

IWG9 Plenary and ZEP 75th Advisory Council

14 June 2023, 10:30-17:00 CET

Agenda Item 1: Introduction and welcome

1.a. Meeting instructions

The IWG9 Plenary and ZEP AC75 meeting will be a physical meeting. **It will be held at ACE events, Avenue d'Auderghem 22 in Brussels (Metro Schuman).**

Physical participation is strongly encouraged. Virtual participation will be facilitated if required, via Teams. The link to join virtually can be found in the Outlook calendar invitation, you can also [click here to join](#).

1.b. Draft meeting agenda

The draft agenda for the IWG9 Plenary and 75th meeting of the Advisory Council is appended as pre-read 1.b.

1.c. IWG9 Plenary and ZEP AC74 draft meeting minutes

The draft meeting minutes of the previous IWG9 Plenary and 74th meeting of the ZEP Advisory Council, which took place on 22 March 2022, are appended as pre-read 1.c.

1.d. ZEP ACEC April meeting minutes

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

1.e. ZEP ACEC May meeting notes

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

DRAFT MEETING MINUTES

ZEP 74th ADVISORY COUNCIL AND IWG9 PLENARY

22 March 2023, 10:30-17:00 CEST

In-person meeting in Brussels (and online)

1. Welcome and introduction

Eve Tamme/Chair welcomes participants and confirms Quorum verified.

Chair introduces herself and welcomes the new ZEP member 8Rivers, represented in the AC by Jennifer Diggins, as well as the new AC member for IFPEN, Cecile Barrere-Tricca.

Chair asks for approval of

- the IWG9 Plenary/AC74 draft meeting agenda – approved.
- the IWG9 Plenary/AC73 draft meeting minutes – approved.
- the ACEC January draft meeting minutes – approved.

2. ZEP and IWG9 2023

POG highlights the ZEP conference on 26 April and invites participants to register, he gives an update on the election of a new ZEP Chair as well as the strategic seminar organised in February.

Asking the AC for approval of the focus and budget for the ZEP additional work programme, POG notes the background with decreased EU funding and increased funding from members, and presents the basis for the additional ZEP work programme, focused on outreach, public affairs and communication: additional resource to be employed in CCSA serving ZEP, enhanced advocacy and communication activities and external events, as well as linked administrative support.

Asking the AC for approval of the way forward and starting the new ZEP Network Project, POG notes the great need to support the many market-ready projects and refers to the previous AC approval. He presents the basis for the new Network, including addressing enablers and barriers, enabling knowledge sharing, improve public perception, and de-risking projects focusing on specific regions, also referring to Governments, public authorities, and the ZEP Government Group.

POG gives an update regarding the 2022 budget follow-up and the very sound financial situation, where the ZEP-C has some €355,000 in financial reserves at the beginning of 2023. He notes the two items additional items for the ZEP-C 2023 budget – funding of the ZEP chair and the additional work programme and asks the AC to approve the budget.

Chair invites the ZEP AC to approve the additional work programme, delegating to the ACEC the preparations and starting of the new Network, and the 2023 ZEP-C budget, including funding for the ZEP Chair and the ZEP additional work programme – all approved.

3. Updates from governments & projects

Jasmin Sharzad (JS) gives a presentation on Denmark's plan and recent milestones on CCS deployment, highlighting the plan for 52 Mtpa domestic CO₂ storage possibilities and stating that a new licensing round should take place this year. Answering participants' questions, JS highlights that engagement in public perception is crucial for onshore storage and adds that Denmark has a mandate to engage with like-minded countries in the EU/EEA.

Sara Budinis gives a presentation on the International Energy Agency (IEA) work and findings on CCS and CCU, highlighting that the IEA will release publicly its database of CCS and CCU projects. The IEA will publish a report on business models for CCS and CCU applications in 2023/2024 and organise a workshop on DACCS on 31 May.

Sander Nijman gives a presentation of the Aramis project. Final investment decision is expected in 2024/2025 and storage potential could reach 10 Mtpa in 2030. CCS on ships is not being considered at the moment.

4. Updates from the Networks

a. Network Policy & Economics

CS gives an update on the latest Network meeting, noting discussions on the agreement on the EU ETS revision, the memorandum of understanding signed between Equinor and RWE, the review process for the CO₂ storage directive Guidance Documents, the CCUS Forum and the revision of the TEN-T regulation. ZEP co-signed a letter calling on the inclusion of multimodal CO₂ transport in the TEN-T. He gives an update from the latest TWG Policy & Funding meeting, noting the work on a draft ZEP position on the Green Deal Industrial Plan and the Net-Zero Industry Act, and that the 50 Mtpa objective by 2030 is a very positive signal.

CAB provides an update from the working group on CO₂ transport by ship, noting the preparation of the scope and the first inputs to the report. CAB and AF present the recent ZEP consultation responses that are up for AC approval:

- DNV's call for inputs on the CO₂ Storage Directive Guidance Documents
- DG CLIMA's consultation on the key features of the Innovation Fund
- The EC consultation on the list of PCI/PMI candidates in CO₂ networks
- The EC consultation on competitive bidding schemes for hydrogen under the Innovation Fund.

All are approved.

The two open EC consultations on the Net-Zero Industry Act and the European Critical Raw Materials Act, and the expected consultations on the CCUS Communication and the EU 2040 climate target are noted.

b. Network Technology

FN gives an update on the latest Network meeting, noting discussions on the new Network Projects, a presentation on the ISO work on standards for CO₂ storage, and presentations by OGE and PilotSTRATEGY. He highlights that TWG CDR will work on ZEP responses to the EC proposal for a

regulation on an EU certification for carbon removals and the Article 6.4 Supervisory Body call for feedback.

AH presents the new TWG supply chain that will investigate bottlenecks and dependencies along the CCS and CCU supply chain, noting that larger volumes of CO₂ entail larger demand of material and equipment. The aim is to see whether there are enough resources and workers available.

FN mentions ZEP's response to the EC consultation on the Horizon Europe work programme, highlighting the need for knowledge sharing and the importance of coordinated calls at the regional, national, and EU level. FN and AF present the recent ZEP consultation responses that are up for AC approval:

- DG RTD's consultation on the Horizon R&I programmes
- Article 6.4 Supervisory Body call for input on carbon removals
- EC call for views on the proposed certification framework for carbon removals

All are approved.

5. Updates from External Relations Group

POG provides a short update of ZEP activities, highlighting the ZEP conference on 26 April – the most important place to be for CCS and CCU this year, the successful ZEP application to the EU Sustainable Energy Week on 20-22 June.

POG gives a background to the proposed merger of the ERG and the Communications Group, he notes the increased focus on outreach and communication and that the ZEP vice-chairs for Oil & gas, Research, and Industry have been asked to nominate ERG co-chairs, and asks the AC for endorsement. Both are endorsed by the AC.

6. Updates on monitoring and reporting regulation and carbon removals

Ioannis Markoudakis gives a presentation on the revision of the monitoring and reporting regulation. The revision will run from March to November and there will be a public consultation in Q3 2023. The aim of the revision is to clarify, simplify, and make rules more cost-efficient. New rules will be laid out for municipal waste incineration, renewable fuels of non-biological origin (RFNBOs) and recycled carbon fuels. The revision could cover CCS and CCU if there is enough time.

Questions and answers follow.

Fabien Ramos (FR) presents the EC proposal for a regulation on an EU certification for carbon removals and the ongoing process. There is significant interest from the European Parliament and the Council for this proposal. The EC is aiming for a political agreement in January/February 2024. The EC expert group met on 7 March and had a good discussion. After the summer there will be expert group meetings on BECCS/DACCS and the certification process. A workshop on geological storage is planned for October as a basis for a paper on existing EU frameworks and gaps. FR takes questions from participants and highlights that BECCS and DACCS are priorities.

Kristin Jordal (KJ), ZEP's representative in the expert group, provides an update from the first meeting. The expert group is focused on the methodology and the CCS+ was mentioned as one

possibility. KJ notes that clarity is needed regarding the certificates' timescale/permanence. This is also highlighted by LE in the following discussion on CDR and permanence. POG notes ZEP's current position here, that removals will need geological storage of CO₂.

7. The Green Deal Industrial Plan

Daniel Kitscha (DK) gives a presentation of the EC's proposed regulation, the Net-Zero Industry Act, noting among other things that CCS is defined as a strategic Net-Zero technology, and that the proposal includes a legally binding target of 50 Mtpa of CO₂ by 2030 with the aim to reinsure industry investors. He adds that the EC aim is to have the proposal adopted before the 2024 EU elections. DK also notes that €3 billion will be awarded under the third large-scale Innovation Fund call with €1 billion for general decarbonisation. Innovation Fund auctions for renewal hydrogen will start in the autumn to award €800 million.

Many questions are asked in the discussion that follows.

8. CCUS Forum

Chris Bolesta gives an update on the CCUS Forum and the four working groups, and the expert group on CO₂ specifications, noting that a public consultation on the strategy will take place in April, and that the Forum plenary is scheduled for late November in Denmark.

POG gives an update regarding the WG Industrial Partnerships, noting the ZEP written input – that the platform is ideal to be this partnership since it, including the new Network Projects, gathers the right stakeholders and performs the tasks described as crucial by the Industrial Partnership co-chairs.

9. EC update on CO₂ infrastructure

FN presents the preliminary findings of the TNO/Trinomics study on regulation for CO₂ transport and storage, noting the policy recommendations:

- open-access infrastructure,
- overcapacity and oversizing,
- forum to coordinate emitters and storage,
- support Central and Eastern Europe,
- decouple emitters from transport and storage,
- EU guidance for transport,
- prioritise BECCS and DACCS,
- insurance to cover financial liabilities for storage, and
- avoid too early overregulation.

A discussion follows.

Dražen Tumara provides an update on the Joint Research's work on a cost-optimal way from CO₂ sources to sinks via pipelines and maritime ships that is planned to be finished in May 2023. He

describes the methodology used to model cost-optimal transport routes. For 2030, the study relies on existing and announced projects and foresees 70 million tonnes of CO₂ transported by pipeline and ship. The model used can incorporate the 50 Mtpa CO₂ target laid out in the Net-Zero Industry Act proposal.

Questions and answers follow.

Katrien Prins provides an update on the state-of-play of the 6th list of projects common and mutual interest, highlighting that there is no theoretical limit to the number of projects that can be granted PCI/PMI status.

10. SET Plan

Eirik Velle Wegner Lønning notes that there is no significant new update. LE notes that the Net-Zero Industry Act should impact the Horizon Europe programme.

11. ZEP and IWG9 actions / Closing remarks and next meeting

Chair notes that 8 Rivers could not attend the meeting and that they will present themselves at the next meeting.

Chair thanks all for participating and notes the next AC/Plenary meeting dates for 2023: ZEP AC75 and IWG9 Plenary on 14 June, 13 September and 13 December.

Attendants		
1	Eve Tamme	Zero Emissions Platform
3	Sebastian Busch	NRW.Energy4Climate
4	Anna Dubowik	Negative Emissions Platform
5	Rodolphe Nicolle	European Lime Association
6	Ståle Aakenes	Gassnova
7	Luke Warren	bp
8	Sander Nijman	Shell
9	Christian Schwarck	Shell
10	Pauline Bourguignon	TotalEnergies
11	Eric De Coninck	ArcelorMittal
12	Filip Neele	TNO
13	Winston Beck	Heidelberg Materials
14	Lamberto Eldering	Equinor

15	Per-Olof Granström	Zero Emissions Platform
16	James Cogan	Ethanol Europe
17	Nils Røkke	SINTEF
18	Jonas Helseth	Bellona Europa
19	Eirik Lønning	European Commission
20	Axel Scheuer	IOGP Europe
21	Alberto Pettinau	Sotacarbo
22	Alex Blades	UK government
23	Anders Melhus	Altera Infrastructure
24	Anders Uihlein	European Commission
25	Anton Manakhov	Aramco
26	Arash Hedayat	Repsol
27	Cecile Barrere-Tricca	IFPEN
28	Bernice Maxton-Lee	ETH Zurich
29	Caterina De Matteis	IOGP Europe
30	Codie Rossi	CATF
31	Constantin Sava	GeoEcoMar
32	Eadbhard Pernot	CATF
33	Daniel Kitscha	European Commission
34	Eric Ingels	Pall Corp
35	Timo Ritonummi	Finnish Ministry of Economic Affairs and Employment
36	Carol Paquier	French Ministry for the Ecological and Solidarity-Based Transition
37	Giovanni Vergine	Eni
38	Gülten Özçayan	Tenmak
39	Jarand Gauteplass	University of Bergen
40	Jan Kjärstad	Chalmers University of Technology
41	Guillaume Janin	NeoCarbon
42	Jannicke Gerner Bjerkås	Hafslund Oslo Celsio
43	José Moya	European Commission
44	Klaus Meyer	Bosch

45	Kristin Jordal	SINTEF
46	Leila Faramarzi	Vallourec
47	Lieselot Marinus	Port of Antwerp-Bruges
48	Liv Rathe	Norsk Hydro
49	Luke Warren	bp
50	Marine Plassier	French Ministry for the Ecological and Solidarity-Based Transition
51	Martijn van de Sande	Netherlands Enterprise Agency
52	Michael Evans	Cambridge Carbon Capture
53	Michał Wondolowski	Bellona Europa
54	Francis Morin	McDaniel
55	Nicolai Mykleby-Skaara	Aker Carbon Capture
56	Nicolò Cairo	ETN Global
57	Ane Gjengedal	Norwegian Ministry for Petroleum and Energy
58	Roberto Ferrario	Eni
59	Sebastian Fischer	German Federal Ministry for Economic Affairs and Climate Action
60	Sina Blix Prestmo	ECCSEL
61	Sophie Wilmet	Cefic
62	Stefan Gielis	Air Liquide
63	Stefano Benato	
64	Stuart Haszeldine	University of Edinburgh
65	Svante Söderholm	Swedish Energy Agency
66	Sytze Ferwerda	Porthos Development
67	Thomas Le Guénan	Bureau de Recherches Géologiques et Minières
68	Tine Leroux	Flemish Energy and Climate Agency
69	Hanife Tuzcuoğlu	Tenmak
70	Vicente Cortés Galeano	Inerco
71	Ward Goldthorpe	Sustainable Decisions
72	Wolfgang Haider	Carbon2ProductAustria
73	Xavier Pettiau	Lhoist

