

ZEP Advisory Council 57

Wednesday 05th December 2018

Agenda Item 1: Introduction and welcome

1.a. AC57 Agenda

Appended to this paper is the agenda for the 57th meeting of the Advisory Council.

1.b. AC56 Draft Minutes

Appended to this paper are the draft minutes for the 56th meeting of the Advisory Council, which took place on Wednesday 19th September 2018.

The Advisory Council are invited to approve the minutes of the last meeting.

1.c. ACEC October Meeting Minutes

Appended to this paper are the minutes for the October meeting of the ACEC.

1.d. ACEC November Draft Meeting Minutes

Appended to this paper are the draft minutes for the November meeting of the ACEC.

1.e. Chair's update

Appended to this paper is a summary of the Chair's external meetings since the AC56 in June, and an update for SET-plan IWG9 CCS and CCU activities.

ZEP 57th Advisory Council meeting

Wednesday 05th December 2018

Agenda

DG AGRI, 130 rue de la Loi - 1049 Brussels (LOI 130A)

Item		Lead Presenter	Time
1	Introduction and welcome <ul style="list-style-type: none"> • Adoption of agenda • Approval of AC 56 minutes and review of actions • ACEC minutes(October, November) • Chair's update 	Graeme Sweeney	10:30 – 11:00
2	Secretariat Update	Luke Warren	11:00 – 11:15
3	Commission updates: <ul style="list-style-type: none"> • DG CLIMA • DG RTD • DG ENER • DG GROW 	Maria Velkova Vassilios Kougionas Peter Horvath Achim Boenke	11:15 – 12:00
4	IEA GHG Presentation on recent work on CO ₂ Capture Rates	Keith Burnard	12:00 – 12:45
	<i>Lunch</i>		12:45 – 13:30
5	Overview of European Parliament, Council & other relevant activities	Marine d'Elloy	13:30 – 13:45
7	CCUS developments in the Netherlands	Martijn van de Sande	13:45 – 14:15
8	'Industrial Value Chain: A Bridge towards a Carbon Neutral Europe' Presentation of EEIs report	Tomas Wynes Jean-Pierre Debruxelles	14:15 – 15:15
9	Network Policy and Economics update: <ul style="list-style-type: none"> • TWG Policy and Funding • TWG PCIs Network Technology update: <ul style="list-style-type: none"> • TWG Collaboration across the CCS chain • TWG CCU and Sink Factor Methodology 	Lamberto Eldering, Kim Bye Bruun & Jonas Helseth Filip Neele & Arthur Heberle	15:15 – 16:00
10	External Relations Group (ERG) update	Jonas Helseth, Helen Bray	16:00 – 16:30
11	AOB and closing remarks	Graeme Sweeney	16:30 – 17:00

European Zero Emission Technology and Innovation Platform

ZEP Secretariat,
Carbon Capture and Storage Association
6th Floor, 10 Dean Farrar Street, London, UK
www.zeroemissionsplatform.eu

ZEP Advisory Council 57 – 05th December 2018

Agenda item 1.b.: ZEP Advisory Council 56 (19.10.2018) Draft Minutes

Attendance

Advisory Council members

Arthur Heberle
Constantin Sava
Dominique Copin
Filip Neele
Gardiner Hill
Graeme Sweeney
Isabelle Czernichowski (alternate)
Kim Bye Brunn (alternate)
Lamberto Eldering
Liz Rogers
Nils Røkke
Pierre le Thiez
Rob van der Meer
Stuart Haszeldine
Theo Mitchell (alternate)
Ward Goldthorpe

Mitsubishi
National Institute for Marine Geology and Geoecology
Total
TNO
BP
ZEP Chairman
BRGM
Shell
Equinor
BP
Sintef
IFP Energies Nouvelles
HeidelbergCement
University of Edinburgh (SCCS)
Enerfair Engagement / Bellona
Sustainable Decisions

Observers and other attendees

Alexander Kazaglis
Andrew Lewis
Brian Murphy
Caterina de Matteis
Chia-Wen Wu
Chris Davies
Emrah Durusut
Eric de Coninck
Fabrice Devaux
Jon Scowcroft
Jyun-Yi Yeh
Marie Bysveen
Martin Schneider
Thomas Berly
Ugo Simeoni
Valentin Moëns
Virgilijus Petuska

Vivid Economics
Cadent
Ervia
IOGP
National Taiwan University
Independent
Element Energy
ArcelorMittal
Total
GCCSI
National Taiwan University
Sintef
ECRA
IEA
European Turbine Network
European Turbine Network
UAB Minijos Nafta

ZEP Secretariat

Luke Warren
Marine d'Elloy

ZEP Secretariat
ZEP Secretariat

Commission

Achim Boenke
Maria Velkova
Peter Horvath
Vassilios Kougionas

Item 1: Introduction

GS welcomed AC members and observers, thanked GH and PT for their services to ZEP and key contributions. GS introduced LR.

The agenda for the meeting was adopted.

IC noted a correction to the AC55 minutes. The minutes for AC55 were approved.

There were no matters arising from the July and August ACEC minutes.

Chair's update

GS outlined current work priorities, including ZEP's event on the EU Long-Term Strategy, the ongoing work on the Innovation Fund, conversations on blue hydrogen with IOGP and the Commission, and the SET-Plan.

GS fed back on the ERA-NET ACT workshop that took place in Brussels on 18th September and the conversations on the securitisation of leakage risk.

