ZEP Advisory Council 56

19th September 2018

Agenda Item 8: Review of Network 2018 Work Programmes

8.a. Network Policy and Economics

Appended to this paper is the following pre-read:

8.a. Network Policy and Economics update

8.a.i. Draft agenda 11th October meeting

8.a.ii. Draft ToR TWG Policy and Funding

8.a.iii. ZEP response to the Commission's Long-Term Strategy consultation

8.a.iv. 2050 Strategy technology table

8.a.v. ZEP response to the Commission consultation on a framework for sustainable investment

8.b. Network Technology

Appended to this paper are the following pre-reads:

8.b. Network Technology update

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

ZEP ACEC 56

19th September 2018

Agenda item 8.a. Network Policy and Economics update

Co-chairs: Lamberto Eldering (Statoil), John MacArthur (Shell), Jonas Helseth (Bellona)

The next Network Policy and Economics meeting will take place in Brussels on 11th October. The draft agenda is attached for information as pre-read 8.a.i.

Temporary Working Group Policy and Funding

Co-chair: Theo Mitchell, Enerfair

Terms of Reference and membership
During a discussion of the co-chairs it was flagged that the majority of work within the Network is currently assigned to the TWG Policy and Finance; however the previous defined scope for the group is now out of date. Furthermore the working group currently has only one chair, and a small membership.

Therefore the Secretariat was asked to update the Terms of Reference for the group, as it was agreed the group has produced good work and should continue. An updated Terms of Reference is attached as item 8.a.ii. for AC approval. The Secretariat will circulate the new ToR with a request for members and a co-chair to join Theo Mitchell.

Jonas Helseth from Bellona has historically co-chaired the TWG. However, having recently secured funding to continue its work in ZEP, Bellona has appointed Theo Mitchell (Enerfair Engagement) as an independent consultant to support its European affairs and CCS work. In this capacity, Theo Mitchell has been proposed as one of the co-chairs of the TWG.

Response to the Commission consultation on the long-term emissions reduction strategy
ZEP's response to the Commission's Long-Term Strategy consultation was submitted on 31 August. The final response is appended to as pre-read 8.a.iii. for information.

Also attached (as pre-read 8.a.iv.) is a table depicting the cost, impact and technology readiness of CCS and CCU solutions for industry. This was developed in answer to a question contained in the survey however the ACEC felt that further work would be needed to get the detail and consensus required. Therefore the ACEC decided that the table would not be included in the response but merited further work by ZEP. It is proposed the CCU working group within Network Technology incorporate this into their work programme.

Response to the Commission consultation on a framework for sustainable investment
The response submitted on 23 August was approved by the ACEC and is attached for information as pre-read 8.a.v.

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

ZEP Network Policy and Economics

DRAFT Meeting Agenda: 11th October 2018

Location: DG RTD, Rue du Champ de Mars 21, 1040, Brussels
11:00 – 15:00 CET

Item		Lead Presenter	Time
1	Introduction, tour de table, safety notices	Co- chairs	11:00
2	Progress update: a. Network Policy & Economics b. TWG PCIs c. TWG Policy & Finance	Co- chairs	11:10
3	Chair's update a. Feedback from ZEP September AC b. Feedback from Long Term Strategy event	Graeme Sweeney	11.45
4	European Commission updates	Vassilios Kougionas, DG RTD (TBC) Maria Velkova, DG CLIMA (TBC) Peter Hovarth, DG ENER (TBC)	12.30
Lunch			13:00
5	2020 Gas Package and opportunities for hydrogen	Christian Schwarck, IOGP (TBC)	13.45
8	Next steps: a. AOB b. Chairs' summary c. Forward work programme d. Next meeting	Co- Chairs	14.30

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

ZEP Temporary Working Group Policy & Funding

The Temporary Working Group Policy and Funding will be responsible for developing ZEP positions and responses on high level developments in relation to policy and funding of CCS and low carbon technology more broadly, including but not confined to:

-Review of the CCS Directive
-The EU's Long Term Climate and Energy Strategy
-Development of the ETS Innovation Fund
- The Commission's proposal for a framework for sustainable investment

Building on the group's work to date, the TWG will continue to scope out developments and gaps in the EU policy landscape for CCS.