74	Yelda Guven	ExxonMobil
75	Arthur Heberle	
76	Ioannis Markoudakis	European Commission
77	Fabien Ramos	European Commission
78	Chris Bolesta	European Commission
79	Katrien Prins	European Commission
80	Jürgen Gusterhuber	Austrian Federal Ministry of Finance
81	Frederik Pieters	BASF
82	Rebecka Larsson	Bellona Europa
83	Morten Skovgaard Olsen	Danish Energy Agency
84	Julia Mülheiss	e.on
85	Stijn Santen	EBN
86	Panos Deligiannis	Ecolog
87	Arjan van Ginkel	Endress+Hauser
88	Luisa de Castro	Equinor
89	Helena de Sousa-Falcao Montull	Equinor
90	Nicolò Cairo	ETN Global
91	Federico Benito Dona	Eurofer
92	Robin Clowes	ExxonMobil
93	Natalya Hermann-Kopotilov	German Federal Ministry for Economic Affairs and Climate Action
94	Nikolaos Koukouzas	CERTH
95	Ana Mingo	Norsk Hydro
96	Tim Dixon	IEAGHG
97	Ayan Bhattacharji	Interconnector
98	Michalis Agraniotis	Mitsubishi Power Europe
99	Ross Brown	Shell
100	Marine Valdois	ExxonMobil
101	Paola Mazzuchelli	CIRCE
102	Bram Sommer	Shell
103	Aslak Hellestø	Northern Lights

104	Heimo Friede	Siemens Energy
105	Marie Bysveen	SINTEF
106	Miguel Angel Hernando García	Tecnicas Reunidas
107	Ümit Çalıkoğlu	Turkish Ministry of Energy and Natural Resource
108	İrem Işık Çetin	Tenmak
109	Çağrı Yildirim	Tübitak
110	Hooman Haghighi	Wood
111	Andreas Weiss	Forschungszentrum Juelich
112	Eleonora Andaloro	Eni
113	Flavia Cassiola	Shell
114	Arash Hedayat	Repsol
115	Alexis Perrier	Lhoist
116	Ana Maria Staack Reis Machado	University of Lisbon
117	Bruno Langlois	Khimod
118	Cécile Boyer	Vicat
119	Fred Selhorst	Victrol
120	Jean-Louis Roux Dit	NeoCarbons
121	Giovanni Vergine	Eni
122	Jeromine Albertini	Veolia
123	Kerstin Schwalm	e.on
124	Pana Ligia	Saipem
125	Michał Piekutowski	KGHM
126	Mohamed Magdeldin	Sumitomo SHI
127	Priscilla Moukouri	Suez
128	Przemysław Grojs	PKN Orlen
129	Tino Villano	CRH
130	Wolfgang Haider	Borealis
131	Yoshihiro Sawada	Japan CCS
132	Per-Olof Granström	ZEP Secretariat
133	Charles-Albert Bareth	ZEP Secretariat

134	Ana Faria	ZEP Secretariat
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DRAFT

ACEC April meeting

18 April 2023

9:00-11:00 CET

Draft meeting minutes

1. Introduction and welcome

Chair/ET welcomes all and confirms quorum.

Chair asks for approval of the ACEC April meeting agenda – agenda is approved. Asks for endorsement of draft meeting minutes from the 74th Advisory Council meeting, held in March – minutes are endorsed. The draft minutes will be brought to the AC75/Plenary on 14 June 2023 for approval.

2. ZEP development

POG highlights the actions from AC74, noting the good attendance, the delegation to the ACEC to prepare for the new Network Projects, and the invite to the vice-chairs to select chairs for the ERG.

POG gives a short update on the ZEP additional work programme. Regarding the setup to start Network Projects, POG notes the discussions held with the CCUS Forum Industrial Partnerships WG co-chairs, regarding ZEP's important role. He highlights the objectives of the new Network and way forward: a meeting with the vice-chairs for Industry (WB), Oil & Gas (LE) and the NWT co-chair (FN) to prepare for the start – further define the network scope, propose co-chairs, and highlight projects to include – to be discussed at May ACEC, presented at AC75/Plenary, and the network to start directly afterwards.

In the discussion that follows, the importance that the Industrial Partnerships WG co-chairs communicates the ZEP input and importance to the EC, noting the risk of duplication. It is also noted regarding de-risking projects that the Net-Zero Industry Act (NZIA) proposal, by creating an obligation on licensees, creates a new stakeholder group (smaller companies) which would benefit from the network exchanges and linkages with emitters. It is also proposed that one of the co-chairs of the new network comes from the R&I community. A meeting with DG ENER is proposed in order to discuss ZEP's alignment with the proposed industrial partnership.

The way forward regarding the new Network Projects is endorsed.

3. Updates from Networks

a. NWPE

LE and CS provide the Network Policy and Economics (NWPE) update, outlining the discussions at the latest NWPE and TWG Policy and Funding meetings, respectively. CS highlights the discussions held to prepare input to the European Commission and co-legislators on the Net Zero Industry Act.

CAB gives an update on the ZEP/CCSA working group on CO₂ transport by ship in Europe, describing the objectives and timeline. CAB highlights four open consultations – on ‘Sustainable investment – EU environmental taxonomy’, Innovation Fund pilot auction for renewable hydrogen production, the EU 2040 climate target, and the Net Zero Industry Act adopted proposal – and proposed way forward.

The forward plans in relation to the 2040 climate target and the TEN-T are discussed. WB points out that amendments to the TEN-T pertaining to CCS were dropped and LE mentions that a discussion is needed regarding a ZEP reaction. The item will be brought up at the next WG Policy & Funding meeting.

The ACEC endorse the proposed way forward for the consultations.

b. NWT

AF gives an update on an open consultation (the EC call for feedback on proposed European Critical Raw Materials Act), outlining the proposed way forward. AF gives an update on the CCS+ initiative, focusing on the new workstream on CDR for which ZEP had been invited to participate. It is proposed that the item is brought for discussion at the TWG CDR. AF gives an update on the TWG supply chain, highlighting the results of the first meeting.

CAB gives an update on the CCUS Forum expert group on CO₂ specifications, namely, the objectives and timeline.

4. Updates from External Relations Group

POG notes the AC74 approvals regarding the merging of the ERG and Comms Group and that the vice-chairs are to present ERG co-chairs from their respective constituencies. He asks the vice-chairs to send in the nominated co-chairs.

AF gives an update on the upcoming ZEP conference and the policy session at the EU Sustainable Energy Week. For the current gaps, in the conference programme, the ACEC are asked for proposed alternative speakers, keeping in mind the gender balance of each panel session.

5. Net-Zero Industry Act (NZIA)

CAB gives an update on the proposed ZEP response to the Net-Zero Industry Act, highlighting the additional input received. A discussion follows on proposed additional and clarifications to the text, notably regarding the timelines of impact assessments and the geographical distribution of CO₂ storage. LE highlights the need for a prudent Impact Assessment (IA) process, adding that a 2-week period might be too short. WB clarifies that the 2-week period refers to the window for opinion/feedback from

competent authorities, which is the first step in the IA process. FN suggests that the text makes reference to the multi-modal CO2 transport infrastructure.

Chair invites the ACEC to endorse the proposed ZEP paper via email.

6. Closing remarks

Chair thanks participants and reminds that the next ACEC meeting will take place on 16 May 2023 and that the AC75 / IWG9 Plenary and ZEP-C AGM will take place on 14 June 2023 as an in-person meeting in Brussels. Closes the meeting.

List of participants

Eve Tamme	ZEP chair
Jonas Helseth	Bellona
Charles Soothill	Sulzer
Lamberto Eldering	Equinor
Winston Beck	Heidelberg Materials
Filip Neele	TNO
Nils Røkke	SINTEF
Christian Schwarck	Shell
Per-Olof Granström	ZEP Secretariat
Charles-Albert Bareth	ZEP Secretariat
Ana Faria	ZEP Secretariat

ACEC May meeting

16 May 2023

9:00-11:00 CET

Draft meeting minutes

1. Introduction and welcome

Chair/ET welcomes all and confirms quorum.

Chair announces that CS will leave the co-chair of the Network Policy & Economics. CS thanks all, says good progress was made, and adds that it was a pleasure working with the secretariat. Participants thank CS for his work.

Chair asks for approval of the ACEC April meeting agenda – agenda is approved. Asks for endorsement of draft meeting minutes from the ACEC April meeting – minutes are endorsed.

2. ZEP development

Chair presents draft terms of reference for the new working group, aiming to review ZEP structure, governance, funding model, and membership. The group should produce a draft describing ZEP's future by the end of May this year. From the discussion the following is noted: The timeframe needs to be changed, aiming for a presentation of the work at the AC in June and presenting findings at the AC in September. The need to involve the EC, especially DG RTD, in the process is highlighted.

POG gives an update on further ZEP development, noting the need for new ZEP groups co-chairs – Industry and Oil & Gas chairs for the ERG, replacement for CS in NWPE, and a new chair for the GG – highlighting the need for ACEC input and how to proceed with the NWPE and GG. POG also gives an update from the Network Projects' preparation meeting with FN, LE and WB referring to the pre-reads, noting the next steps for the group and inviting proposed co-chair Stijn Santen from EBN to the next meeting.

The ACEC endorses the way forward regarding the working group on future ZEP and the new Network Projects.

3. Updates from Networks

a. Network Policy and Economics

LSN and CS provide the update, outlining the discussions at the latest NWPE and WG Policy & Funding meetings respectively, including the EU ETS and CBAM agreements, the memorandum signed between RWE and Equinor on low-carbon hydrogen, the revision of the CO2 storage directive Guidance

Documents, the revision of the TEN-T regulation for the NWPE meeting. Discussions at the WG included inputs to the public consultation on the EU climate target for 2040 and potential ZEP amendments to the Net Zero Industry Act. LSN highlights the open consultations on the draft of economic Terms and Conditions of the 2023 Innovation Fund pilot auction for renewable hydrogen production, the EU 2040 climate target, and the Net Zero Industry Act. LSN describes the draft ZEP response to the consultation on the EU 2040 climate target. CAB gives an update on the working group on CO2 transport by ship in Europe, describing the expected report content. There is an update regarding ZEP's engagement with policymakers. Participants highlight the importance of engaging with key policymakers on the NZIA and discuss possible required amendments.

b. NWT

FN gives an update from the latest meeting of the Network Technology that included a research paper presentation on the influence of system boundary decisions on abatement metrics CO2 storage and a presentation by DG GROW on the provisions relating to permitting under the proposal 'Net Zero Industry Act' (NZIA) the TWG Carbon Dioxide Removals. Together with the WG Policy & Funding the TWG is preparing input to the EC public consultation on the 2040 climate target, focusing on the role of carbon removals.

AF gives an update on the TWG supply chain. The TWG has agreed on a report structure and has allocated chapters to participants to kickstart the first draft. The next meeting will focus on ideas for each chapter.

The ACEC endorse the proposed way forward for the consultations.

4. Updates from External Relations Group

POG notes the need for constituencies Industry/WB and Oil & Gas/LE to choose their ERG co-chairs, mentioning that MB is the choice for the research community. He also notes that the next planned ERG meeting and asks if it is possible to hold another meeting with the ERG in end-May/beginning-June.

AF gives an update on the ZEP session at the EUSEW 2023, that will be organised at 16:00-17:30 on 22 June. A programme for engaging with policymakers has been set up for the ZEP chair, aiming for the Director level in the EC around the June AC and the EUSEW 20-22 June.

POG thanks the secretariat for great work linked to the successful Net-Zero Within Reach conference and proposes 24 April 2024 for next year's edition.

24 April is endorsed for next year's conference.

5. ZEP actions on the Net-Zero Industry Act

Based on the Net Zero Industry Act (NZIA) negotiations process, POG describes the setup for the planned technical CCS webinar, where ZEP will invite MEP assistants, European Government

representatives and Council staff. From the discussions it is noted that the ZEP webinar should be organised on 1 or 13 June.

The ACEC endorses the activities related to the NZIA.

6. Closing remarks

Chair asks if there are any other business. FN brings up the topic of naturally occurring hydrogen, asks if ZEP should engage in this. It is proposed to relay this to Network Technology.

Chair thanks participants and reminds that the next ACEC meeting will take place on 11 July 2023 and that the AC75 / IWG9 Plenary and ZEP-C AGM will take place on 14 June 2023 as an in-person meeting in Brussels. Closes the meeting.

List of participants

Eve Tamme	ZEP chair
Marie Bysveen	SINTEF
Jonas Helseth	Bellona
Charles Soothill	Sulzer
Lamberto Eldering	Equinor
Winston Beck	Heidelberg Materials
Filip Neele	TNO
Nils Røkke	SINTEF
Christian Schwarck	Shell
Per-Olof Granström	ZEP Secretariat
Charles-Albert Bareth	ZEP Secretariat
Ana Faria	ZEP Secretariat

Agenda Item 2: ZEP developments – for information, guidance, and approval

2.a. Finance update per 31 May 2023 and end of year outlook

Appended is ZEP Communications financial management report of 31 May 2023.

- Income: Budgeted income for 2023 is €330,000. ZEP-C invoices for 2023 have been issued.
- Expenditure: Due to startup after Covid-19, the expenditure for January through May 2023 is lower than budgeted. Some of the Network and TWG meetings, as well as workshops are still virtual. This has kept costs down at the same time as we have increased ZEP activities and outreach.
- Given the additional member funding and lower costs than budgeted for the start of the year, the ZEP-C financial reserves are expected to increase during 2023.

ZEP Communications is holding its Annual General Assembly on 14 June at 12.45, approving the accounts for 2022 and the budget for 2023, previously recommended by the AC.

2.b Temporary Working Group on ZEP future structure

In light of the strong positive CCS and CCU momentum in Europe ZEP will revisit its structure, funding model, membership, and working methods, in order to be an effective vehicle for enabling climate neutrality by 2050. Draft terms of reference for a temporary working group (TWG) for this work has been discussed with and endorsed by the ACEC in May.

A first meeting to inform and discuss this work with DG RTD was held on 1 June and further meetings with all related DGs is being planned. The TWG is planned for the first time on 9 June.

There will be a presentation of the proposed work at the AC for approval on 14 June.