GS fed back on the dissemination of ZEP's report on the role of CCUS in a below 2 degrees scenario. GS said the report was extremely well received, especially in DG CLIMA. GS said ZEP would try to be more assertive in its messaging to increase its reach and raise its public profile.

Item 2: Secretariat update

Actions from AC 55

LW provided an update on actions from the last AC meeting. The Secretariat is to progress the review of ZEP will circulate a survey in the last week of September and organise a workshop to analyse results.

The Secretariat looked into Directors' liability for ZEP-C.

LW said the Secretariat would follow-up with hydrogen stakeholders on Horizon Europe proposals. LW added that it would be important to improve communication with hydrogen stakeholders and bring both communities closer together.

LW said the Secretariat submitted ZEP's response to the Commission's consultation on a framework to facilitate sustainable investment.

LW said the Secretariat had scheduled a call on the below 2 degrees report and engaged with DG ENER on its work on the Life Cycle Analysis. LW said DG ENER is responsible for determining the emissions reduction from CCU fuels through a Delegated Act under the Renewable Energy Directive (RED).

Finance

LW provided an update on ZEP-C finances. Forecast income for 2018 is €180,000. Since the AC55, Total settled its invoice, bringing the total income received for 2018 to €152,500. An invoice for €12,500 has been issued to the Port of Rotterdam and it is understood that this is being processed. It is expected that the outstanding invoice for €15,000 can be issued in the 3/4Q 2018. LW said the budgeted expenditure for 2018 is €103,492 and expenditure to date is largely as forecast. ZEP-C has no outstanding creditors. ZEP-C started 2018 with a net equity position of -€36,650. The forecast outturn shows ZEP-C returning to a budget surplus in 2018 of €40,144 by year end.

European Commission Grant

It is confirmed that the CCSA has successfully bid for H2020 funding to continue the provision of secretariat support to ZEP for a new three-year period (2018 – 2021). CCSA is currently in the final phase of the grant agreement process with the European Commission and expect this to be concluded imminently.

Nomination to the Advisory Council

LW said that Florence Delprat-Jannaud had been nominated to the AC to replace Pierre le Thiez and invited the AC to vote.

LW said that Liz Rogers had been nominated to the AC to replace Gardiner Hill and invited the AC to vote.

The AC approved Florence and Liz's nominations.

ZEP review

LW said that at the 2017 ACEC Away Day it was agreed to review ZEP's longer-term structure and funding to ensure that the Platform remains effective and sustainable.

The Secretariat proposed to undertake a survey of both immediate and external stakeholders to understand their priorities, and to hold a more targeted workshop in Autumn to review feedback and consider how ZEP might respond.

LW outlined the objectives of the survey, which are to 1) Ensure ZEP understands stakeholders' priorities and meets their needs; 2) Inform activities for new grant period and ensure ZEP effectiveness; and 3) Consider ZEP's role longer-term, how might be structured and supported.

Item 3: Commission updates

DG CLIMA

MV gave an update on the Innovation Fund. DG CLIMA submitted the impact assessment of the Innovation Fund to the Regulatory Assessment Board. A scrutiny board meeting is scheduled in October, and the meeting will determine whether DG CLIMA will be able to proceed with the envisioned timeline. Work is ongoing on the draft regulation and the next Expert Group meeting will take place in November. MV said the exact date will be announced in due course. DG CLIMA aims at completing its internal work by the end of the year.

MV gave an update on DG CLIMA's work on CCU. DG CLIMA commissioned a study led by Ramboll. The European Commission's Group of Chief Scientific Advisors, which provides the Commission with independent scientific advice on specific policy issues, published an opinion and a supporting evidence report in April. MV said the study will be published in October – the Commission is still working on the regulatory framework.

MV said the main conclusions are that 1) hydrogenation routes would require vast amounts of renewable energy; 2) in the longer-term CCU technologies will have an important role in circulating carbon when fossil carbon won't be available anymore; 3) support will be available through Horizon Europe and the Innovation Fund; 4) the LCA methodology for the Innovation Fund still needs to be worked out; 5) carbon recycling fuels will be rewarded through the Renewable Energy Directive (RED); 6) cross-sector innovation is essential.

MV gave an update on the Commission's Long-Term Strategy for Emissions Reductions. The strategy will be released before COP24. MV said the strategy would outline the Commission's ambitions but will not focus on explaining how ambitions will be realised. The Commission will work on this at a later stage.

EC asked what the timeline would be regarding the LCA methodology for the Innovation Fund. MV said that the timeline is linked to the Innovation Fund – end of 2020.

CD asked about DG CLIMA's conclusions on the climate mitigation potential of CCU technologies. MV answered CCU is more about recycling and circularity than climate mitigation. The climate mitigation potential is limited.

MV stressed that the Innovation Fund will rule out projects that do not deliver climate mitigation benefits.

WG asked whether the Innovation Fund could be used to support infrastructure projects and how the latter would be assessed. MV said that the Commission would like to support industrial symbiosis projects through the blending of financial instruments. MV added that the Commission is aware of the difficulties associated with the assessment of such projects.

WG asked whether the scope of the Innovation Fund would allow including large-scale demonstration projects. MV answered that the Commissions aims at including large-scale demonstrations.

GS said that flexibility is needed to support projects that can promote infrastructure development.