The TWG will be co-chaired by:

- Theo Mitchell, Enerfair
- Candidate?
- Candidate?

The TWG membership is currently:

- Dominique Copin, Total
- Lamberto Eldering, Statoil
- Hubert Fabriol, BRGM
- Andrea Forabosco, Shell
- Jonas Helseth, Bellona
- Chris Littlecott, E3G
- Keith Whiriskey, Bellona

ZEP AC56 19.09.2018
Agenda Item 8.a.iii.
ZEP response to the Commission consultation on the long-term strategy

Long term greenhouse gas emissions reductions

To achieve its temperature objectives, the Paris Agreement also includes a long term ambition to achieve a balance between emissions and removals of greenhouse gases by human activities in the second half of this century. Given that addressing climate change is a global challenge requiring all parties of the Paris Agreement to act, what do you think the EU should contribute to achieve the Paris Agreement's objectives:

- ○ Reduce greenhouse gas emissions in the EU by 80% by 2050 compared to 1990 levels
- ○ Reduce greenhouse gas emissions in the EU more, within the range of 80 to 95% by 2050 compared to 1990 levels
- ◉ Achieve already a balance between emissions and removals in the EU by 2050

In your opinion, what are the biggest opportunities and challenges
1000 character(s) maximum

- The long-term strategy should clearly set out the EU ambition to reach net-zero emissions. A decision on whether this is met before, on or after 2050 would need to be underpinned by a detailed impact assessment by sector including macroeconomic modelling. Regardless of the precise timing the long-term strategy should send a clear signal that Europe is moving toward a net-zero emissions economy.
- The EU needs to employ and commercialise the technologies available to it today to achieve rapid emissions reduction by 2050 and a just transition to a low-carbon economy.
- Carbon Capture and Storage (CCS) features in 114 out of 120 modelled pathways in the IPCC's 5th asessment report to meet 0.9-2.3c global warming. Furthermore, the IPCC has estimated the cost of a pathway without CCS to be 138% higher.
- CCS is a multi-pathway and cross-sector climate solution as it can ensure deep emissions reduction in power, decarbonisation of gas (hydrogen), industrial processes, and bioenergy (bioCCS to enable negative emissions). This will enable low carbon heat, low carbon transport and low-carbon industries.

(928 characters)

Energy

The energy system today is responsible for ca. 75% of the EU's greenhouse gases emissions and undergoes a rapid transition due to e.g. cost reduction of renewables, improvements of energy-efficiency and rapid development of new technologies (e.g. batteries) driven i.a. by policies put forward by the EU and its Member States. Accelerating this change will play a central role in the transition of our economy towards a carbon-neutral economy.

In the following table listing different energy technologies, please rank each option in the table below from 1 (important) to 5 (not important) on what role you think they will play in the clean energy transition (not all options need to be ranked)?

	1	2	3	4	5
Energy efficiency reducing the need to produce energy	◉	○	○	○	○
Renewable energy from wind, solar or hydro	◉	○	○	○	○
Other forms of renewable energy, like geothermal, wave or tidal	◉	○	○	○	○
Nuclear energy	○	○	○	○	○
Fossil fuels with Carbon Capture and Sequestration	◉	○	○	○	○
Solid biomass for heat and electricity production	◉	○	○	○	○
Advanced Liquid Biofuels	◉	○	○	○	○
Biogas from agricultural and domestic waste	○	◉	○	○	○
Electricity storage (e.g. batteries)	◉	○	○	○	○
Hydrogen (produced in a carbon-neutral manner)	◉	○	○	○	○
E-fuels derived from hydrogen	○	○	○	◉	○
Other	○	○	◉	○	○