The AC are invited to approve the terms of reference and the proposed way forward.

Draft Terms of Reference – Temporary Working Group ZEP future structure

Introduction

CCS and CCU have had varying support and stakeholder momentum since ZEP's inception in 2005. The core structure established from the start has more or less been kept intact. There was a revision and simplification after the NER300 process where windfall profits were chosen over the realisation of projects and the subsequent walkout of coal power producers from ZEP in 2010. This resulted in the present core structure and constituencies (Research, NGO, Industry, Oil & Gas and Equipment Suppliers):

- *Network oriented working groups,*
- *Advisory Council (AC), which has the formal decision power in ZEP,*
- *The Advisory Council Executive Committee (ACEC) – the operating body that is steering ZEP between the quarterly AC meetings – composed of the co-chairs of each network, the ZEP vice chairs and the ZEP chair.*

Ahead of the current EU grant, that started in July 2022, the ZEP activities and structure were updated and coordinated with the CCUS SET-Plan Implementation Plan working group (IWG9), in order to increase impact, efficiency, and benefit for stakeholders.

The regained momentum of CCS and CCU through for instance the Net Zero Industry Act proposal and the drive from the European Commission, Member States, associated countries and private and public enterprises raise the question if ZEP is fit for purpose to enable the mega scale development needed. Initiatives that are complementary and partly overlapping with ZEP have been started. In light of this, ZEP will revisit its structure, funding model, representation and working methods, in order to be an effective vehicle for driving CCS and CCU and enabling climate neutrality by 2050.

Work description

Revisit the present ZEP structure in view of the current situation and the opportunities at hand, notably:

- *Structure and governance*
- *Funding model*
- *Membership*
- *Working methods*

This work should pay particular attention to:

- *A structure which is attractive to contribute to from the various stakeholders of CCS and CCU in Europe, i.e., industry including energy companies and – providers, vendors, trade and labour organisations, civil society, the European Commission, Member State/EEA country representatives, NGOs, research institutes and academia. This reflects the working methods of such organisations, overwhelmingly relying on in-kind work. The structure can also draw upon/include other established structures if this enhances effective operation.*
- *A structure which has effective governance, is easy to understand and engage with by the various stakeholders.*
- *A structure which is target focused, yet flexible.*
- *An administration which is effective, fit for purpose and flexible with regard to funding opportunities.*
- *A funding model focused on increasing ZEP's impact through additional funding streams (including but not limited to growing funding by the members).*
- *A growing membership base that strengthens ZEP's advice and impact.*
- *Providing a clear value proposition for the various stakeholders, without hindering funding from public bodies.*

- *A ZEP that has clear and agreed battery limits towards other established bodies in the CCS and CCU, CDR area.*
- *A ZEP which can drive the development forward, do advocacy, provide unbiased facts for agenda setting, based on the latest scientific findings and aiming to build consensus. In short, a ZEP fit to fulfil the 'Fit for 55' and climate neutrality objectives.*
- *Maintain the role as a trusted advisor to the European Commission in matters pertaining to carbon management with a variety of DGs.*
- *Develop further the role of ZEP towards the SET Plan Implementation Working Group 9 (IWG9) – potentially in a transition period as the SET plan is being revamped this year.*
- *The communication work, aiming at getting ZEP better known to potential new stakeholders and members.*

Composition

The work will be tasked to the ZEP chair and vice chairs with the support of voluntary resources sourced from the entities involved. The ZEP chair will lead the group.

The next steps are:

- *First meeting with the working group – 9 June 2023*
- *Presentation and approval of the ToR and way forward – AC75 on 14 June 2023*
- *Continued work and coordination meetings with the European Commission*
- *Follow-up of progress at ZEP ACEC meetings*
- *Presentation of proposed solutions for approval – AC76 on 13 September 2023.*

Informal discussions with other initiatives are foreseen to happen in parallel with the ZEP TWG work.

Budget management: Expenditure against 2023 budget

Activity	Contractor	Budget 2023	Comments	To date Spent	Comments	To Date Committed	Comments
Administration / Auditing	Adams accountants / Vandelanotte	€ 8 000		€ 1 127			
Website maintenance	Global Concept	€ 1 000		€ 0			
Legal advice		€ 4 000		€ 0			
Chair	Climate Principles	€ 67 992		€ 28 330			
Contingency	Multiburo	€ 4 000		€ 1 264			
Additional work programme		€ 145 000					
Communications and Public Affairs		€ 85 000		€ 13 263			
Strategic work		€ 12 500					
Total		€ 327 492		€ 43 984		€ 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 € 43 984
 Remaining total budget € 283 508

Cash management of ZEP Communications VZW / ASBL

Category	Source	Issued invoices	Comments	Pending invoices	Comments	Received payments	Comments
2023 contributions	O&G	€ 180 000	Total, Equinor, ENI, BP, Exxon Mobil, Shell				
	OEM						
	Others (confirmed)	€ 147 500	Port of Rotterdam, HeidelbergCement, EBN, Northern Lights, Norsk Hydro, Celsio, MHI, 8Rivers	€ 15 000	Gassnova		
	Others (Potential)						

General	VAT return	€ 43 683	VAT declar 2023/05	€ 626	Invoices 2023 to be rec.	€ 0	VAT on sales invoices
Total outstanding / pending ZEP-C		€ 371 183		€ 15 626			

Cash situation (of 31 May 2023)

Current account (KBC - Business compact rekening)		€ 297 241
Savings account (KBC - Spaarrekening)		€ 101
Actual cash at bank and in hand		€ 297 342

Expenditure situation

Source	Outstanding invoices	Comments	Pending invoices	Comments
Short term creditors	€ 40 000		€ 642	VDL + CA + Ardna
Outstanding invoices in spent to date, to be paid	€ 40 000		€ 642	

Cash boundaries

Minimum virtual financial position (all creditors paid, no more income) € 256 701
 Maximum virtual financial position (all creditors paid, all income realised) € 643 509

Forecast

€ 355243, 06	Starting point 2023 (= Left over budget 2022)
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2023 Total Spend	Comments Relative to budget
€ 8 000	
€ 1 000	
€ 4 000	
€ 67 992	
€ 4 000	
€ 145 000	
€ 85 000	
€ 12 500	
€ 327 492	Total budget spent 2023

€ 180 000	
€ 0	
€ 162 500	

€ 342 500	Total forecasted income 2023
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370 251,06	Forecasted Left over budget 2023
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Agenda Item 3: Updates from governments and projects

3.a. German ministry for economic affairs and climate action

Germany has launched a funding programme that is expected to amount to 50 billion euros over the next 15 years. The carbon contracts for difference (CCfD) programme aims to decarbonise industries such as steel, cement, paper or glass. Companies must submit to public authorities their required price to achieve low-carbon production (see *agenda item 5*).

There will be a presentation at the meeting.

3.b. RWE – decarbonising power generation

RWE is a German energy company with a global presence, covering both renewable and conventional energy sources. RWE aims to be climate neutral by 2040, an ambition supported by a climate transition plan certified by the Science Based Targets initiative and decarbonisation strategy focused on renewable and storage technologies.

RWE has recently announced plans to develop three new carbon capture projects in the UK by retrofitting carbon capture technology at the existing combined cycle gas power stations at Pembroke and Staythorpe (link to [more information about the three projects](#)) and with a new build combined cycle gas turbine power station in the Humber region. The three projects would be located within the vicinity of proposed CO₂ transport networks with access to storage solutions, and are expected to, collectively, deliver 4.7 GW of generation capacity and capture 11 Mt of CO₂ per year.

In the Netherlands, RWE is developing two BECCS projects (technical and economical concept) at two biomass co-firing plants, in Eemshaven and Amer. The two projects are expected to deliver 11-14 Mt of negative CO₂ per year. The ambition is that the plants are converted to 100% biomass and CCS by 2030, if deemed technically and economically feasible.

Fiona Auty, from RWE, will go through the company's plan to decarbonise their power station assets in the United Kingdom and the Netherlands.

3.c. Delta Rhine Corridor project

The Delta Rhine Corridor project aims to develop a bundle of underground pipelines for underground transport of sustainable energy carriers and CO₂ between Rotterdam, Moerdijk, Venlo Chemelot in the Netherlands and Cologne/Wesseling, Duisburg and Gelsenkirchen in North Rhine-Westphalia and Ludwigshafen in Rhineland-Palatinate (Germany). There is also an opportunity to establish a connection between Moerdijk and Antwerp in Flanders (Belgium).

Business cases are being developed for each specific pipeline (CO₂, H₂, and potentially NH₃). The total volume of CO₂ transported through the main Delta Rhine Corridor pipeline is planned to amount to 14.9 million tonnes per year, half of which would come from Germany.



There will be a presentation at the meeting.

DRAFT

Agenda Item 4: SET-Plan revision – for information and guidance

4.a. The revised SET-Plan – for information

The [SET-Plan](#) is being revised with the aim to make it fit for the new political context and more politically visible: aligning the SET-Plan with the objectives of the European Green Deal, renewing policy aims and targets for development and deployment, and pooling national and European R&I resources.

ZEP and IWG9 have already made the most important changes that is set out by the SET-Plan review: [the Implementation plan targets have been updated and aligned with the European Green Deal and net-zero](#), and the ZEP and IWG9 governance structures, work programmes and activities have been coordinated to increase impact, efficiency, and benefits for stakeholders.

We are awaiting the adopted revised SET-Plan, which is expected before the summer.

4.b. SET-Plan questionnaire – for information and guidance

The 2023 SET Plan reporting will focus on the progress of both the SET Plan as a whole and the implementation working groups (IWGs) and aims to provide an update on the EU policy landscape, and insights on the changes to the SET Plan that will be introduced by the review that is yet to be published.

To support this process, the EC has launched a questionnaire to gather information about the main developments of the IWGs (deadline: 16 June). The submission of the CCUS SET Plan IWG (IWG9) is being prepared in coordination with ZEP, SINTEF, CO2 Value Europe, and the British Geological Survey (BGS).

The draft submission will be presented at the AC/Plenary meeting. A meeting will also be held between the IWG9 co-chairs and the ZEP chair on the 15 June for final approval.

The ZEP AC and the IWG9 Plenary are invited to approve this way forward.

4.c. Introduction of a new SET-Plan Implementation Plan working group on hydrogen – for information

A new temporary IWG is expected to be created under the revised SET Plan, with a focus on renewable hydrogen but also including hydrogen produced with CCS. The new IWG would build on the European Research Area's pilot R&I action for Green Hydrogen, and have the following objectives:

- support the development of H2 technologies and adopt a long-term research perspective
- contribute to EU and national hydrogen strategies, R&I agenda, and energy and climate planning

- foster collaboration and coordination within SET Plan countries and among Europe's hydrogen experts
- support coordination and synergies among R&I initiatives, IWGs and networks
- support a systematic and coordinated implementation.

The objectives would be accomplished through the set up of a Platform to facilitate exchanges, leveraging on synergies with other initiatives and matchmaking/partnering.

The implementation plan of the new IWG is being prepared and the official start is expected for Q3 2023.

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Agenda item 5: Updates from Networks – *for information and guidance*

5.a. Network Policy and Economics

The Network Policy & Economics (NWPE) held its latest meeting on 25 May. The Network discussed the proposal 'Net Zero Industry Act', identified clarifications required from the European Commission (EC), and discussed ZEP's next actions. The Network received an update on the Working group on CO₂ transport by ship with a presentation on the content of the first draft and the next steps. The final report will look into the future market for CO₂ transport by ship and issue clear recommendations to remove barriers and ensure interoperability.

There were other updates on the Article 6.4 call for feedback, the EC expert group on carbon dioxide removals (CDR), the CCS+ Initiative and the status of the annex prepared by the CCUS Forum expert group on CO₂ specifications. Trinomics presented the key policy recommendations made by the EnTEC study regarding the regulation of CO₂ transport and storage. The key provisions of the revised EU ETS directive and the CBAM regulation were discussed, including the future EC assessments and reports. *The next Network Policy & Economics meetings will take place on 26 October.*

The Working Group (WG) Policy & Funding held its latest meeting on 4 May. The group worked on the EC questionnaire on the EU 2040 climate target, discussed amendments to the 'Net Zero Industry Act', and was informed of the state-of-play regarding the revision of the TEN-T regulation. *The next WG meeting will take place on 9 June.*

Consultations and calls for feedback – *for information and approval*

Open consultations:

- EC call for input on the *EU 2040 climate target* (link to the [call](#)). Deadline: 23 June. This consultation takes place ahead of the EC proposal setting the 2040 target, which is expected in 2024. ZEP WG Policy & Funding and TWG CDR prepared a response to the consultation.

The AC are invited to approve the response (appended), that has already been endorsed by the ACEC.

- EC call for feedback on the *Net Zero Industry Act* (NZIA) adopted proposal (link to the [call](#)). The call allows for simple written feedback on the proposal and a document attachment. Deadline: 27 June.

Proposed ZEP action: ZEP input will be the ZEP paper on the NZIA (link to the [paper](#)) and possible further input prepared and endorsed by the ACEC.

The AC are invited to approve the way forward.

- EC call for evidence and public consultation on *Industrial carbon management – carbon capture, utilisation and storage deployment* (link to the [call and consultation](#)). The call allows for simple written feedback on the proposal and a document attachment. The public consultation includes a questionnaire. Deadline: 31 August.

Proposed ZEP action: ZEP will prepare a response to the call and consultation.

The AC are invited to approve the way forward.

EU policy and funding timelines

- ZEP EU policy timeline with a focus on CCS and CCU can be found here ([link](#)).
- ZEP EU funding timeline with a focus on CCS and CCU can be found here ([link](#)).

Temporary working group on CO₂ transport by ship – for information

Ship transport will be a crucial mode of transport for the early deployment of CCS. CO₂ transport by ship is required to link industrial emitters and offshore storage sites; it is a less costly transport mode than pipelines for lower volumes or longer distances, and crucial for early and smaller projects. Key European CCS projects rely on transport by ship.

The TWG is preparing a report describing the future Europe-wide market for CO₂ transport by ship, highlighting the technical, regulatory, and commercial barriers to this future market, and providing clear recommendations to remove barriers and ensure interoperability.

The aim is to present the final report for approval at the AC in September 2023.