MV said that there will be between EUR 5M and EUR 100M for projects, and that project would not be competing one against each other. MV added that with the rise of the carbon price, there should hopefully be enough money to finance big projects. MV said that there would be special calls for small projects.

DG RTD

VK gave an update on the SET-Plan IWG9 and said the next plenary meeting will take place in the Hague on 20th September. VK said the Commission opened a call under H2020 to provide resources to support and coordinate the IWG9's activities. This call closed on 11th September. To date the support to the IWG9 has been provided by the ZEP secretariat.

VK confirmed that the CCSA has successfully bid for H2020 funding to continue the provision of secretariat support to ZEP for a new three-year period (2018 – 2021). CCSA is currently in the final phase of the grant agreement process with the European Commission and expect this to be concluded imminently. The new grant will be backdated to the 1st May 2018.

VK gave an update on Mission Innovation.

VK updated the AC on proposals for Horizon Europe (formally FP9). 35% of the budget will be allocated to addressing climate change. VK said that under the proposal, CCS falls under the energy cluster and CCU falls under the industry cluster. The idea behind this is to promote co-creation and collaboration between clusters.

NR said there is some concern regarding the split between CCU and CCS for industry under the proposal. VK said that the proposal is still under discussion and input from ZEP is always appreciated. NR said that the IWG9 would be a good place to discuss this.

GS said it needs to be clear to the energy cluster that CCS for industrial activity is an energy activity.

DG ENER

PH gave an update on Projects of Common Interest. Under the first Connecting Facility Europe Energy call 2018, a total of €48.4 million in CEF grants was allocated to 8 PCIs to undertake studies, of which 4 are in the electricity sector, 2 in the gas sector, 1 for smart grids, and 1 for carbon capture technology (Acorn, Pale Blue Dot). The second CEF Energy call 2018 opened on 11th June. The deadline for submission is 11th October. The selection decision will be adopted by February 2019.

GS encouraged projects that did not go through the first call to reapply to the second CEF Energy call.

PH said the High-Level Energy Conference, which highlighted the role of innovation as key determinant for implementing the Energy Union, took place in Linz on 17th and 18th September. The hydrogen initiative has been endorsed at the conference. PH said that the main focus is on green hydrogen. PH noted that there have been discussions among Member States on whether blue hydrogen should be more explicitly endorsed.

GS said that blue hydrogen will be necessary to deliver high volumes of H2. Both blue and green hydrogen should be promoted and ZEP will have to work further on the promotion of blue hydrogen.

PH said that Commissioner Arias Cañete will not be able to go to the Global CCUS Conference in Edinburgh. It is not clear whether someone will be able to replace him. GH and GS highlighted the importance of having the Commission represented at the Global CCUS Conference. PH said he would follow-up with the cabinet.

DG GROW

AB said the last phase of the European Sustainable Chemicals Support Service has been completed by the Commission. A conference taking place on 27th September with the European Chemical Support Network

Office will cover the work that has been done on the capture and reuse of different gases including CO₂ and hydrogen.

AB said that the Investment Tool including regional data is now available and will be circulated to the Secretariat.

Item 6: Overview of Parliament, Council and other relevant activities

Multiannual Financial Framework

MD said that the Commission had released its proposal for the Multiannual Financial Framework 2021-2027 (MFF) on 2 May. The proposal increased climate-related spending in the EU budget from 20% to 25%. The EP has previously called for 30%, and a comprehensive, continuous source of funding for energy investments including CCU and CCS, especially for carbon-intensive regions. The Connecting Europe Facility will be renewed with €8.7 billion for energy projects over the 7 year period. This is an increase on the €5.3bn allocated from 2014-2020.

MD said that in his State of the Union Speech, (12th September), President Juncker mentioned the intention to finalise the EU budget before the elections in May.

A swift agreement by the European Parliament and the Council of the European Union on the overall long-term EU budget and its sectoral proposals is needed, in order to ensure that EU funds deliver results on the as soon as possible. Delays similar to the ones experienced at the beginning of the current 2014-2020 budgetary period could result in severe constraints to meet EU's international obligations and commitments towards partners.

Long-Term Strategy

MD said the Commission plans to be able to present its strategy before COP 24 in December, which will be followed by a period of scrutiny in 2019. The strategy will consider net zero emissions by 2050 and will not be legislation; it is there to provide strategic direction.

A High-level Stakeholder Consultation Event took place on 10-11 July.

The public consultation for the long-term strategy opened on 17.07 and closes on 09.10. It is a joint process between DG ENER and CLIMA. A summary of responses from the public consultation will be published following the end of the consultation.

ZEP has submitted its response to the long-term strategy consultation and organises an event on the strategy on 26th September in Brussels.

Sustainability Taxonomy

MD said the Commission has published its Legislative Proposal for a Regulation on 24th May. A Working Party on Financial Services (attachés + experts) will meet on 8th October to continue the examination of the proposal for a regulation of the European Parliament and of the Council on the establishment of a framework to facilitate sustainable investment. The detailed taxonomy is to be created over next few years.

ZEP submitted its response to the Commission's proposal to introduce a framework for sustainable investment on 23rd August.

Projects of Common Interest (PCIs)

MD provided an update on the status of PCIs and CEF 2018/2019 calls.

Item 8: Networks update

Network Policy and Economics

LE gave the update from Network Policy & Economics. There had been no physical meeting between this and previous AC. LE said the next NWPE meeting is scheduled for 11th October.