ZEP AC56 19.09.2018
Agenda Item 8.a.iii.
ZEP response to the Commission consultation on the long-term strategy

* If other, please specify:
Text of 3 to 200 characters will be accepted

"fossil fuels with CCS" can refer to gas-fired power stations or production of hydrogen through hydrocarbon reforming with CCS

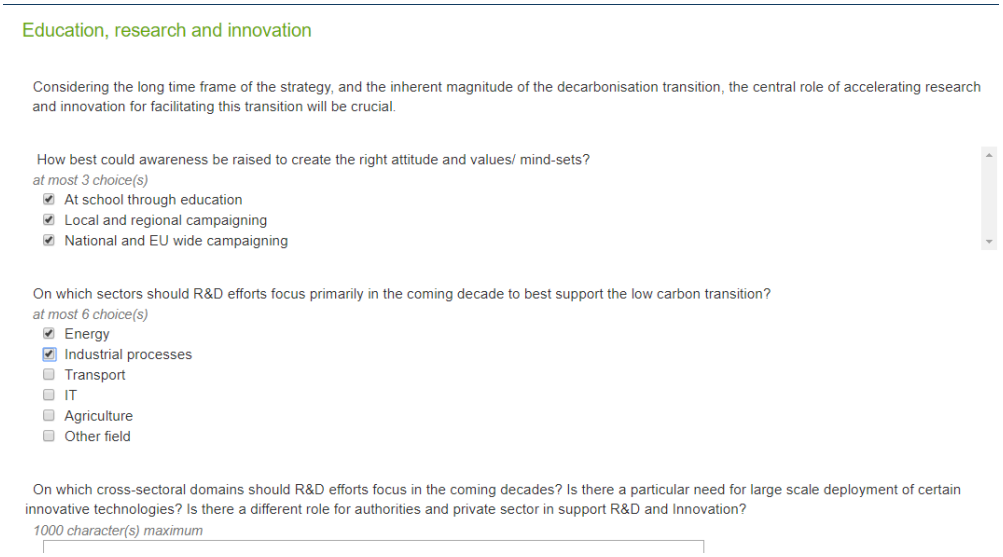
"Hydrogen (produced in a carbon-neutral manner)" can refer to hydrogen from hydrocarbon reforming with CCS (200 characters)

What are the biggest opportunities, including for the wider economy? What are the biggest challenges, including as regards public acceptance or the availability of land and natural resources, related to these future developments?
2000 character(s) maximum

- CCS can provide significant value for the economy in Europe; by providing the least-cost pathway to meeting climate targets and through creation and retention of highly skilled jobs and sectors. A study by SINTEF in 2018 demonstrated that a European CCS industry could support up to 40,000 jobs by 2030 and up to 90,000 by 2050, both by retaining existing high-value jobs in process industries and creating new jobs through the development of a CCS industry[1]- hence meeting the EU goal of a just transition to a low-carbon economy.
- As well as being an indispensible solution for emissions from industry CCUS can provide a solution for emission reduction for heating, through production of low-carbon hydrogen. It can also provide flexible low-carbon power which can complement and facilitate integration of high levels of renewables into the power grid.
- A study by ZEP in 2017 demonstrated that electrifying just European chemical processes would require 140% of total current electricity generation in Europe[2]. Large-scale electrification of all sectors poses significant challenges for land use, and would most likely lead to high volumes of renewable electricity being imported from outside the EU.
- CCUS can reduce the demand for vast amounts of new electricity generation; a study by Poyry in 2018 demonstrated that with a balanced energy mix for power, heat and transport which included CCS for hydrogen production, electricity demand would still increase by 60% to 2050 in a completely decarbonised economy. By contrast, an "all-electric" pathway saw a rise in peak electricity demand of 180%[3].
- In pathways with high levels of electrification, CCS can provide large volumes of flexible power generation. (1,803 characters)