Revision of the TEN-T regulation – for information

The EC put forward a proposal for a revision of the TEN-T regulation in December 2021. The revision aims to make transport greener, more efficient, and resilient to climate change (link to the [file](#)). ZEP responded to the call for evidence ‘Development of trans-European transport (TEN-T) network in light of war in Ukraine – amended proposal for guidelines’ (link to [call](#) and [ZEP response](#)) highlighting that “*the TEN-T revision represents an opportune moment to introduce funding mechanisms for CO₂ transport infrastructure, supporting upcoming projects, especially in Eastern Europe, that rely on non-pipeline transport to store CO₂ in a safe and permanent manner*”. ZEP is one of the signatories of a joint letter calling for the recognition of multimodal CO₂ transport under the TEN-T (link to the [letter](#)).

The Council adopted its General Approach on 5 December 2022 and the European Parliament adopted its report on 19 April. CO₂ transport by ship, rail, barge and truck is not included in the EP report. A second round of trilogues is expected to take place in June.

Germany’s carbon contract for difference scheme – for information

Germany has launched a funding programme that is expected to amount to 50 billion euros over the next 15 years. The carbon contracts for difference (CCfD) programme aims to decarbonise industries such as steel, cement, paper or glass. Companies must submit to public authorities their required price to achieve low-carbon production. The scheme appears

to be technology-neutral with blue hydrogen included. The German government intends to start the first bidding process this year, following the required state aid approval by the EC.

Revised EU ETS directive and CBAM regulation – for information

The revised EU ETS directive and the regulation for a carbon border adjustment mechanism (CBAM) entered into force respectively on 17 May and 5 June (link to the [directive](#) and [regulation](#)). The price of EU ETS allowances stood at €78.7 on 1 June¹.

G7 commits to CO2 export/import – for information

The G7 ministers of climate issued a statement on 16 April recognising the importance of CCS technologies. Ministers committed “to promote development of export/import mechanisms for CO2” (link to the [communiqué](#)). The G7 is an informal forum bringing together leaders from the EU, Canada, France, Germany, Italy, Japan, the UK, and the United States. Its decisions are not legally binding.

For updates on the Innovation Fund and the PCI/PMI process, please see pre-read 10.

5.b. Network Technology

The latest Network Technology meeting took place on 11 May. *The next Network Technology meetings are planned for 28 September and 23 November.*

The May meeting focused on CO2 storage permitting, with presentations from DG GROW and TotalEnergies. There was also a presentation of a research paper on scoping costs and abatement metrics for BECCS.

The TWG CDR held its latest meeting on 2 May. Attendees discussed ZEP’s input to the EC public consultation on the 2040 EU climate target, with a focus on the role of carbon removals. The group also heard the latest updates from Mission Innovation’s Mission CDR and discussed the United Nations Framework Convention on Climate Change (UNFCCC) information note on carbon removal activities under the Article 6.4 mechanism. *The next TWG CDR meeting will be held in June.*

The TWG Supply chain held its latest meeting on 16 May to discuss the progress of the report chapters. *The next meeting will take place in June.*

Consultations and calls for feedback – for approval

Closed consultations:

¹ [EU carbon price tracker](#). Ember.

- UNFCCC – Article 6.4 mechanism Supervisory Body Call for input 2023 - Issues included in the annotated agenda and related annexes of the fifth meeting of the Article 6.4 Supervisory Body (link to the [call for input](#)). ZEP TWG CDR prepared a response to the consultation, highlighting the merits of engineered carbon removals and raising concerns about the unbalanced comparison of engineered and land-based removals, the inclusion of tonne-year accounting, and the emphasis on a 100-year time horizon. (link to the [response](#)).

The AC are invited to approve the response, which has been endorsed by the ACEC.

Open consultations:

- UNFCCC – Article 6.4 mechanism Supervisory Body structured public consultation: Removal activities under the Article 6.4 mechanism (link to the [consultation](#)). Deadline: 19 June. ZEP TWG CDR is preparing a draft response to the consultation, which will be sent to the ACEC for endorsement.

Proposed ZEP action: The TWG CDR is working on a response to this consultation. Given the short timeframe the proposal is to send the draft response to the ACEC for endorsement.

The AC are invited to approve this way forward.

5.c. ZEP Government Group

The latest Government Group (GG) meeting took place on 7 March 2023, where participants exchanged on recent national developments on CCS and CCU, as well as on EU and international developments, notably, on the Article 6.4 mechanism, the Green Deal Industrial Plan and the upcoming EU Strategy on CCS and CCU.

The next meeting will take place on 27-28 June at the Danish Ministry of Climate, Energy and Utilities in Copenhagen, Denmark. The agenda includes a site visit to the ARC waste incineration facility (link to the [project](#)) and to a gas storage site with the potential to store CO₂ onshore.

The following GG meetings are planned: 20 September and 14 November (hosted by the German Federal Ministry for Economic Affairs and Climate Action).

The GG has been chaired by Stig Sverinnsen (Norwegian Ministry of Petroleum and Energy) for many years. He has now communicated his intention to step down from his role as chair of the group. Members of the group have been asked to volunteer for the role and the Secretariat is engaging bilaterally to find a way forward. The new chair will be approved by the GG before formal appointment.

Public consultation on the EU climate target for 2040

Fields marked with * are mandatory.

Introduction

Background

Climate change remains the defining challenge of the coming decades. As an essential part of the European Green Deal, the European Climate Law enshrines the EU's commitment to becoming the first climate neutral continent by 2050 and its 2030 climate target of cutting net greenhouse gas (GHG) emissions by at least 55% compared to 1990 levels. It is now more important than ever for the EU to get and stay on track to climate neutrality and greater climate resilience. This will lead to long-term economic, societal, and environmental benefits for the people of Europe that leave no one behind while providing a positive example to galvanise global action.

The detrimental effects of global warming are becoming more frequent and evident, with devastating impacts all around the world. The urgent need for strong global action to tackle climate change comes at a time of high energy prices, a global food supply crisis, and geopolitical tensions, triggered by Russia's invasion of Ukraine. The energy crisis brought about by the war has reminded us of the risks of EU energy dependence and has made very clear the need to step up the transition to climate neutrality in the EU and globally, both for energy security and economic stability and to reduce climate-related disruptions and impacts.

The EU has developed a comprehensive set of climate, energy, environmental and related legislation and enabling policies that have allowed it to reduce GHG emissions and exceed its climate commitments. These policies and measures have led to a clear decoupling between economic activity and GHG emissions and have spurred the development of clean energy.

The EU's legally binding objective of climate neutrality by 2050 sets the direction of travel. The comprehensive policy framework to deliver on the increased climate target for 2030, the 'Fit for 55' legislative package, was proposed by the Commission in 2021. Once it has been politically agreed by the European Parliament and the Council, Fit for 55 will accelerate the modernisation of our economy, the roll-out of renewable energy, the deployment of new technologies and will ensure a more efficient use of our natural resources. Improved low- and zero-carbon technologies and experience in implementing climate policies further expand the opportunities for transforming the EU economy and society beyond 2030.

Given the depth of the economic and societal transformations required, the short timeframe and the extent of policy and economic decisions as well as the importance of incentivising the right kind of investments

and avoiding carbon lock-in effects, the EU needs a clear GHG reduction path beyond 2030 towards the 2050 climate neutrality objective. This will create a better understanding of the urgent need for transformation in the different sectors of the economy and inform the future preparation of a post-2030 climate and energy policy framework.

The European Climate Law calls on the Commission to propose an EU-wide climate target for 2040, taking into account an indicative GHG budget (defined as the cumulative net emissions over the period) for 2030-2050. The Commission's initiative for a climate target for 2040 will be accompanied by an impact assessment that will address the different types of impacts related to the target.

The replies to this questionnaire will contribute to the impact assessment and shape the upcoming initiative. This public consultation focuses on the overall level of ambition for 2040 and looks at the possible evolution and role of EU climate policy instruments in order to prepare the ground for future analysis of the policies the EU must implement after 2030.

Guidance on the questionnaire

This public consultation consists of a set of introductory questions related to your profile, followed by a questionnaire split into two sections: a general section and a section for experts. Please note that **you are not obliged to respond to both parts, and you can choose to fill in only one of the two (either the general section or the section for experts)**. In addition, **not all questions in the questionnaire have to be answered**.

1. About you: Since the public consultation is open both to organisations and individuals, the first block consists of **questions related to your profile**.
2. General section: The second block consists of **questions related to your opinion on the EU's overall climate ambition** for 2040, associated opportunities and challenges, and related policy needs.
3. Expert section: The third block is more technical, and consists of questions related to **the role of policy instruments, carbon removals, technological options and adaptation to climate change**.

At the end of the questionnaire you are invited to provide additional comments and to upload additional information, position papers or policy briefs that express in more detail your position or views or those of your organisation.

The results of the questionnaire will be published online, along with uploaded position papers and policy briefs.

Please read the specific privacy statement attached to this consultation with information on how personal data and contributions will be processed.

In the interest of transparency, if you are replying on behalf of an organisation, please register with the register of interest representatives [[transparency register](#)] if you have not already done so (you will need

your organisation's transparency register number). If you do not wish to register, your contribution will be treated and published together with those received from individuals.

Selection of sections

* Which sections do you want to respond to?

at most 2 choice(s)

- ☒ General section (section 1)
- ☒ Expert section (section 2)
- ☐ Neither of the two

About you

* Language of my contribution

- ☐ Bulgarian
- ☐ Croatian
- ☐ Czech
- ☐ Danish
- ☐ Dutch
- ☒ English
- ☐ Estonian
- ☐ Finnish
- ☐ French
- ☐ German
- ☐ Greek
- ☐ Hungarian
- ☐ Irish
- ☐ Italian
- ☐ Latvian
- ☐ Lithuanian
- ☐ Maltese
- ☐ Polish
- ☐ Portuguese
- ☐ Romanian
- ☐ Slovak
- ☐ Slovenian

- ☐ Spanish
- ☐ Swedish

* I am giving my contribution as

- ☐ Academic/research institution
- ☐ Business association
- ☐ Company/business
- ☐ Consumer organisation
- ☐ EU citizen
- ☐ Environmental organisation
- ☐ Non-EU citizen
- ☐ Non-governmental organisation (NGO)
- ☐ Public authority
- ☐ Trade union
- ☒ Other

* First name

Ana

* Surname

Faria

* Email (this won't be published)

ana.faria@zeroemissionsplatform.eu

Place of residence - Where do you live

- ☐ Predominantly urban (city with more than 100 000 inhabitants)
- ☐ Suburban (city with 10 000 to 100 000 inhabitants)
- ☐ Rural (city or village with less than 10 000 inhabitants)

* Organisation name

255 character(s) maximum

Zero Emissions Platform (ZEP)

* Organisation size

- ☒ Micro (1 to 9 employees)
- ☐ Small (10 to 49 employees)
- ☐ Medium (50 to 249 employees)
- ☐ Large (250 or more)

Transparency register number

255 character(s) maximum

Check if your organisation is on the [transparency register](#). It's a voluntary database for organisations seeking to influence EU decision-making.

793300922868-60

* Country of origin

Please add your country of origin, or that of your organisation.

This list does not represent the official position of the European institutions with regard to the legal status or policy of the entities mentioned. It is a harmonisation of often divergent lists and practices.

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| <input type="radio"/> Åland Islands | <input type="radio"/> Dominica | <input type="radio"/> Liechtenstein | <input type="radio"/> Saint Pierre and Miquelon |
| <input type="radio"/> Albania | <input type="radio"/> Dominican Republic | <input type="radio"/> Lithuania | <input type="radio"/> Saint Vincent and the Grenadines |
| <input type="radio"/> Algeria | <input type="radio"/> Ecuador | <input type="radio"/> Luxembourg | <input type="radio"/> Samoa |
| <input type="radio"/> American Samoa | <input type="radio"/> Egypt | <input type="radio"/> Macau | <input type="radio"/> San Marino |
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| <input type="radio"/> Argentina | <input type="radio"/> Ethiopia | <input type="radio"/> Malta | <input type="radio"/> Sierra Leone |
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| <input type="radio"/> Aruba | <input type="radio"/> Faroe Islands | <input type="radio"/> Martinique | <input type="radio"/> Sint Maarten |
| <input type="radio"/> Australia | <input type="radio"/> Fiji | <input type="radio"/> Mauritania | <input type="radio"/> Slovakia |
| <input type="radio"/> Austria | <input type="radio"/> Finland | <input type="radio"/> Mauritius | <input type="radio"/> Slovenia |
| <input type="radio"/> Azerbaijan | <input type="radio"/> France | <input type="radio"/> Mayotte | <input type="radio"/> Solomon Islands |

- ☐ Bahamas
- ☐ Bahrain
- ☐ Bangladesh
- ☐ Barbados
- ☐ Belarus
- ☒ Belgium
- ☐ Belize
- ☐ Benin
- ☐ Bermuda
- ☐ Bhutan
- ☐ Bolivia
- ☐ Bonaire Saint Eustatius and Saba
- ☐ Bosnia and Herzegovina
- ☐ Botswana
- ☐ Bouvet Island
- ☐ Brazil
- ☐ British Indian Ocean Territory
- ☐ British Virgin Islands
- ☐ Brunei
- ☐ Bulgaria
- ☐ Burkina Faso
- ☐ Burundi
- ☐ Cambodia
- ☐ French Guiana
- ☐ French Polynesia
- ☐ French Southern and Antarctic Lands
- ☐ Gabon
- ☐ Georgia
- ☐ Germany
- ☐ Ghana
- ☐ Gibraltar
- ☐ Greece
- ☐ Greenland
- ☐ Grenada
- ☐ Guadeloupe
- ☐ Guam
- ☐ Guatemala
- ☐ Guernsey
- ☐ Guinea
- ☐ Guinea-Bissau
- ☐ Guyana
- ☐ Haiti
- ☐ Heard Island and McDonald Islands
- ☐ Honduras
- ☐ Hong Kong
- ☐ Hungary
- ☐ Mexico
- ☐ Micronesia
- ☐ Moldova
- ☐ Monaco
- ☐ Mongolia
- ☐ Montenegro
- ☐ Montserrat
- ☐ Morocco
- ☐ Mozambique
- ☐ Myanmar/Burma
- ☐ Namibia
- ☐ Nauru
- ☐ Nepal
- ☐ Netherlands
- ☐ New Caledonia
- ☐ New Zealand
- ☐ Nicaragua
- ☐ Niger
- ☐ Nigeria
- ☐ Niue
- ☐ Norfolk Island
- ☐ Northern Mariana Islands
- ☐ North Korea
- ☐ Somalia
- ☐ South Africa
- ☐ South Georgia and the South Sandwich Islands
- ☐ South Korea
- ☐ South Sudan
- ☐ Spain
- ☐ Sri Lanka
- ☐ Sudan
- ☐ Suriname
- ☐ Svalbard and Jan Mayen
- ☐ Sweden
- ☐ Switzerland
- ☐ Syria
- ☐ Taiwan
- ☐ Tajikistan
- ☐ Tanzania
- ☐ Thailand
- ☐ The Gambia
- ☐ Timor-Leste
- ☐ Togo
- ☐ Tokelau
- ☐ Tonga
- ☐ Trinidad and Tobago