TWG Policy and Funding

LE said that the Secretariat had updated the terms of reference of the TWG. LE said the TWG has only one co-chairs and encouraged AC members and participants to nominate themselves.

TWG PCIs

NR asked to have an update on the London Protocol ratification. LE said the work is happening outside of NWPE. Ministers are exploring the possibility of ratifying the proposal next year. Projects are providing ministries with information and supporting them to do so. The Norwegian government is currently leading by preparing a proposal ('white paper') and is seeking to involve other governments.

GS said it would be useful to think about how to best support this initiative. GS asked whether preparing a letter to endorse the proposal would be useful. LE said he would consult the government group and see whether such work would be desirable. LE said the proposal will not come out before next year.

Network Technology

MD said the next meeting is scheduled for 31st October.

TWG Collaboration across the CCU Chain

Workstream 1 (WS1)

FN presented an overview and key findings from the WS1 report. The report quantifies storage-related risks using data from operators.

LE suggested amending the slide on financial security because there is a financial security in Norway, which is based on the oil and gas experience.

It was suggested that the TWG works on the report's recommendations.

GS said ZEP will need to be thoughtful about how it communicates the risks outlined in the report. It was also agreed that the report should be accessible to people with a non-technical background.

It was agreed that the ERG will work on the messaging of the report.

Workstream 2 (WS2)

The second workstream looks at risks and liabilities which need to be shared across the CCS chain. The group hold a joint workshop with the ERA-NET ACT projects on 18th September. GS said there was a very constructive conversation on the securitisation of the leakage risks and risk perception.

TWG CCU

RvdM said that several meetings of the TWG had been cancelled due to delay in the publication of the Ramboll study. RvdM said initial conclusions are disappointing.

RdvM said the objective of the TWG is to add value to the ongoing discussions on LCA and CCU, however, it is unclear how the TWG will proceed. AH said it will be important to clarify the benefits of CO₂ reduction.

Item 12: External Relations Group (ERG) update

TM said that Johnny Stokes had been nominated as a new co-chair to replace Sarah Kempe from Shell.

TM invited the AC to join ZEP's event on the EU long-term strategy for emissions reduction. TM described the event agenda and objectives.

TM said that GS will meet with CEFIC and DG RTD on 25th September.

GS encouraged AC members to participate to future engagement programmes.

Item 13: Any other Business and closing remarks

N/A

Actions

Action		Owner	Deadline
2	Secretariat to follow-up with hydrogen stakeholders on Horizon Europe proposals	Secretariat	
3	DG GROW to circulate Investment Tools to ZEP Secretariat	AB	
8	ERG to work on the messaging of the TWG Collaboration across the CCS chain WS1 report	ZEP ERG	
8	LE to follow-up with Government Group on ZEP potential piece of work regarding the London Protocol ratification proposal	LE	

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Agenda item 1.c. : ACEC October Draft Minutes

Attendance

Arthur Heberle	Mitsubishi
Charles Soothil	ZEP Vice Chair
Frederic Hauge	Bellona
Graeme Sweeney	ZEP Chairman
Kim Bye Brunn	Shell
Lamberto Eldering	Equinor
Luke Warren	ZEP Secretariat
Marine d'Elloy	ZEP Secretariat
Rob van der Meer	HeidelbergCement
Theo Mitchell	Enerfair Engagement / Bellona

* Frederic Hauge acted as Nils Røkke's proxy

1. Introduction and general update (open session)

Introduction & actions from last meeting

GS updated the ACEC on work progress.

GS said ZEP needs to find a longer-term replacement for the Oil and Gas constituency.

GS said ZEP will need to pursue its discussions with hydrogen stakeholders.

GS said the SET-Plan plenary meeting had been productive. However in the absence of dedicated resources it will be difficult to push the work plan forward. LW said the Coordinated Support Action (CSA) could be available early next year. LW said there is good energy in the group. The priority is to engage with Member States.

It was agreed that the ACEC will discuss findings from the ZEP Review and steps forward at the next ACEC dinner on 4th December in Brussels. Network chairs will be invited to join the meeting.

2. Network and Temporary Working Group updates (open session)

a. Network Technology

AH updated the ACEC on work progress within Network Technology. The next NWT meeting will take place on 31st October 2018 in Brussels. AH invited the ACEC to attend.

TWG Collaboration across the CCS chain

WS1's (storage-related risks) draft report has been presented and discussed at the joint ZEP & ERA-NET ACT workshop, Advisory Council 56, and Network Policy and Economics meeting on 11th October. The report was generally very well received. It was agreed that the ERG will work on messaging and conclusions. The report will then be proofread by the Secretariat.

WS2 (risk sharing in a CCS network) held a joint workshop with ERA-NET ACT projects on 18th September. The workshop aimed at discussing risk and liabilities across the CCS chain as well as associated de-risking mechanisms. The TWG will now start the process of preparing a report, consistent with WS1 recommendations and the feedback from the workshop.

TWG CCU and Sink Factor Methodology

RvdM said a TWG call will be arranged soon. It was agreed that the Secretariat should contact DG CLIMA to ask for an update on the publication date of the Ramboll report.

RvdM said he will attend the Network meeting on 31st October.

b. Network Policy and Economics

LE gave an update on Network Policy and Economics. A meeting of the Network took place on the 11th October. The ACEC agreed to endorse KB as the acting co-chair of the Network until the December AC.