[1] https://www.nho.no/siteassets/nhos-filer-og-bilder/filer-og-dokumenter/energi-og-klima/industrial-opportunities-ccs_english.pdf
[2] http://www.zeroemissionsplatform.eu/library/publication/276-climate-solutions-for-eu-industry.html
[3]http://www.poyry.com/sites/default/files/media/related_material/poyrypointofview_fullydecarbonisingeuropesenergysystemby2050.pdf

ZEP AC56 19.09.2018
Agenda Item 8.a.iii.
ZEP response to the Commission consultation on the long-term strategy



Education, research and innovation

Considering the long time frame of the strategy, and the inherent magnitude of the decarbonisation transition, the central role of accelerating research and innovation for facilitating this transition will be crucial.

How best could awareness be raised to create the right attitude and values/ mind-sets?
at most 3 choice(s)
- [x] At school through education
- [x] Local and regional campaigning
- [x] National and EU wide campaigning

On which sectors should R&D efforts focus primarily in the coming decade to best support the low carbon transition?
at most 6 choice(s)
- [x] Energy
- [x] Industrial processes
- [ ] Transport
- [ ] IT
- [ ] Agriculture
- [ ] Other field

On which cross-sectoral domains should R&D efforts focus in the coming decades? Is there a particular need for large scale deployment of certain innovative technologies? Is there a different role for authorities and private sector in support R&D and Innovation?
1000 character(s) maximum

- CCS and low carbon hydrogen have potential to decarbonise multiple sectors at scale, so should be a core focus for R&D over the next decade- both in technology and in business models.
- Large scale deployment of CCS in the 2020s is critical to ensuring it is an option for industry, heat and power in 2030 and beyond. The Commission's Strategic Energy Technologies plan (SET Plan) sets targets for development of pilot and commercial-scale CCUS projects by 2020.
- Initiatives in industrial hubs such as Rotterdam (NL) and Teesside (UK) seek to combine CO_2 capture with both permanent storage (CCS) and utilisation (CCU). Under the proposals for Horizon Europe, industrial CCS is included in the "climate, energy and mobility" cluster whereas CCU is included in "Digital and industry". This could be a barrier to effective deployment of CCUS in industrial clusters, and to permanent storage of CO_2 from industry.
- R&D funding for low carbon hydrogen production is currently restricted to electrolysis. Reforming of natural gas with CCS should also be eligible as this will be able to provide the volumes of low carbon hydrogen needed for use in industry or heat networks in the coming decades.

(999 characters)

ZEP AC56 19.09.2018
Agenda Item 8.a.iii.
ZEP response to the Commission consultation on the long-term strategy

Role of CO_2 removal

The objectives of the Paris Agreement are challenging and many scientists consider that it will be necessary at a certain point to remove a significant amount of CO_2 from the atmosphere in order to stay below 2°C and certainly in case the temperature increase should be limited to 1.5°C. There are a limited number of options to remove CO_2 from the atmosphere.

The removal of CO_2 can be accomplished by 1) capturing CO_2 via natural photosynthesis or artificial chemical processes, and then 2) storing CO_2 in long term geological sites or within biomass and (bio)materials.

Rank from 1 (important) to 5 (not important) on what role you think this removal and storage options can have in the EU to deliver negative emissions taking into account issues such as economic and technical feasibility, storage potential, environmental integrity and social acceptance.