- Cameroon
- Canada
- Cape Verde
- Cayman Islands
- Central African Republic
- Chad
- Chile
- China
- Christmas Island
- Clipperton
- Cocos (Keeling) Islands
- Colombia
- Comoros
- Congo
- Cook Islands
- Costa Rica
- Côte d'Ivoire
- Croatia
- Cuba
- Curaçao
- Cyprus
- Czechia
- Democratic Republic of the Congo
- Denmark
- Iceland
- India
- Indonesia
- Iran
- Iraq
- Ireland
- Isle of Man
- Israel
- Italy
- Jamaica
- Japan
- Jersey
- Jordan
- Kazakhstan
- Kenya
- Kiribati
- Kosovo
- Kuwait
- Kyrgyzstan
- Laos
- Latvia
- Lebanon
- Lesotho
- Liberia
- North Macedonia
- Norway
- Oman
- Pakistan
- Palau
- Palestine
- Panama
- Papua New Guinea
- Paraguay
- Peru
- Philippines
- Pitcairn Islands
- Poland
- Portugal
- Puerto Rico
- Qatar
- Réunion
- Romania
- Russia
- Rwanda
- Saint Barthélemy
- Saint Helena
Ascension and
Tristan da Cunha
- Saint Kitts and Nevis
- Saint Lucia
- Tunisia
- Türkiye
- Turkmenistan
- Turks and Caicos Islands
- Tuvalu
- Uganda
- Ukraine
- United Arab Emirates
- United Kingdom
- United States
- United States Minor Outlying Islands
- Uruguay
- US Virgin Islands
- Uzbekistan
- Vanuatu
- Vatican City
- Venezuela
- Vietnam
- Wallis and Futuna
- Western Sahara
- Yemen
- Zambia
- Zimbabwe

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General section

This section addresses individuals and organisations alike. The questions aim to find out more about opinions on the EU's overall climate ambition for 2040, associated opportunities and challenges, and related policy needs.

Overall opinion on the EU's climate ambition for 2040

The European Climate Law requires the EU to achieve climate neutrality by 2050. This is defined as a balance between any remaining emissions of the main greenhouse gases (carbon dioxide, nitrous oxide, methane and the fluorinated greenhouse gases) and removals of CO₂ from the atmosphere. It further sets a target for the EU to reduce net GHG gas emissions by at least 55% by 2030, compared to 1990 levels. The EU seeks to lead by example to promote ambitious climate action across the world.

In response to the energy crisis due to Russia's invasion of Ukraine the European Commission also proposed the [REPower EU plan](#), to rapidly reduce dependence on Russian fossil fuels and fast-forward the green transition.

Emissions reduction ambition for 2030-2040

Considering the objective of achieving climate neutrality by 2050 and the current energy crisis, how should the EU pursue the climate transition up to 2040?

- ☒ The EU should accelerate the transition to climate neutrality.
- ☐ The transition to climate neutrality should continue at the current pace.
- ☐ The transition should be slower than the current pace.
- ☐ The EU's ambition should depend on other countries' climate ambition.
- ☐ I don't know.

EU emission reduction target for 2040

The EU has committed to reduce its net GHG emissions by 55% compared to 1990 levels by 2030 and aims to achieve climate neutrality by 2050 (-100%). In your opinion, what should be the net emission reduction target for 2040 to put the EU on track to meeting the 2050 climate neutrality target?

- ☐ up to -65% emission reduction (a very low ambition, barely increased compared to the target for 2030).
- ☐ between -65% and -75% emission reduction.
- ☐ between -75% and -80% emission reduction (following the average trajectory between 2030 and climate neutrality in 2050).
- ☒ between -80% and -90% emission reduction.
- ☐ more than -90% emission reduction (a very high ambition, close to reaching climate neutrality already in 2040).
- ☐ I don't know.

Optionally, you can also indicate a specific value between -55% and -100% emission reduction here:

Role of carbon removals in the 2040 climate target

The opposite of CO₂ emissions are CO₂ removals, also called 'carbon removals'. Carbon removals are processes in which carbon dioxide is removed from the atmosphere and stored in a durable way in geological, terrestrial or ocean reservoirs or in products. Carbon removal solutions can be nature-based,

for example through improving soil, forest management, or by restoring ecosystems, or they can be industrial through the development of technologies to capture and store carbon from the atmosphere. Carbon removals are indispensable for achieving EU climate neutrality because it may not be possible (or would be very expensive) to mitigate all emissions. As a first, important, step, the Commission has proposed a regulation establishing a framework for certifying carbon removals, to guarantee transparency, reliability, and environmental integrity.

The EU's 2030 climate target is expressed in 'net' emissions, which is the sum of GHG emissions and carbon removals. In your opinion, how should carbon removals be considered so that the EU achieves its 2040 climate target?

- ☐ Carbon removals should be considered together with actual GHG emissions. Hence, it is enough to have only a single 'net' emissions target for 2040 to set the GHG trajectory towards climate neutrality by 2050 in a cost-effective way.
- ☐ It is better to set a separate target for reducing GHG emissions and another target for carbon removals.
- ☒ It is better to have one target for reducing GHG emissions, a target for nature-based carbon removals and a target for industrial removals with permanent storage.
- ☐ No opinion / I don't have enough information to make a judgment.

Opportunities associated with higher climate ambition

What are the benefits of an ambitious climate target by 2040? Which opportunities would you consider as most relevant when implementing an ambitious climate target by 2040? [Multiple answers possible]

- ☐ It will help mitigate costs to societies who are likely to suffer from climate change (e.g. from extreme weather events, droughts or loss of ecosystems).
- ☐ It will ensure that we do our part in protecting the planet and fulfilling our duty towards future generations.
- ☐ It will improve our well-being (by lowering pollution, improving health and creating more liveable cities) and help protect the planet's ecosystems.
- ☐ It will create green and high added-value jobs, including those that are difficult to outsource outside the EU (e.g. maintenance of renewable energy installations, construction and renovation, bioeconomy).
- ☐ It will simultaneously address the climate and the biodiversity crises.

- ☐ It will improve the competitiveness of the European economy and give EU industry a first-mover advantage on global markets.
- ☐ It will help individuals and businesses lower their energy and climate bills.
- ☐ It will give a clear signal that the EU economy will embrace sustainable production and consumption models (e.g. circular and sharing economy approach).
- ☐ It will improve energy security, reduce the EU's dependency on imported fossil fuels and reduce exposure to volatility in fossil fuel prices.
- ☐ It will reinforce EU leadership and inspire action to combat climate change globally.

Challenges and enabling actions for the EU climate ambition to 2040 and beyond

There will be challenges on the path to climate neutrality by 2050. There will also be ways to overcome these challenges, while at the same time modernising our economy and ensuring a socially just transition.

How important do you consider the different challenges and associated enabling factors listed below for the EU to reach its climate ambition?

Please rate them from 1 = very unimportant to 5 = very important.

	1 (very unimportant)	2	3	4	5 (very important)	I don't know
There is a risk of new dependencies on resources and raw materials. Action should be taken to secure supply and ensure sustainable use of these resources.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Older infrastructure may lock people into carbon-intensive consumption patterns. Promoting and deploying digital solutions such as smart meters or digital-enabled mobility solutions on a large scale can help reduce GHG emissions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Further improvements in energy efficiency are necessary. The EU should promote the smarter and more efficient use of energy and resources.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
A faster expansion of renewable energies is needed. This will be supported by more ambitious EU and Member State legislation to further cut GHG emissions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

Public support is critical for climate ambition, which will require behavioural and societal changes. This needs to be reflected in policies, for instance on reusing and recycling and a fair transition.						
Monitoring and reporting on the evolution of GHG emissions and climate impacts is crucial. EU space data and services should be further used to do this.						
Small and medium enterprises will need support to develop and adapt as part of the transition.						
New technologies and solutions need to emerge and be deployed (e.g. clean fuels), which will require more research, development and innovation.						
Small and medium enterprises will need support to develop and adapt as part of the transition.						
The climate transition will require a shift in investment flows. It is very important to promote green financing to ensure that resources are appropriately allocated to climate-friendly economic activities.						
Capturing CO ₂ from the atmosphere and storing through nature-based and industry-based solutions is vital for the EU's climate neutrality. It should be financially supported.						
Vulnerable households (such as single parents) may struggle with increasing energy prices and face an unequal burden of climate change. A socially just transition is key and should be ensured through mechanisms to support middle- and lower-income households financially.						

Gender aspects of climate policy

Climate policy and climate action can be seen from many different perspectives. In your view, should more consideration be given to gender aspects in the transition to climate neutrality and in climate and related policies?

- 1 - No, I totally disagree
- 2
- 3

- ☐ 4
- ☐ 5 - Yes, I totally agree

If you believe this is an important topic, how should climate and related policies better address gender aspects?

200 character(s) maximum

Contribution of individual sectors to the EU's climate ambition

Which sector should do more to reduce GHG emissions?

The potential of different sectors to further reduce GHG emissions may vary. In your opinion, to which extent can the different sectors further reduce their GHG emissions?

1 = can reduce little more; 5 = can reduce a lot more

	1 (can reduce little more)	2	3	4	5 (can reduce a lot more)	I don't know
Production of electricity and district heating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Industrial processes & waste	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Buildings (residential and services)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Road transport (passenger and freight transport)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Aviation & maritime transport	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Agriculture, forestry and other land use	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>


Sectors expected to reach climate neutrality first


It will be easier for some sectors to reach climate neutrality than for others. For example, different sectors could face different investment needs, conditions of technical feasibility or may require changes by consumers.


Please rank the following sectors in the order in which you expect them to reach


climate neutrality in the coming three decades, where (1) is the first to become climate neutral and (6) is the last to reach climate neutrality. If you don't know or you don't feel able to provide a ranking, please simply skip that question.


Use drag&drop or the up/down buttons to change the order or [accept the initial order](#).


 Road transport (passenger and freight transport)

 Industrial processes & waste

 Production of electricity and district heating

 Buildings (residential and services)

 Agriculture, forestry, and other land use

 Aviation & maritime transport

Capacity to innovate

How do you assess the capacity to innovate and access financing of the sector or company you are working in?

Please rate them from 1 = totally disagree to 5 = totally agree.

	1 (totally disagree)	2	3	4	5 (totally agree)	I don't know
My sector or company has the capacity to carry out the necessary innovation (e.g. product innovation, technologies, technical skills, etc) to manage the transition to a net-zero emission economy.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My sector or company has access to risk capital and financing.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My sector or company has access to EU dedicated facilities for the green transition (e.g. InvestEU, Just Transition Fund, Modernisation Fund, etc.).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

General section

My personal contribution to protect the climate

Awareness of climate change impact and climate action

The effects of climate change have been regularly described in the reports by scientists of the Inter-governmental Panel on Climate Change (IPCC). Their

analyses are covered by the media.

How aware are you and how aware do you think society is of the reality of climate change and its impacts

Please indicate the extent to which you agree with the statements below, from totally disagree (1) to totally agree (5).

	1 (totally disagree)	2	3	4	5 (totally agree)	I don't know
I am aware of the reality of climate change and its expected impacts.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am ready to change my behaviour to reduce my carbon footprint (e.g. by using sustainable transport; using or producing renewable energy; reducing consumption, reusing and recycling products; consuming foods with a lower climate impact; reducing fashion consumption; or by choosing climate-friendly investment plans).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have felt or experienced the present-day impacts of climate change (e.g. hotter summers, dryer land, less snow) and I feel a need to adapt to these impacts.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There are many factors preventing me from taking further action, for example insufficient information on products or services, lack of sustainable choices and infrastructure, or solutions that are too complicated.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Society is aware of the reality of climate change and its expected future impacts.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Society is ready to implement actions to reduce GHG emissions (e.g. by using sustainable transport; using or producing renewable energy; reducing, reusing and recycling products; consuming foods with a lower climate impact; reducing fashion consumption; or by choosing climate-friendly investment plans).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Society feels the need to manage and adapt to climate change (e.g. different infrastructure in cities; preparedness for floods, droughts and heatwaves; greening spaces; improving health conditions).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Most important changes expected for peoples' daily lives

The effort to reduce GHG emissions in the EU will progress further in the coming

years in order to reach climate neutrality by 2050. Where do you expect the greatest changes to happen in your daily life? [Multiple answers possible]

- ☐ Consumer goods and services (including reduce, reuse, repair & recycle)
- ☐ Transport used for long-distance trips
- ☐ My current job
- ☐ Housing (e.g. energy consumption in buildings, living space)
- ☐ Transport used for short-distance trips
- ☐ Food (including food waste)
- ☐ Education and skills needed for future jobs

Please specify any other expected changes:

100 character(s) maximum

Willingness for action at individual level

Consumer choices and behavioural change can considerably impact our GHG emissions. Which of the following personal actions would you be willing to take to fight climate change?