It was agreed that the Network would ask the AC in December to endorse KB as a permanent co-chair of the Network in place of John MacArthur.

LE said that IOGP presented their work on the 2020 gas package and the potential for regulatory change to drive the transition to low carbon hydrogen. ZEP showed interest in the initiative, however having an active role would involve co-funding.

LE said there was a presentation on key messages from TWG Collaboration across the CCS chain WS1 report. It was suggested that the conclusions make it much clearer what CO₂ leakage would actually mean, in terms of damage i.e. there would be no explosions, risk to human life, and minimal risk to wildlife. It was also agreed that the report should be reviewed by academics in order for the evidence to be accepted as robust.

TWG Policy and Funding

LE said the TWG was asked at the meeting on 11th October to produce a paper in support of some amendments, drafted by Equinor, on the Connecting Europe Facility. The ACEC agreed to support these amendments.

The next meeting of the Innovation Fund Expert Group is due to take place in November. It was agreed at the Network meeting that the TWG will respond to the draft Delegated Act from the Commission once it becomes available.

TWG PCIs

There is a meeting of the Thematic Group for CO₂ PCIs on 7 November. LE will attend on behalf of the group.

c. ERG

GS and FH agreed that the two key items to discuss are the COP24 Resolution and the Report from the European Court of Auditors.

COP 24 Resolution vote

TM explained the context in which the COP 24 Resolution will be voted and the impact it could have on the Commission as it prepares its long-term strategy for emissions reductions. TM said there is an internal debate within the Commission around the role of CCS and bioenergy.

TM explained that the draft text, which was adopted by the ENVI Committee, includes Recital R that could be particularly damaging for CCS. Recital R was put forward by the DEV Committee.

TM said Bellona and ZEP have mobilised their networks extensively and contacted MEPs in an attempt to split out the negative wording and get MEPs to reject the Recital.

GS said that ZEP also prepared a short two pager responding to the amendments proposed by the DEV Committee, which was circulated to Coordinators and MEPs.

TM said the voting list is expected to be released shortly.

FH said the issue should be brought to the attention of the media before the vote takes place. It was agreed that ZEP will prepare a press statement. LW and TM said the statement should be supported by evidence from the latest IPCC report.

FH said he will mobilise his network. It was agreed that ZEP will pursue its efforts and continue mobilising MEPs, the press, etc.

European Court of Auditors report

GS said the European Court of Auditor's report has been released. It was agreed that ZEP should highlight the recommendations that are in line with ZEP's messaging regarding the Innovation Fund. It was also agreed that ZEP should be prepared in case the press would approach the Secretariat.

The ACEC agreed to endorse HB as the acting co-chair of the ERG until the December AC. This will require formal ratification at the AC57 meeting in December.

TM said the EU event on the long-term strategy had good coverage given the short notice. GS said the event created more support for the PORTHOS project which is a very good outcome. It also enabled creating valuable connections.

LW fed back on the CCS Gassnova Safari and said it was a positive event.

LW updated the ACEC on the DG GROW meeting of high-level group on energy-intensive industries. LW said the report acts as their contribution to the long-term strategy. The report highlights the challenges of industry electrification. LW said the platform should consider how to leverage the findings from the report in its conversations with the Commission.

AC57 agenda

LW presented the draft AC57 agenda and sought feedback on suggested external presentations. GS said the ENVI Committee could be invited to explain the position adopted in the draft COP24 Resolution.

Finance update (closed session)

LW said the grant agreement is in its final stages. LW said a budget is set aside for external communications support to the ERG. The Secretariat is currently organising a tender, which should tie in with the contract sign off.

KB asked whether money would be set aside for the website. LW confirmed that money will be dedicated to update the website.

AOB

N/A

Actions

Actions		Owner
1.	Secretariat to organise ZEP ACEC dinner and present ZEP Review results	Secretariat
2.	Secretariat to contact DG CLIMA about the Ramboll report	Secretariat
3.	Secretariat to prepare a press statement on COP 24 Resolution	Secretariat
4.	ZEP to invite ENVI Committee at the next AC57 meeting	Secretariat

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Agenda item 1.d.: ACEC November Draft Minutes

Attendance

Arthur Heberle	Mitsubishi
Charles Soothil	ZEP Vice Chair
Frederic Hauge	Bellona
Graeme Sweeney	ZEP Chairman
Jonas Helseth	Bellona
Kim Bye Brunn	Shell
Lamberto Eldering	Equinor
Luke Warren	ZEP Secretariat
Marie Bysveen	Sintef
Marine d'Elloy	ZEP Secretariat
Rob van der Meer	HeidelbergCement
Theo Mitchell	Enerfair Engagement / Bellona

* Jonas Helseth acted as Frederic Hauge's proxy

* Marie Bysveen acted as Nils Røkke's proxy

1. Introduction and introduction (open session)

Introduction & actions from last meeting

The Chair (GS) introduced the meeting. GS noted a correction to the agenda. The ACEC adopted the agenda for the meeting.

GS said that LE was unanimously elected vice chair of the oil and gas constituency. GS will advise the AC that this has occurred at the next meeting.

GS said funding for the European Project Network has been awarded and ZEP should engage with the selected consortium, which is led by TNO. It was agreed that GS and LW will approach Prof Stuart Hazeldine.