Capture of CO_2 from the atmosphere

	1	2	3	4	5
Intensive afforestation	◉	○	○	○	○
Forest and cropland residues	◉	○	○	○	○
Woody perennial plantations	◉	○	○	○	○
Direct Air Capture	◉	○	○	○	○
Other	◉	○	○	○	○

*If other, please specify:
Text of 3 to 200 characters will be accepted

Negative emissions through Direct Air Capture and Bioenergy with Carbon Capture and Storage (BECCS) are both dependent on carbon capture and storage being available. (142 characters)

Storage of CO_2

	1	2	3	4	5
Carbon capture and storage (CCS) with enhanced oil or gas recovery	○	◉	○	○	○
CCS in onshore geological sites	◉	○	○	○	○
CCS in offshore geological sites	◉	○	○	○	○
Carbon Capture and Utilisation (CCU) (long lived products)	○	◉	○	○	○
Increased permanent carbon stock in soils	○	○	○	○	○
Increased permanent carbon stock in plants	○	○	○	○	○
Other	○	○	○	○	○

What main barriers do you see currently preventing the large scale deployment of CCS, including on how to use it to generate negative emissions? What are the particular challenges related to biomass CCS? What type of CCU (Carbon Capture and Utilization) would lend itself to create long term storage? Are there other technologies that should also be considered? What policies do you think the EU should pursue to better help development and deployment?
1000 character(s) maximum

The main barrier to large scale deployment of CCS currently is lack of a business model in Europe. The carbon price under EU ETS is insufficient to drive development of low carbon technologies, and as a result only technologies which have benefited from dedicated support schemes have been deployed at scale (e.g. wind, solar). Meanwhile the ETS Directive places a significant liability for long-term emissions monitoring on operators which means private sector investment in storage is highly unlikely in the current market. ZEP has made detailed recommendations on how to develop transport and storage infrastructure as a public good, to stimulate a market.

The paper attached to this submission highlights key recommendations for the deployment of CCS in Europe, which remains essential to meeting 2050 climate targets.

Regarding utilisation, only mineralisation provides long-term (but not permanent) CO_2 storage. As this represents a small market for CO_2 use, CCS is crucial for industry as well as other sectors.

Industrial Sector	Technology Option	Mitigation Potential	Economic Viability	Technology readiness	Year of large scale deployment
Cement	CCS - Oxyfuel/ Pre and post-Combustion	High (90%+), can address process emissions most effectively	Medium, depends on the creation of a CO2 transport and storage infrastructure and support in market for low-carbon cement. General CCS cost fro Cement 50-100€/tCO2	Depends on capture technology, generally high: ready to be deployed	2030+
	CCU - Mineralisation	Medium, Small (1-3% of total process emissions) market size but high product longevity means CO2 stored	Medium, it can help make a stronger business case for capturing CO2 to be stored	Lab Scale	2030+
Chemicals	CCU - Ptg/PtL	Small, the "double-use" of CO2 means under optimal conditions (fully zero-emission electricity) 50% emission savings.	Low, vast zero-carbon electricity requirements drives prices into the several hundred € per tCO2	Technology is deployable but suffers from high inefficiencies and clean energy requirements	2050+
	CCU - Circularity	Medium, can replace fossil carbon intake	Medium, depends on electricity prices	Requires extensive zero carbon electricity	2050+
	CCS	High (90%+)	High, mostly pure waste streams mean capture cost minimal, total cost at €30€/tCO2 (ammonia) €30-80/t (ethylene/propylene	Developed and ready	2030+
Steel	CCU - short lived chemicals (plastics, fuels)	Tiny, any CO2 from industry sites used in short lived products do not decarbonise the steel industry	Low, High capture costs to produce chemicals without providing a decarbonisation benefit to steel	Pilot Project Stage (Carbon2Chem)	2050+
	CCS - Hydrogen Route	High (90%+)	Medium to High, depends on Hydrogen cost. Requires new production route	Pilot Project Stage (Hybrit, SALCOS)	2030+

	CCS	High (90%+)	Medium, due to impure waste stream increasing capture costs, 50-100€ t/CO2. High econonmic viability with new production methods	Comercial demonstration by Emirates Steel Industry CCS Project. Pilot Project Stage in Europe (Hisarna CCS Netherlands)	2030+

ZEP AC56 19.09.2018
Agenda item 8.a.v.
ZEP response to the Commission consultation on a framework for sustainable investment

REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on the establishment of a framework to facilitate sustainable investment

Response from the Zero Emissions Technology and Innovation Platform (ZEP)

1. Introduction

ZEP welcomes the opportunity to provide input to the Commission's proposal to introduce a framework for sustainable finance, recognising that investment in low-carbon technologies and infrastructure will need to increase dramatically if the EU is to meet its 2050 emissions reduction target.