	1 (No, I would not be willing to do this)	2 (I am not sure whether I would do it or not)	3 (Yes, I would be willing to do this)	Not applicable in my case
Eat food with a lower climate impact, such as plant-based, local or sustainably produced food.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Improve the energy performance of my building (insulation, triple glazing, more efficient heating, etc.).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Invest in energy measures for my building that reduce its emissions (solar panels, thermal insulation, heat pumps).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Accept infrastructure for renewable energy such as wind turbines, above-ground power lines or solar panels in your municipality.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Buy products and services that are more climate-friendly (according to a trusted label or certificate), even if they come at a somewhat higher price.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Consider how climate-friendly a product is when the information of its climate impact is provided (e.g. through a label).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Have goods repaired or reuse them, rather than buying new ones.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reduce wasteful consumption, for instance buying and using long-lasting appliances, clothing, and other products.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use alternatives to the car for everyday journeys (e.g. walking, cycling, public transport), or reduce trips (e.g. by working from home).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
For long journeys, fly less and travel more by alternative modes (e.g. trains) or consider shorter distance trips.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Switch to sharing-based business models to rent products rather than owning them, such as car-sharing.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Compensate some of my emissions via reliable and certified carbon-offsetting programmes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Engage in active political support for increased climate ambition, regardless of political affiliation.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How to improve incentives for climate action

Climate policies and the trajectory to climate neutrality by 2050 will require us to change our consumption patterns, both for products and services. Which of the following proposals would help you to reduce your personal climate footprint?

	1 (not helpful)	2	3	4	5 (very helpful)	I don't know
Put in place measures to make sure that the most vulnerable in society have access to sustainable and climate-friendly products and services.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ensure the price of goods and services reflects their impact on climate change, making climate-friendly products with a lower climate impact more attractive.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Ease financing of investments in solutions that will lead to reductions in personal GHG emissions, notably from a person's house (e.g. installing heat pumps), transport means (e.g. electric cars or affordable public transport) or food consumption.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Raise awareness of the climate impact of goods and services.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ensure the price of goods and services reflects their impact on climate change, but treat first necessity /regular/ luxury goods and services differently.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Label the climate impact of goods and services so that consumers can better choose more climate-friendly options.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Provide better information on how to invest in solutions that will help people reduce their GHG emissions or increase carbon removals, notably from buildings, food consumption or transport.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Support sharing and leasing services to facilitate the access to technologies that reduce an individual's net GHG emissions (e.g. heat pump, photovoltaic panels or electric vehicles).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

If other, please specify:

100 character(s) maximum

The impacts of the climate crisis

Setting a 2040 climate target will confirm the importance for the EU of tackling climate change, which is already having an impact on our society and economy. Scientists have emphasised that, without a significant reduction of GHG emissions, climate change and the impacts it brings will accelerate in the coming years and decades, with possible tipping points reached and large-scale irreversible outcomes. The impacts from the changing climate are also likely to hamper efforts to reduce GHG emissions needed to reach a 2040 target and climate neutrality.

The following questions assess perceptions of risks and impacts, which will increase in the absence of ambitious global climate action.

Possible effects of climate change for individuals

Which effects of climate change are of most concern for you? [Multiple answers possible]

- ☐ Loss of life due to natural hazards such as heatwaves, floods, droughts or wildfires.
- ☐ A change of landscape and forests in areas I relate to or that I live in.
- ☐ Increasing material losses to my property.
- ☐ Loss of job or income due to changes in the sector in which I work.
- ☐

Having to face changes in my private life or activities, e.g. facing water-scarcity; not being able to do outdoor activities in summer; less opportunity for winter-related activities; paying more for energy, food and transport; fewer transport services that address my specific needs as a woman, person with disabilities or as a young or older person.

- ☐ Damage from natural hazards (floods, wildfires, droughts, etc.) and rising sea levels.
- ☐ Loss of biodiversity and natural habitats.
- ☐ Spread of new diseases (e.g. malaria) and pandemics.
- ☐ Varying capacity of different social groups to adapt (e.g. older people, persons with disabilities, displaced persons, low income households, and other vulnerable groups).

Please specify any other effects below:

100 character(s) maximum

Possible natural hazards caused by climate change at the place where you live

As an individual, what possible hazards induced by climate change do you fear most? [Multiple answers possible]

- ☐ Droughts
- ☐ Heatwaves
- ☐ Wildfires
- ☐ Rising sea levels
- ☐ Floods and intense rain
- ☐ Lack of water
- ☐ Windstorms

Possible effects of climate change for society

What will be the main climate change-related impacts for society in your country in the next 20 years? [Multiple answers possible]

- ☐ Negative impacts on the economy and employment.
- ☐ Loss of lives.
- ☐ Increasing inequalities due to climate hazards and different socio-economic vulnerabilities in society.

- ☐ Negative impacts on critical infrastructure.
- ☐ Negative impacts through decreasing water availability for example municipal water-saving measures.
- ☐ Migration or refugee movements due to climate change and environmental crises.
- ☐ More conflicts between countries or regions and their inhabitants g. due to declining water cycles and land resources.
- ☐ Negative impacts on health.
- ☐ Negative impacts on energy supply.
- ☐ Natural disasters (e.g. fires, droughts or floods).
- ☐ Negative impacts on food production.

Adapting to climate change where you live

The Intergovernmental Panel on Climate Change (IPCC), the intergovernmental scientific body of the United Nations responsible for advancing knowledge on human-induced climate change, warns in its latest report that the world is set to reach the 1.5°C temperature increase level within the next two decades. While stressing that preventing mounting loss of life, biodiversity and infrastructure requires the most significant cuts in GHG emissions, the IPCC also calls for more action to adapt to climate change.

Buildings can be adapted to increase their resilience to climate change, for example by improving thermal insulation, using highly durable materials, retrofitting or by greening urban areas to fight the urban heat.

Considering your place of residence, your community, and the city or region you live in, how much do you agree with the following statements ?

From totally disagree (1) to totally agree (5)

	1 (totally disagree)	2	3	4	5 (totally agree)	I don't know
I am aware which climate impacts are threatening the building I live in.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The risks associated with climate change for my place of residence have been assessed and I can access this information.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would be ready to invest to make my building more resilient to climate change.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Concrete actions to improve climate resilience in my place of residence have been carried out and I judge them sufficient.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The local or national authorities should do more to prepare my city or region for climate change.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Some physical measures have already been implemented to prepare my building for climate change impacts.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We need more adaptation policies that take gender-differentiated needs and the needs of disadvantaged groups into account.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Plans to prepare for inevitable climate change events have been sufficiently developed and I am informed of them.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Expert section

This section complements questions on the 2040 climate target by exploring how the EU's climate policies could evolve after 2030 to set the EU on track to meeting its climate neutrality target by 2050. It includes questions on the role of the EU Emissions Trading System (ETS), the Effort Sharing Regulation and sectoral targets, questions on GHG mitigation in the land sector, the role of carbon removals, technologies, and the role of EU policy on adaptation to climate change for buildings and energy infrastructure.

The section is addressed predominantly to people with expert knowledge. As an individual, you may also respond to it, but it is not mandatory.

General policy framework

In addition to the European Climate Law, GHG emissions from the EU are currently covered by three policy instruments:

- the EU Emission Trading System (ETS) Directive, an EU-wide market-based instrument to reduce GHG emissions from specific sectors through a declining cap on emissions, a carbon price signal and trading of emission allowances;
- the Effort Sharing Regulation, which sets EU-wide and national targets on GHG emissions reduction from the other sectors (excluding land use, land use change and forestry (LULUCF));
- the LULUCF Regulation, which defines an EU-wide target of delivering 310 million tonnes of CO₂ equivalent (MtCO₂e) removals from the LULUCF sector by 2030.

Scope and role of EU-wide carbon pricing instruments

In the context of the Fit-for-55 package, the scope of the EU ETS is being extended to cover most of the CO₂ emissions from the use of fossil fuels and industrial processes.

How could emissions trading in the EU evolve in a post-2030 policy framework in terms of GHG coverage, sectoral coverage, and relations with non-EU emissions trading schemes?

	1 (totally disagree)	2	3	4	5 (totally agree)	I don't know
EU emissions trading should cover all fossil fuel uses, including those that are so far not or not entirely covered, e.g. in the non-road transport sector.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
EU emissions trading should also cover all non-CO ₂ GHG emissions from the use of fossil fuels and industrial processes, not only CO ₂ emissions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
EU emissions trading maintains the obligation to surrender allowances for emissions that are captured and utilised (Carbon Capture Utilisation, 'CCU') in non-permanent products. This aspect of emissions trading should be adapted for sectors with hard to abate, residual emissions and for sectors that require a carbon feedstock (e.g. chemicals, pulp and paper) in order to promote carbon circularity.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Options to link the EU ETS with other compliance carbon markets should be pursued, provided that the environmental integrity, potential cost-efficiency gains and more options for emissions abatement are carefully assessed.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
EU emissions trading should also cover GHG emissions from other sectors (e.g. extractive industries or the land sector).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Future role of the carbon border adjustment mechanism (CBAM)

In October 2023, the European Commission will introduce the carbon border adjustment mechanism, which, for the goods and sectors under its scope, will replace the existing mechanisms to prevent the risk of carbon leakage under the EU ETS. Instead, the CBAM will ensure equivalent carbon pricing for imports and domestic products. Under the (provisional) CBAM agreement, the Commission is mandated to assess the possibility of including all sectors identified as at risk of carbon leakage in the ETS Directive (Directive 2003/87/EC) at the latest by 2030.

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	1 (totally disagree)	2	3	4	5 (totally agree)	I don't know
Any extension of CBAM to all ETS products, which will replace free allocation, should be done progressively and prioritise certain sectors.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Priority should be given to sectors where absolute emissions are the highest.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Priority should be given to sectors where the emission reduction efforts are the lowest.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

If the scope of CBAM were extended to additional sectors, which sectors would be the priority?

100 character(s) maximum

Future role of the Effort Sharing Regulation (ESR) and links with the ETS

With the 'Fit for 55' package, some emissions currently falling under the ESR (and the associated national targets) will also be covered under an EU ETS (notably CO₂ emissions from road transport and buildings).

How should the scope of emissions under the ESR and the associated national targets evolve in the EU's post-2030 climate policies?

	1 (totally disagree)	2	3	4	5 (totally agree)	I don't know
The ESR and associated national targets should cover only GHG emissions that are not subject to the EU ETS.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The ESR and associated national targets should keep the same GHG scope as currently, covering both emissions that are not under the EU ETS (e. g. agriculture methane and nitrous oxide emissions) and emissions from fuels used in road transport and buildings (subject to the new ETS).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There should be national targets covering all GHG emissions from all sectors (including those covered by the EU ETS).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
National targets should be replaced by EU-wide sectoral legislation.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Mitigation of GHG emissions from the land sector (agriculture, forestry and other land use) and policy options

The role of carbon pricing and non-carbon pricing instruments for agricultural emissions and land-based removals

Agriculture is responsible for almost 12% of EU emissions. One possible way for climate policies to tackle this problem is to set a carbon price on agricultural emissions. But there are also other options, such as national targets, sectoral standards, or better information and support.

	1 (totally disagree)	2	3	4	5 (totally agree)	I don't know
Unsustainable farming practices should be ruled out by ambitious sectoral standards that make sustainable farming practices the new standard.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A carbon price on agricultural emissions, coupled with payments for carbon removals, will provide farm-level incentives to move to sustainable farming practices.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Emission reductions and carbon removals in the agricultural sector should be covered by national targets and achieved through, inter alia, the EU common agricultural policy (CAP).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Non-regulatory approaches such as better information on the climate impact of food and support to innovation, combined with consumers' higher demand for climate action, will be enough to drive the transformation of the farming sector.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Agricultural emissions and climate policies

If a carbon price was set on agricultural emissions, for which actor should it be set?

	1 (totally disagree)	2	3	4	5 (totally agree)	I don't know
Farmers: A carbon price or stricter standards at the farm level would steer the decisions of the actors who are more directly in control of agricultural emissions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Food companies: Making food producers liable for the climate footprint of a product along the						

entire value chain would drive the transition towards more sustainable food systems.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Producers of fertilisers: Fertilisers generate greenhouse gases when applied on the land. Asking producers to pay the corresponding carbon price would promote the most sustainable and efficient fertilising solutions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Consumers: A carbon price linked to the emissions of the most GHG-intensive food products (e.g. animal-based) would incentivise a shift towards more climate-friendly diets.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

The role of carbon removals

The objectives of the Paris Agreement are challenging, and scientific evidence presented by the IPCC indicates that it will be necessary at a certain point to remove a significant amount of CO₂ from the atmosphere in order to stay below 2°C, and even more so in order to limit the temperature increase to 1.5°C. Carbon removals are processes in which carbon dioxide gas is removed from the atmosphere and durably stored in geological, terrestrial or ocean reservoirs or in products. While some nature-based solutions like growing forests and storing carbon in biomass have already existed for a long time, industrial solutions that capture atmospheric carbon and then store it underground (directly with direct air capture and indirectly through carbon capture associated with bioenergy) are so far only used on a small scale or are still being developed.

General role of carbon removals

Carbon removals can decrease the overall level of CO₂ in the atmosphere or cover for remaining GHG emissions from the economy.

What should be the role of carbon removals to meet the EU climate neutrality target by 2050?

- ☐ A very limited role. All GHG emissions can be brought down close to zero by 2050, including in sectors that are currently considered as difficult to fully abate (like agriculture, aviation or some industrial processes).
- ☒ An important role. Carbon removals compensate remaining unabated GHG emissions in different sectors, including agriculture, industrial processes, while driving the growth of the EU clean industry and providing co-benefits for other environmental objectives.
- ☐ No opinion.

Relative contribution of nature-based removals and industrial removals

If the EU were to rely to a certain extent on carbon removals to meet its targets

in 2040, what should be the relative contribution of nature-based removals in the land sector (“LULUCF”) and industrial removals (direct air capture or carbon capture and storage associated with bioenergy)?

- ☐ A stronger reliance on the LULUCF sink, since the large-scale deployment of industrial removals is uncertain.
- ☐ A balance between the LULUCF sink and industrial removals.
- ☒ A stronger reliance on industrial removals, since the evolution of the LULUCF sink is uncertain.
- ☐ No opinion.

Expert section

Technologies

Barriers to carbon capture and storage technologies

What are the main hurdles to deploying carbon capture and storage technologies?

	1 (minor)	2	3	4	5 (major)	I don't know
Public acceptance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Regulatory framework	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Technology maturity	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cost of CO ₂ capture technology	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
CO ₂ storage availability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Economic signals (e.g. the price of carbon)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

Carbon capture and use or storage

Which deployment of carbon capture and storage and carbon capture and use should be prioritised?