LW informed the ACEC that the European Commission awarded the CSA for the support of the SET-Plan IWG9 to the consortium led by CCSA. LW said the Commission will start preparing the grant agreement.

The ACEC approved the minutes of the ACEC October meeting.

LW said all actions from October have been completed. The Secretariat contacted the Commission about the Ramboll study. It is expected to be released by end November.

2. Network and Temporary Working Group updates (open session)

a. Network Technology

AH updated the ACEC on work progress within Network Technology. The next NWT met on 31st October 2018 in Brussels.

AH said MD provided a useful policy update. AH said that ZEP should follow the CEF regulation vote closely as some amendments could negatively impact investments towards CCS. The next SET-Plan meeting will take place on 26th March in the Hague.

AH said there were two interesting presentations on blue hydrogen. LE presented the Magnum projects and said partners are approaching the next decision gate.

GS said ZEP prepared a paper outlining its position on the role of low-carbon hydrogen and how it is addressed within Horizon Europe, which will be shared with the Commission. GS asked whether AH could ask CH to establish a connection with Hydrogen Europe. GS also asked LE whether he would be able to establish a connection.

JH said he attended a presentation by David Hone from Shell, who emphasised that the growth of green hydrogen would go forward due to cost competitiveness. JH asked KBB about Shell's position regarding low-carbon (blue) hydrogen. KBB was not aware of this presentation and said he would get back to JH.

AH said there was an important discussion on capture rates. The Network agreed to review the report produced by the IEA GHG and will decide whether it needs to produce a paper to set out ZEP's view on the topic. LW said the IEA GHG will present its report at the next Advisory Council meeting on 5th December.

AH said he volunteered to review the report *Industrial Value Chain: A Bridge towards a Carbon Neutral Europe*, which was developed by a group of eleven industry sectors as their input to the EC Long Term Strategy.

TWG Collaboration across the CCS chain

AH said WS1 report on storage-related risks had been presented and discussed at the NWT meeting. The following suggestions were given:

- The report should make it clearer what CO₂ leakage would actually mean in terms of damage (i.e. no explosions).
- The report should highlight that the likelihood of all scenarios occurring at the same time is zero.
- The report should consider the risk of CO₂ transport leakage.
- The report's title should specify that the report focuses on offshore storage in the North Sea.

MD said the ERG and the Secretariat are currently working on the messaging and proof reading. The intention is to present the report for review at the next AC meeting, with the aim of releasing it in January. GS said the ERG should prepare a draft dissemination plan to be circulated with the AC pre-reads.

KBB said the OGCI will be organizing a workshop in Q1 2019. KBB suggested presenting the report at the meeting. KBB said there is appetite to discuss the report further, which could lead to new actions. The insurance industry will take part in the meeting.

AH said WS2 is currently preparing a draft report.

TWG CCU and Sink Factor Methodology

AH said there has been no progress since the last ACEC meeting. The group will meet after the release of the Ramboll study to discuss ZEP's response. In the meantime, RvdM and AH will prepare a short paper on ZEP's position regarding LCA.

b. Network Policy and Economics

LE gave an update on Network Policy and Economics. A meeting of the Network took place on the 11th October.

LE said the TWG produced a paper in support of some amendments, drafted by Equinor, on the Connecting Europe Facility – which was also approved by the ACEC. LE said deadline for amendments in the Committees responsible was in September, and the ENVI Committee has also developed its opinion. Therefore, the focus for getting the amendments included is on the Council; the ZEP ERG is taking this work forward.

LE said the next meeting of the Innovation Fund Expert Group will take place on 4th December. It is expected that GS will provide feedback at the AC 57 meeting on 5th December. It was agreed at the Network meeting that ZEP will respond to the draft Delegated Act from the Commission once it becomes available.

TM said the draft implementing decision on the Innovation Fund is expected to be released today.

GS said it will be important that Member States highlight the need for CCUS during the meeting. GS said ZEP prompted the Netherlands, the UK and Norway. MB said she will be meeting with the Norwegian Ministry before the expert group meeting and will raise the issue.

LE said he attended a meeting of the Thematic Group for CO₂ PCIs on 7th November. LE said there will be a new list of PCIs ready by end 2019. Until then, existing PCIs will be eligible to apply for any calls. Existing PCIs will need to reapply to keep their PCI status. The application deadline is end of February/ beginning of March. The Commission said during the meeting that the same template and methodology (for the cost benefit analysis) will be used.

LE said he asked the Commission to be more vocal regarding their announcements on PCIs to ensure that new projects understand the process well.

LE said there is a group in Petten (JRC) that will be responsible for assessing the applications and cost benefit analyses. The Commission said the application level from the last round was good.

LE said the Northern Lights Project attended the meeting on the London Protocol on 6th November. LE said the Norwegian Delegation, which has been working on recent negotiations, was very positive. The next step is a meeting with the Ministry and projects to discuss the forward process. The intention is to have a proposal at the next meeting and the wording should be finalised during the summer.

c. ERG

GS fed back on the engagement programme. GS and LW meet with several stakeholders including Tom van Ierland, Lukasz Kolinski, Castern Bermig, IOGP and CEFIC.

GS said that Commission officials affirmed that CCS would be included in the long-term strategy.

GS said the meeting with Castern Bermig was very positive. LW and GS spoke about CCS's potential to tackle emissions across the whole economy, Horizon Europe, the market maker concept and Innovation Fund, blue hydrogen, etc. There was substantial request for further information, which will be sent shortly.