Alongside other renewable, sustainable and/or emissions reduction technologies, the inclusion of Carbon Capture, Utilisation and Storage (CCUS) in article six of the proposed legislation is of vital importance, given the critical role CCUS can play in reaching deep emissions reduction across multiple sectors. In particular, in industrial sectors such as steel and cement, CCS is currently the only process able to achieve substantial, large-scale emissions reductions in line with the EU climate objectives for 2050[1]. CCUS is also currently the only technology capable of reducing non-energy emissions from industrial processes. CCUS also enables the production of low-carbon hydrogen in large volumes which will be needed to replace fossil-fuel based feedstocks in industry, and can also be used for decarbonisation of transport and heating.

Carbon Capture and Storage is also essential for negative emissions technologies, whether utilising bioenergy or Direct Air Capture. ZEP's proprietary modelling work has shown that negative emissions will be key to meeting the Paris Agreement goal of achieving net zero emissions through a balance of emissions and sinks in the second half of the century[2].

2. Technical screening criteria

ZEP welcomes the proposal for technical screening criteria. In particular ZEP advised the Commission to take the following into account:

- Often, energy systems modelling assumes that carbon capture technologies have a maximum CO_2 capture rate of 90%. A recent study by DG ENER used this assumption to conclude that Direct Air Capture (DAC) would be needed to mitigate the final 10% of emissions, making this an expensive option[3]. However, existing CCS technologies can already achieve nearly 100% capture rates[4]. Doing so may be more costly and therefore any decision to capture less is a commercial one, and not to do with technical feasibility. The technical screening criteria should therefore

[1] https://www.iea.org/publications/freepublications/publication/Cement_Roadmap_Foldout_WEB.pdf
[2] http://www.zeroemissionsplatform.eu/news/news/1689-launch-of-zep-report-qrole-of-ccus-in-a-below-2-degrees-scenarioq.html
[3] https://ec.europa.eu/energy/sites/ener/files/documents/final_draft_asset_study_12.05.pdf
[4] https://ieaghg.org/exco_docs/2017-TR3.pdf

not make assumptions about maximum capture rates, but assess projects on their overall decarbonisation potential.

- The post-combustion CO_2 capture process comes with an energy penalty from heating and cooling. While this may mean a plant is less "efficient" than its unabated equivalent, the resulting CO_2 saving means that the climate mitigation benefit significantly outweighs the efficiency loss. The CO_2 savings should be prioritised in the screening criteria while encouraging the most efficient processes to be supported.

- Article 5 describes the requirement that 'economic activity contributes substantially to one or more environmental objectives and does not significantly harm any of the others'. This could exclude projects which overall have a net-positive impact in meeting the objectives. Instead, the relative merits of each project should be considered, and projects should on balance meet the overall objectives as defined in Article 5.

  There are instances in which contributing significantly to one of the defined objectives will detract from another. For example, permanent storage of CO_2 takes carbon dioxide out of the economy and therefore could be seen to damage "circularity". However, the market for CO_2 use is relatively small and is set to remain small[5], and therefore the amount of CO_2 that could be recycled for use in products is minimal compared to the amount that will need to be permanently stored.

- Furthermore, geological storage of CO_2 removes it permanently from the atmosphere. In the case of many products which are produced using captured CO_2, the CO_2 is eventually released back to the atmosphere, in some cases in a relatively short time frame (for example fuels and soft drinks). Therefore in order for CO_2 utilisation to be classed as sustainable it should be able to demonstrate a substantialCO_2 reduction over the whole lifecycle of the product (cradle-to-cradle).