	1 (lower priority)	2	3	4	5 (higher priority)	I don't know
Capture of CO ₂ from the combustion of fossil-fuel.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Capture of CO ₂ from non-energy related industrial processes CO ₂ emissions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

Capture of CO ₂ from the combustion of biomass.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Capture of CO ₂ directly from the air (direct air capture).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Permanent storage of captured CO ₂ in underground geological formations to avoid emissions (fossil CCS) or generate negative emissions (BECCS /DACCS).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
The use of captured CO ₂ in fuels and products to replace virgin fossil carbon.	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The co-production of clean gas and biochar through the treatment of biomass in an approach combining the use and storage of biogenic carbon.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Energy technologies

The energy system today is responsible for around 75% of the EU's GHG emissions and is currently undergoing a rapid transformation. Accelerating this change will play a central role in the transition towards a carbon-neutral economy.

The following table lists different energy technologies. Which are the most relevant solutions for the energy transition towards carbon neutrality?

	1 (very irrelevant)	2	3	4	5 (very relevant)	I don't know
Hydrogen and its derivatives (produced in a carbon-neutral manner).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Solid biomass for heat and electricity production.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Advanced liquid biofuels.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Renewable energy from wind (onshore, offshore and floating), solar (including rooftop and decentralised installations) or hydro.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nuclear energy (existing nuclear fission).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Demand management, demand response and greater digitisation of energy systems.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other forms of renewable energy, like geothermal (including heat pumps), wave or tidal.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fossil fuels with carbon capture and storage.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Biogas from agricultural and domestic waste.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Energy efficiency first principle: prioritise further reducing the need to produce and consume energy.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bioenergy from advanced biofuels or solid biomass.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Electricity storage, long duration storage and heat storage (electricity system integration).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please specify any different options below:

100 character(s) maximum

Opportunities and challenges with regard to energy technologies and their development

What are the biggest opportunities in the energy sector and in the sectors of the economy consuming energy (residential, industry, transport), including for the wider economy and security of supply? What are the biggest challenges related to the future development of a low-carbon energy sector, including as regards to public acceptance or the availability of land and natural resources?

300 character(s) maximum

Other options to fight climate change to be considered

Please rate the options below to indicate the most relevant solutions for limiting climate change:

	1 (very irrelevant)	2	3	4	5 (very relevant)	I don't know
Enhanced weathering (that allows CO ₂ to be removed from the atmosphere through storing into silicate rocks spread onto surfaces).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bio-energy carbon capture & storage (BECCS).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Soil carbon sequestration.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Direct air carbon capture and storage (DACCS).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

Peatland restoration (rewetting, revegetating, and paludiculture on peatlands).						
Innovative mobility technologies (wireless charging, multimodal urban platforms, autonomous shared vehicles).						
Ocean-based carbon storage (ocean fertilisation, ocean alkalinity enhancement, artificial upwelling).						
Innovative technologies improving digitalisation in different sectors (digital energy systems, precision farming, connected mobility, etc.) that reduce GHG emissions.						
Production of plant-based meat substitutes or 'in vitro' meat.						
Solar radiation modification (temporary measure to limit climate change through aerosol injection to reflect more sunlight into outer space).						
Afforestation, reforestation and forest restoration.						
Biochar (carbon sequestration by heating biomass in low oxygen environment).						
Nuclear fusion (energy generation through the fusion of atoms).						
Agroforestry and other agricultural soil management practices.						
Coastal blue carbon (carbon sequestration by restoring and managing coastal wetlands like mangroves, saltmarshes, sea grasses).						

Open question on the future role of other innovative options

Which other innovative technologies could be used to reduce emissions, in particular in hard-to-abate industrial sectors or to compensate for hard-to-capture emissions?

100 character(s) maximum

Engagement and social impacts

Local and regional implementation of the European Green Deal

Local and regional authorities such as cities, regions and local communities, as well as other actors such as civil society and the private sector, can play an

important role in achieving the energy transformation, reducing GHG emissions and adapting to climate change. Many regions, cities, companies and citizens' organisations are implementing projects covering energy, transport, food and waste management, and thereby helping to foster the green transition. Importantly, they often achieve local co-benefits related to economic and social development, health and well-being, while contributing to a low carbon economy and the energy transition.

In your view...

	1 (No, absolutely not)	2	3	4	5 (Yes, absolutely)	I don't know
...are local, regional, and private sector actors sufficiently involved in supporting the green transition?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...are national energy and climate plans (NECP) a good source to inform the 2040 policy framework?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

Social impacts of climate change policies

While achieving climate neutrality will lead to long-term economic, societal and environmental benefits for the people of Europe, the increase in the price for fossil fuels will have significant social and distributional impacts that can disproportionately affect regions, sectors and vulnerable people in our society. In view of ensuring a just transition, please rate the following statements from totally disagree (1) to totally agree (5).

	1 (Totally disagree)	2	3	4	5 (Totally agree)	I don't know
After 2030, there will be a greater need to support vulnerable individuals who must cope with the costs associated with the green transition.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Strengthening carbon pricing to spur climate-friendly activities, services and goods may affect the cost of living. It should be accompanied by adapted fiscal policies to mitigate the impacts on citizens.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Vulnerable households (such as single parents) may struggle with increasing energy prices and face an unequal burden of climate change. A						

socially just transition is key and should be ensured through mechanisms to support middle- and lower-income households financially.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is important to ensure inter-generational fairness: ambitious action is needed now to limit future adverse impacts of climate change on young people and future generations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Sectoral impacts of the transition

The green transition will create new opportunities but also lead to a decline in employment in certain sectors (such as coal, peat, oil shale, petroleum) and increase the need for transformation in others (GHG intensive industry such as non-metallic minerals, basic metals, chemicals, cement, fertilisers, and oil refining). In addition, some small and medium sized enterprises may be impacted by changes necessary for decarbonising operations and manufacturing less energy-intensive products.

Please rate the following statements from totally disagree (1) to totally agree (5).

	1 (Totally disagree)	2	3	4	5 (Totally agree)	I don't know
The green transition represents an opportunity for small and medium sized enterprises (SMEs).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
After 2030, there will be a greater need to support SMEs to cope with the adaptation and costs associated with the green transition.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The impact on competitiveness of micro-companies is likely to differ from the impact on small and medium-sized ones.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The EU transition to a net-zero economy impacts differently on the competitiveness of SMEs from those of large companies.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The most affected sectors by the green transition will significantly change after 2030.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The likely structural shift and changing skill requirements in the economy towards a green and circular economy will require EU action to reskill and upskill the workforce.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Open Question on affected sectors after 2030

If you believe the sectors affected by the green transition will change after 2030, which sectors do you believe will be affected by then and how? Please describe briefly in the text field.

200 character(s) maximum

Adapting to climate change

Climate change is already causing observable effects on the environment. Towards 2040 it will increasingly impact the achievement of our climate targets through its effect on sectors such as energy, transport and land-use. Some of these observable effects include more extreme temperatures, higher wind speeds, heavier rainfall, droughts and wildfires all of which negatively impact climate mitigation efforts.

EU policy ambition on climate resilience of mitigation efforts

Assets instrumental in delivering our climate mitigation targets will be exposed to the effects of a growing number of extreme weather events. This includes energy infrastructure, (from generation and transmission to distribution and the final customer), transport infrastructure (from bicycle roads to the high-speed train network) and land use (both in terms of sectoral carbon emissions and carbon removal).

What do you believe would be the right scope for regulating these sectors from the point of view of climate adaptation and resilience?

- ☐ Current EU regulations and policy are sufficient to guarantee the security of the mitigation efforts in face of climate impacts.
- ☐ The EU should do more to promote the climate resilience of mitigation efforts using soft measures (guidance, training, etc.)
- ☐ The EU should provide specific provisions related to climate risks in the existing EU legislative framework
- ☐ The EU should draft new legislation to improve the climate resilience of mitigation efforts.
- ☐ I don't know.

Additional information

Should you wish to provide additional information (for example a position paper) or raise specific points not covered by the questionnaire, you can upload your additional document here.

Please note that the uploaded document will be published alongside your response to the questionnaire which is the essential input to this public consultation. The document is an optional complement and serves as additional background reading to better understand your position.

Please upload your file

Only files of the type pdf,txt,doc,docx,odt,rtf are allowed

c18d2e9e-36a9-4d5a-bec2-5bac9a44b26e/ZEP_response_-_2040_climate_target.pdf

Contact

CLIMA-2040-TARGET@ec.europa.eu

ZEP response to the public consultation on the EU climate target for 2040

The Zero Emissions Platform (ZEP) welcomes the opportunity to provide input to the European Commission regarding the EU climate target for 2040. This paper complements the responses provided in the questionnaire, aiming to provide further context and rationale supporting our answers.

ZEP is pleased to contribute to this work and remain available to expand on any element of this response.

EU emission reduction target for 2040

ZEP supports an ambitious target supported by scientific evidence, including a thorough investigation of the social, economic, and environmental impacts associated. The target needs to be in line with the climate urgency and recognise that early and strong action is needed. The cheapest and more cost-efficient measures (so called low-hanging fruits) are more likely to be implemented first, leaving some proportion of the necessary net GHG emission reductions – those most difficult to abate – to be accomplished later. The implementation of earlier and stronger climate action will allow more time for that proportion of emissions reductions to be accomplished, allowing for a smoother transition, with abatement costs spread over a longer period of time.

At the same time, the target for 2040 should be set at a level appropriate for industry, allowing it to invest and adjust, and must be backed by clear conducive policies and funding programmes, enable industry to take significant action.

With this in mind, ZEP supports a target in the order of -80%.

Role of removals in the 2040 climate target

ZEP supports a more disaggregated 2040 target, with clear and separate targets for GHG emission reductions, for nature-based carbon removals (biogenic sink), and for industrial removals with permanent storage (geologic sink).

This is in recognition that a strong political and legislative direction is needed to support the development and scale up of Carbon Capture and Storage (CCS) and Carbon Dioxide Removals (CDR). Establishing separate targets also contributes to an accurate prioritisation of mitigation activities – while carbon removals have a clear role to play, they must not displace emission reductions, which, in turn, must remain the priority in climate action.

Furthermore, a distinct target for the different types of carbon removals is needed as they are part of different carbon cycles (e.g., only removals to geologic sinks can balance emissions from geologic sinks as fossil carbon and limestone calcination), require different incentives and safeguards, and present different reversal risks. In addition, the different types of carbon removals work under substantially different timescales and are thus not equivalent from a climate perspective. ZEP thus supports a

further disaggregated target, preventing non-permanent removals from undercutting investments in permanent removals.

Challenges and enabling actions for the EU climate ambition to 2040 and beyond

CCS, as a mitigation solution for industrial emissions, should be listed among the enabling factors to reach climate neutrality by 2050. All reliable modelling scenarios, including those from the Intergovernmental Panel on Climate Change (IPCC)¹ and the International Energy Agency (IEA)², consider the deployment of CCS critical to reaching climate neutrality by 2050.

How to improve incentives for climate action

Individual climate footprints can be reduced through a set of policy measures that support the ramp up of demand and create a market for low-carbon products such as through CCS and Carbon Capture and Utilisation (CCU) applications where CO₂ is stored in a manner intended to be permanent (i.e., so that emissions do not enter the atmosphere under normal use, including any normal activity taking place after the end of the life of the product). Notably, labelling can help consumers identify low-carbon industrial products with lower GHG emissions as well as to associate price differences between industrial products with different GHG emissions and climate impact.

Scope and role of EU-wide carbon pricing instruments

ZEP supports an evolution of emissions trading in the EU that covers applications of CCU where CO₂ is captured and stored in products (in a manner intended to be permanent, i.e., that emissions do not enter the atmosphere under normal use, including any normal activity taking place after the end of the life of the product), as per the revised EU ETS Directive. We further note that the European Commission will analyse, in 2026, if and how other types of CCU should be included in the EU ETS – a decision regarding the possible inclusion of this type of CCU, in the meaning mentioned in the questionnaire, should be taken considering the findings of that report.

In addition, ZEP strongly supports the coordination/synchronisation of the EU ETS and UK ETS, as a mechanism to create a Europe-wide market for CO₂ storage that covers the European Economic Area and the UK.

General role of carbon removals

Tackling climate change will require a plethora of approaches. While removals must never be used as a substitute to emissions reductions, carbon removals are an essential part of that portfolio and necessary to counterbalance both residual and historical CO₂ emissions. It is thus essential that

¹ Intergovernmental Panel on Climate Change (2022). [Climate Change 2022: Impacts, Adaptation and Vulnerability](#).

² International Energy Agency (2022). [Carbon capture, utilisation and storage](#).

removals do not preclude the much-needed increased efforts in emission reductions. With this in mind, ZEP considers that carbon removals play an important but limited role.

Relative contribution of nature-based removals and industrial removals

Both nature-based and industrial removals have an important role to play; however, a stronger reliance on industrial removals is needed as the LULUCF sink does not allow to achieve permanent removals, faces a higher risk of reversal and is decreasing. It is also important to guarantee that both types of solutions offer the same level of reliability regarding their corresponding climate benefit (i.e., in monitoring, reporting and verification).

Barriers to carbon capture and storage technologies

The cost of CO₂ capture technology, public acceptance, regulatory frameworks, the availability of CO₂ storage, and economic signals (e.g., the price of carbon) are major elements impacting the deployment of CCS and CCU.

The EU ETS is the main vehicle to industrial decarbonisation in the EU, providing economic incentives for industries to make investments in line with the EU climate objectives. Notably, allowance prices are key to incentivise investments in CCS for hard-to-abate industries. With this in mind, the EU ETS market must be allowed to offer price signals that reflect the need for the decarbonisation of all economic sectors.

Carbon capture and use or storage

Reducing emissions, including through CCS and CCU, should remain the EU's priority, and they should be complemented by carbon dioxide removals.

ZEP further notes that the deployment of a robust European CO₂ transport and storage infrastructure should be prioritised as an enabler to the deployment of CCS, CCU, and CDR at scale.

About the Zero Emissions Platform

ZEP is the advisor to the EU on the deployment of CCS and CCU – a European Technology and Innovation Platform (ETIP) under the European Commission's Strategic Energy Technologies Plan (SET-Plan).