CEFIC inquired about the platform, its work and capabilities. GS said he encouraged CEFIC to join TWGs as well as Advisory Council meetings. GS said the discussion was constructive.

TM fed back on ZEP's long-term strategy event. Given the very short notice, it was agreed that the event was a success and got good coverage in the press. The event contributed to create more support for the PORTHOS project and enabled the creation of valuable connections.

TM fed back on the COP 24 resolution vote.

TM explained the context in which the COP 24 Resolution was voted. TM explained that the draft text included Recital R, initially put forward by the DEV Committee and adopted by ENVI, the responsible Committee.

TM said that ZEP and Bellona succeeded in mobilising their networks as well as MEPs and in voting down the anti-CCS recital.

TM said the Recital was split into two parts. The first part was a very close vote with 194 MEPs voting in favour and 203 voting against. 170 MEPs voted in favour of the second part and 232 voted against. TM said this shows that the feeling towards CCS is highly polarised. The S&D Group for instance asked MEPs to vote in favour. TM said there is an urgent need for further work with the Parliament. It was agreed that the Secretariat will put together a short paper ahead of the next AC to reengage with ZEP membership and see whether there is appetite to put more resources in communication work.

TM said the European Parliament is currently working on a paper considering the Horizon Europe Programme's strategic direction. The ITRE Committee, which is leading the file in the Parliament, will have a vote on Thursday 22nd. TM received the latest version of the draft ITRE report. TM said there is implicit support for blue hydrogen, which is positive. However, TM said ITRE has modified the section on low carbon and clean industries (p.59). Whilst the section used to talk about CCUS, it now focuses on industrial CO₂ valorisation, which is a significant departure from what ZEP has been advocating for.

TM encouraged the ACEC to get in touch with MEPs working in the ITRE Committee. It was agreed that TM will contact the ERG and discuss follow-up actions. GS suggested engaging with Carsten Bermig.

TM said that the European Parliament will vote on Establishing the Connecting Europe Facility (CEF) on 22nd November. A number of amendments have been proposed which aim to remove CO₂ transport from the CEF regulations. The ERG therefore developed a short paper setting out its recommendations on these amendments, which will be distributed to the ITRE committee.

It was agreed that the follow-up letter to Carsten Bermig will be amended to include a paragraph on the imminent ITRE position. It will also specify that a separation between CCS and CCU under the Commission's proposal for Horizon Europe is likely to make administration more complex.

TM said that the documents should be circulated before Thursday 22nd November.

3. AC57 agenda

LW presented the draft AC57 agenda. LW said that all external speakers confirmed their venue except the ENVI Committee chair.

LE suggested leaving some time to discuss the outcomes of the ZEP Review at the next AC.

4. Finance update (closed session)

LW said the CCSA is still finalising the grant agreement process with the European Commission. This process has taken significantly longer than anticipated. The latest request is for a set of small, largely editorial, amendments which it is hoped will be the final stage in this process.

LW invited the ACEC to consider a draft 2019 ZEP-C budget which should be forwarded to the AC57 for approval. LW noted that 2018 was the year that ZEP-C returned to a net equity surplus after a number of years of running a net equity deficit that resulted from delayed EC funding in 2015. In addition, the gap between the previous EC grant and the new grant starting now stands at seven months. This gap has been bridged by the current contractor who had sufficient confidence that it could secure a new backdated grant that it has been willing to provide this service at risk.

LW said that considering the 2019 Budget, the ACEC may wish to consider whether to build up its reserves ahead of the end of the new ZEP grant ending in April 2021 in order to cover any potential delay in securing new EC funding and / or contractors being unable to provide bridging secretariat services at risk.

KB asked whether money would be set aside for the website. LW confirmed that money will be dedicated to update the website.

5. AOB

JH said that ZEP had been using the terms CCUS in recent months and should be careful that it does not contribute to fuel the existing confusion between CCS and CCU. The ERG was requested to write a one-pager to address this issue.

Actions

Actions		Owner
1.	GS and LW to approach consortium leading the European Project Network	LW
2.	ERG to prepare draft dissemination plan on WS1 report to be circulated with AC pre-reads	ERG
2.	NWPE to respond to the draft Delegated Act from the Commission ahead of the Expert Group meeting on 4 th December	Secretariat
2.	Secretariat to draft a short paper to engage with ZEP membership and explore whether there is appetite to put more resources in communication work	Secretariat
2.	ERG to follow-up on the draft ITRE report on the Horizon Programme	TM, ERG
2.	Secretariat to amend follow-up letter to Carsten Bernig	Secretariat
5.	ERG to draft a paper on the use of the term CCUS	ERG

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5th December 2018

Agenda Item 1.e: Chair's update

1.e.I. External meetings

Lukasz Kolinski, Head of Unit, Economic Analysis and Financial Instruments, DG Ener and Tom van Ireland, Head of Unit, Strategy and Economic Assessment, DG Clima.