- There is a risk that investment in industrial activity not meeting the requirements of this regulation could be moved to countries outside the European Union. Climate change is a global issue and the European Commission should ensure that energy intensive industries within its region are incentivised for managing emissions where possible rather than moving facilities, which would affect jobs and future economic development in Europe.

3. Technology neutrality

The purpose of the Regulation is to define a framework for sustainable investments, not to define each individual eligible technology, which could in-turn stifle innovation in future clean technologies. It is therefore essential that the principle of technology neutrality should be inherent within the Regulation and Delegated Acts, including the proposed technical screening criteria, so that private investment in clean and innovative projects can be encouraged and supported without prejudice.

[5] https://www.nature.com/articles/nclimate3231

Life Cycle Analysis of individual projects should be undertaken to assess the overall CO_2 reduction of a project without excluding specific industries.

4. Platform on sustainable finance

ZEP welcomes the proposal to set up a Platform on Sustainable Finance, with representatives from finance and industry. As the Commission's technical adviser on Carbon Capture, Utilisation and Storage, ZEP would be pleased to contribute expertise to this Platform on a regular and formalised basis.

ZEP Advisory Council 56

19th September 2018

Agenda Item 8.b.: Network Technology update

NWT co-chairs: Filip Neele (TNO), Arthur Heberle (Mitsubishi Hitachi Power Systems)

The next NWT meeting will take place on 31st October 2018 in Brussels. An agenda will be circulated shortly.

TWG Collaboration across the CCS chain

TWG Co-chairs: Ward Goldthorpe (Sustainable Decisions)/Hallvard Høydalsvik (Gassnova)

WS1 (storage-related risks) has produced a draft report, which will be presented by Filip Neele during the AC. A draft copy of the report will be circulated after the AC for comment.

WS2 (risk sharing in a CCS network) organised teleconferences on 17th July, 02nd August and 22nd August. Members discussed different CCUS investment barriers, business risks and potential de-risking mechanism.

The group holds a joint workshop with the ERA-NET ACT ELEGANCY and ALIGN projects on 18th September in Brussels.

The workshop is organised to bring together the work and interim results of ELEGANCY WP3 and the ZEP TWG workstream 2.The intention is to enable experts, members of the ELEGANCY and ALIGN-CCUS case studies, and wider stakeholders to discuss, debate and provide feedback on the interim results. The outcomes of the workshop will feed into the ZEP TWG report to be delivered in December 2018, the ELEGANCY WP3 report on business models and commercial structures for H_2-CCS chains in April 2019, and the ALIGN-CCUS investigation into a commercial methodology for CO_2 cluster development to be undertaken during 2019.

TWG CCU and Sink Factor Methodology

TWG Chair: Rob van der Meer (Heidelberg Cement)

At the last Advisory Council, it was agreed that the TWG would focus its efforts on inputting into the Commission's work on defining LCA methodology rather than developing a new methodology.

DG ENER will be responsible for determining the emissions reduction from CCU fuels through a Delegated Act under the Renewable Energy Directive (RED). DG ENERG said that it will be required to adopt by 2021 at least a Delegated Act setting out a GHG calculation methodology for recycled carbon fuels and renewable fuels of non-biological origin.

Details about the process have not yet been decided but the process will include a consultation of experts from the Member States. The Secretariat contacted DG ENER (Bernd Kuepker) and asked

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

for further information. Bernd Kuepker was not in the position to provide further detail about the Commission's time schedule.

DG CLIMA commissioned a study on LCA, which was meant to be published in June. The publication was postponed to 17th September. Therefore, the TWG meeting on 29th August was cancelled. The TWG will meet on 18th September to discuss ZEP's response to the study.

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