- These two meetings were organised following the leak of the draft Long Term Strategy (LTS) and to understand whether there were substantial changes to the role of CCS in the LTS since the leaked draft.
- ZEP was concerned that CCS is not receiving equal treatment to other technologies in the leaked LTS. In the draft LTS five pathways were highlighted; Electricity, Hydrogen, e-fuels, energy efficiency and circular economy. While CCS is assumed to be available in these scenarios, there is no CCS “pathway” which assesses the value for money of widely deploying CCS across sectors.
- There were also a number of apparent contradictions for example, CCS is not seen to have a role in the power sector (less than 1% of power sector mitigation) yet a substantial amount of negative emissions are seen to come from the power sector, and a significant amount of remaining gas plant is seen to need CCS. The draft asserted that “The role of CCS [in the power sector] is very limited in all scenarios as no assumptions were put forward to support deployment of the technology.”
- The draft referenced the ASSET study when looking at the role of hydrogen through methane reforming vs. electrolysis. The ASSET study incorrectly assumes a 90% capture rate for SMR; as the CO₂ stream is pure it is feasible for this to be >98%. The ASSET study assumes 10% residual emissions are offset with DAC, which makes it look like a costly option.
- As is EC policy, neither official was willing to comment on a leaked draft but the following points were raised in discussions;
 - CCS is recognised as being on the critical path to realising 1.5C and net-zero. However they do see the role of CCS having changed since the 2011 Roadmap with the reduction in the cost of renewable and the EIs coming forward with multiple new low-carbon technology options.
 - A priority for the EC is to look at different technology options and to identify the commonalities between the different pathways to understand the no regret actions (e.g.

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greater electrification). There were also aware of ZEPs ME5 study on the role of CCUS and believed that this was consistent with what other studies were concluding. All of the LTS scenarios include CCS, albeit at lower levels.

- There was discussion around the EC's assessment of MS National Plans and it was noted that this would be primarily focussed on reaching 2030 goals. ZEP highlighted the importance of having a 2050 perspective and this was recognised but will receive less attention. The EC also recognised ZEPs point on the importance of the enabling actions needed pre-2030 (e.g. CCUS commercialisation) to ensure that 2050 goals are realised.
- In summing up the EC framed the LTS has an opportunity to scope out what it would take to deliver greater EU ambition on climate action and understand whether there is the political will for greater ambition. The EC are keen to secure MS buy-in to a new level of ambition.
- It is expected that the LTS will act as a catalyst for future areas of activity and work, e.g. what is required to support CCUS and how CCUS can be built out from initial clusters to be deployed at scale. These activities will all fall under the new Commission which will be formed 2019.
- Both Tom and Lukasz agreed that they would be happy to discuss further and consider next steps once the LTS has been released (expected 28th November).

Carsten Bermig, Bieńkowska Cabinet

- Carsten Bermig is the advisor to European Commissioner Elżbieta Bieńkowska, responsible for Internal Market, Industry, Entrepreneurship and SMEs. The meeting was an opportunity to highlight the ZEP reports on 2 Degrees and ME5 which demonstrates that CCS is key to a cost-effective transition and to retaining economic value and jobs in Energy Intensive Industries.
- Carsten was very receptive to the ZEP messages and he clearly understood the importance of both CCS and CCU. He noted that he is pushing hard to ensure that industrial policy is well represented in the LTS. He was also clear that if industry is to decarbonise then it will need access to enabling infrastructure, e.g. CCS, and may also need to increase its energy consumption despite the overall EC objective of increasing energy efficiency and reducing energy consumption.
- ZEP took the opportunity to raise three topics that are currently of concern to the platform;
 1. The treatment of CCS and CCU under the Horizon Europe proposal. Specifically the fact CCU is only included under the industry cluster and CCS is only included under the

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energy cluster. We noted that both CCS and CCU should be recognised under both industry and energy. Carsten said he could clearly see how this could create challenges and that it should be addressed.

2. The need for an integrated hydrogen policy that recognises different low carbon hydrogen production routes (both renewable electrolysis and reformed natural gas with CCUS) as well as different end use sectors (transport, heating and industry). ZEP noted that the current EU framework is not inclusive in both of these respects.
 3. The risk of a gap in the EU innovation framework which risks “pilot-scale” projects finding themselves too large for support from Horizon Europe funds but too small to be integrated into complete CCUS value chains which can benefit from Innovation Fund support. A specific example of such a project was highlighted from the cement sector which has an innovative oxy-production technology which is seeking funding but which does not appear well suited to current EU support instruments.
- Overall Carsten was very open to ZEP messages and could be a good advocate for CCUs technologies. The meeting was followed up with a note providing Carsten with further details on the three topics raised (see ERG update for the note).

1.e.II. SET-Plan IWG9 CCS and CCU activities

The SET-Plan IWG9 met on 20th September in The Hague. The group discussed IWG9 structure, subgroups draft terms of reference and forward work plan. The meeting also included updates from the European Commission on ongoing work and relevant policy issues as well as a presentation of the Norwegian full-scale project.

Subgroups are in the process of being populated with experts, i.e. from national governments, industry and the research community that can help deliver the R&I activities. Two or three co-leads are sought for each of the IWG9 subgroups and are also in the process of being identified.

The strategic coordination group will meet on the 17th January to agree on a forward work plan and discuss communication, dissemination and monitoring. The next plenary meeting will take place on 26th March in The Hague.

The Commission has issued a call under H2020 to provide resources to support and coordinate the IWG9's activities. To date the support to the IWG9 has been provided by the ZEP secretariat. A consortium led by CCSA as well as CO₂ Value Europe, British Geological Survey, Sintef have been successful in developing a proposal to provide this support and are now in the Grant Agreement stage. It is anticipated that the grant can be signed in early 2019 enabling a step change in the support available to the IWG9.

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