ZEP supports the European Union's commitment to reach climate neutrality by 2050, defined as net-zero greenhouse gas (GHG) emissions by 2050. To this end, CCS technologies represent readily available and cost-efficient pathways for the decarbonisation of industrial and energy sectors in the European Union. Some applications of CCU – where CO₂ is stored in a manner intended to be permanent – can also contribute to this goal.

Agenda item 6: Updates from External Relations Group – *for information and guidance*

6.a. New ERG

New ERG co-chairs

Jonas Helseth (Bellona Europa) is the ERG co-chair representing NGOs, and the Research constituency has chosen Marie Bysveen as their ERG co-chair. The Oil & gas and Industry constituency have also been asked to choose ERG co-chairs representing their constituencies. Note that this is for information and does not require AC approval.

The new co-chairs will be communicated to the AC in due time.

Combining the External Relations Group (ERG) and the Communications Group

ZEP AC approved the proposal to combine the ERG with the Communication Group under the name ERG as a two-hour meeting led by the new co-chairs.

The next ERG meeting – including the new co-chairs – is planned for 23 June.

6.b. Overview of ZEP communications activities and events

Follow up from the 'Net-Zero Within Reach' conference

Some 170 people attended the [Net Zero Within Reach](#) conference on 26 April, hosted by ZEP and supported by the CCSA. We have received excellent feedback from both speakers and attendees, who have also indicated that they would like to come back next year.

At its May meeting, the ACEC approved 24 April 2024 as the date for next year's conference. The date has been communicated to stakeholders on ZEP's website, social media, and newsletter (link to the [event page](#)).

ZEP knowledge-sharing seminar

ZEP is organising a knowledge-sharing webinar aimed at providing an overview of CCS and CCU technologies and how they can support the EU transition to climate neutrality.

The one-hour seminar will take place on 13 June at 12:00-13:00 CEST, hosted on Teams. This seminar has been organised for attendees from EU Member State governments, Energy and Climate attachés at Permanent Representations, and MEP assistants. The seminar will be held in a closed session, with participation restricted to the presenters and the described audience.

The programme is as follows:

- 1) Introduction and setting the scene – Zero Emissions Platform

- 2) Presentations – the importance of CCS and Europe-wide CO₂ transport and storage infrastructure
 - Directorate-General for Energy (ENER), European Commission
 - Eadbhard Pernot, Clean Air Task Force
 - Winston Beck, Heidelberg Materials
 - Markus Sebastian Hole, Hafslund Oslo Celsio
- 3) Questions & Answers with the speakers.

Website updated

Both [ZEP](#) and [IWG9](#) websites have been updated and restructured to improve searchability and access to content, as well as to allow for performance tracking. Changes include:

- A new homepage at ZEP's website, with menus reorganised for ease of access to content, better search function and more content-driven. Important information can now be easily reached and communicated in the homepage sliders,
- Links between the ZEP and the IWG9 websites, using the same menu setup,
- Increasing searchability by keeping all important material and history from previous and ongoing grants collected in one place.
- Implementation of analytics tools to monitor usage and performance.

ZEP Newsletters

The next newsletter will be published in the week of 12 June. The previous editions were circulated on 12 May ([link](#)), 30 May ([link](#)) and 24 April ([link](#)).

Policy session at the EUSEW 2023

ZEP will host a policy session at the EUSEW 2023 Policy Conference ([link to the session details, in the online programme](#)), scheduled for Thursday 22 June from 16:00 to 17:30, at the Martin's Brussels EU Hotel (Quartz room, on the first floor).

The session's agenda is as follows:

- 1) Introduction by Eve Tamme, ZEP Chair
- 2) Scene setting by moderator Ellina Levina, Global CCS Institute
- 3) Keynote speech by Chris Bolesta, European Commission, DG ENER
- 4) Speaker presentations:
 - Malte Bornkamm, German Federal Ministry of Economic Affairs and Climate Action, BMWK
 - Per Sandberg, Equinor
 - Annemarie Manger, Aramis CCS

- Judith Kirton-Darling, IndustriAll European Trade Union
- 5) Panel discussion
 - 6) Conclusion

At the time of writing, 66 delegates have registered to attend the session, 51 onsite and 15 online.

Agenda Item 7: Network Projects – *for information and guidance*

7.a. Starting the new Network Projects

The Advisory Council has approved for ZEP to include a new Network Projects, in parallel with the Networks Policy & Economics and Technology, to support the many ongoing and planned carbon capture and storage (CCS) and carbon capture and utilisation (CCU) projects, address existing barriers and help de-risking investments, improve public perception, and enable real project-to-project knowledge sharing. The ongoing CCUS Forum evaluation of industrial partnerships is a strong driver for this new ZEP Network.

This new Network Projects addresses the obvious gap in the CCS/CCU deployment in Europe – there is no EU/EEA-wide platform that specifically caters to the numerous projects in the pipeline. It is vital for the CCS and CCU community to coordinate actions as best as possible, not to create singular entities and overlaps that will lead to inefficiency and counterproductivity.

By introducing this network, ZEP establishes an important tool to efficiently support projects and, at the same time, actively help the EC and European governments regarding necessary policy/regulation, funding and actions linked to public perception.

Network objectives and organisation

The Network objectives are to support CCS and CCU projects in Europe by:

- Recommending to the EC and European governments necessary policy/regulation, funding, and business model actions,
- Addressing on-the-ground enablers and barriers, discuss and share with public authorities,
- Enabling real project-to-project knowledge sharing (considering competition law and confidentiality) on good practices and experiences (e.g., permitting, licencing, PCI/funding processes, public perception), and
- De-risking projects, focusing on specific regions.

Set-up for the Network

- Meetings will be organised in cooperation with a project/at project site, be 2-3 days long (one day for the project and one day for policymakers) and both open and closed (Chatham House rules) sessions, every 4-6 months.
- Projects to host the meetings will be selected to ensure geographical balance across Europe.
- Charing the network:
 - a permanent project lead/representative – Stijn Santen from EBN is proposed as the lead Network chair,
 - a representative from the European Commission will be invited,
 - a rotating co-chair (representing the next project that will organise the meeting).

- The Network will have open membership to include also newcomers, smaller/remote emitters, and industrial hubs and clusters.
- Governments and public authorities (on EU, national and regional level) will be invited, linked to the specific geographic area (also link to the ZEP Government Group).
- There will also be a link to the research community (focusing on demos and scale-up resulting in further needs of research and innovation).
- There will be communication activities to provide visibility to the meetings.

Next steps

The Network, scope, programme, and way forward will be presented at the AC meeting. A first project hosting meeting is proposed to be held this autumn, possibly in November. ZEP is contacting projects able to host this meeting. ZEP is also contacting the EC regarding co-chairing the Network.

There will be a presentation of the Network and proposed hosting project at the meeting.

The AC are invited to approve the launch of the Network, the proposed set-up, co-chairs and the first hosting projects.

Agenda Item 8: The Green Deal Industrial Plan and the Net Zero Industry Act – *for information and guidance*

8.a. Green Deal Industrial Plan and Net Zero Industry Act – *for approval*

Background

The EC presented its response to the Inflation Reduction Act (IRA) by putting forward the Communication ‘A Green Deal Industrial Plan for the Net-Zero Age’ (GDIP), that includes CCS, on 1 February 2023 (link to the [communication](#)). The GDIP includes CCS and is built on four pillars: simplified regulatory environment, faster access to funding, skills for the transition, and open trade.

The EC adopted parts of the GDIP, including the Temporary Crisis and Transition Framework and an amendment to the General Block Exemption Regulation on 9 March to relax state aid rules (link to the [communication](#) and [amending regulation](#)).

The EC adopted the Net-Zero Industry Act (NZIA) on 16 March as part of the GDIP (link to the [proposal](#)). The proposal aims to reduce permitting time and administrative procedures for net-zero technologies production, including CCS. The proposal includes a contribution for EU hydrocarbon producers to achieve an objective of 50 million tonnes per year of operational CO₂ injection capacity by 2030 in the EU.

The NZIA is a landmark political achievement for CCS and CCU. At the same time, there are elements of the proposal which bring about important questions and where further clarification is needed (link to [ZEP's position](#)).

Draft ITRE committee report

The European Parliament's Committee on Industry, Research and Energy (ITRE) published the draft report put forward by rapporteur Christian Ehler (DE, EPP) on 26 May (link to the [draft report](#)). The draft report introduces numerous provisions that would support CCS and CCU deployment, among which:

- ‘Net-zero technologies’ defined as technologies that contribute to climate change mitigation under the EU Taxonomy,
- Member States must allocate at least 25% of national revenues from EU ETS allowances to pursue the objectives of this Act,
- EU and Member States must invest in and set up a common strategy to finance CO₂ transport infrastructure,
- Maximum permitting time of 12 months for net-zero technology manufacturing projects relevant for CCS,
- Commission must publish guidelines indicating the maximum levels of CO₂ purity and of trace elements within the flow that may be specified by a company seeking to have a CO₂ storage project contributing to the 50mtpa objective,

- Member States must publish annual national strategy and targets set for the capture of CO₂ by 2030, 2035, 2040 and 2050,
- Net-Zero Industry Valleys created to further reduce administrative procedures (the concept and scope of Net-Zero Industry Valleys for CCS could benefit from clarifications).

Draft ENVI committee report

The European Parliament's Committee on Environment, Public Health and Food Safety (ENVI) is set to issue an opinion on the NZIA. Leaked amendments from the rapporteur for opinion, Tiemo Wölken (DE, S&D), is positive to CCS but intend to limit the use to “energy-intensive sectors with unavoidable CO₂ generation”.

Next steps

The ITRE committee is expected to examine the draft report on 12 June. The deadline for tabling amendments to the draft report is 19 June. The committee is scheduled to vote on the draft report on 12 October. The report is expected to be submitted to the plenary during the session of 16-19 October.

ZEP actions

ZEP is engaging with the EU institutions and further draft input based on the proposal and reports is being discussed with the ZEP WG Policy & Funding.

There will be a presentation at the meeting.

Agenda Item 9: Update on the Monitoring and Reporting Regulation revision – *for information*

9.a. Revision of the Monitoring and Reporting Regulation

On 14 July 2021, the European Commission (EC) adopted a number of legislative proposals under the 'Fit for 55' package, including the revision of the EU Emissions Trading System (EU ETS) to align it with the intermediate greenhouse gas (GHG) emissions reduction target of at least 55% by 2030.

The monitoring and reporting regulation (MRR) ([link to the regulation](#)) lays down the rules for the monitoring and reporting of GHG emissions, thus operationalising the EU ETS. Following the political agreement reached on the EU ETS (see *agenda item 5*), the European Commission will review the EU ETS delegated and implementing legislation, including the MRR. The revision is being supported by a contractor ([link to the call for tender](#)) in a two-step approach – the first revision is expected to run between March 2023 and November 2023; if deemed necessary, a second revision of the regulation would start in mid-2023.

The scope of the first revision includes, among others, the development of new rules/provisions for:

- Municipal waste incineration;
- Handling biomass in mass balances, e.g., remaining carbon in products, and for CCU;
- Renewable fuels of non-biological origin (RFNBOs) and recycled carbon fuels (RCFs), taking into account the additionality criteria and minimum GHG emissions reductions requirements, as laid out in the two relevant delegated acts ([link to the delegated act setting out minimum GHG savings thresholds](#) and to the [delegated act establishing rules and criteria for RFNBOs](#)).

Monitoring, reporting and verification rules for CCS and CCU are also included in the scope of the first revision, if time allows. The revision would consider:

- The inclusion of all CO₂ transport modes in the scope of the EU ETS and the interaction with other EU ETS activities such as shipping and road transport;
- Cross-border transport of CO₂ and the need for coordination between competent authorities;
- The need to define specific monitoring rules for CO₂ from different origins (fossil, sustainable biomass, non-sustainable biomass and mixed);
- The new EU ETS provisions on the subtraction of emissions that are considered to be captured and permanently chemically bound in products.

A public consultation on the revision of the MRR is expected in Q3 2023. The European Commission proposal is expected in Q4 2023.

Ioannis Markoudakis from DG CLIMA will give an update at the meeting.

Agenda Item 10: Update on funding opportunities for CCS/CCU – for information

10.a. Innovation Fund

In March 2023, the European Commission launched the Innovation Fund's third small-scale call for projects (link to the [call](#)). The call is open until 19 September and has a total budget of €100 million, covering CCS and CCU projects, among other technologies. To assist applicants in the application process, CINEA and DG CLIMA are organising a webinar followed by online orientation sessions on 4 and 5 July (link to [additional information and registration page](#)).

The Innovation Fund's third call for large-scale projects, which was open from 3 November 2022 to 16 March 2023, gathered 239 applications, of which 171 applicants were from energy-intensive industries, including CCS and CCU. The total funding requested amounts to EUR 18 billion, around 6 times the call's budget (EUR 3 billion). The projects proposals are being evaluated based on their potential to avoid greenhouse gas emissions, innovation, maturity, potential for scaling up, and cost efficiency. Results will be communicated in the second half of July and grants will be awarded by the end of the year.

On 13 June, DG CLIMA will host a stakeholder consultation event to gather views from stakeholders on future Innovation Fund calls following the revision of the EU ETS directive (link to [more information and registration page](#)).

Maria Velkova, from DG CLIMA, will give an update at the meeting.

10.b. PCI/PMI process

The EC closed the consultation on the list of candidate projects, which includes 18 cross-border CO₂ transport and storage network projects (link to the [list of candidate projects](#)) – 13 candidates to project of common interest (PCI) status and 5 to project of mutual interest (PMI) status. Selected projects will form the First Union List of PCIs/PMIs under the revised TEN-E and will benefit from a range of advantages, including accelerated permitting, enabling regulatory conditions, and be eligible to apply to Connecting Europe Facility (CEF) funding.

Draft PCI/PMI lists are scheduled to be sent to the Agency for the Cooperation of Energy Regulators (ACER) for its opinion in June. The final Union list is expected in November this year.

A representative from DG ENER will give an update at the meeting.

Agenda Item 11: Ahead of the CCUS Communication – for information and guidance

11.a. EU Strategy on CCS and CCU

The European Commission (EC) is expected to publish a Communication on a Strategy for CCS and CCU in Q4 2023.

The CCUS Forum Working Groups are feeding into this work. Ahead of the Communication, the EC has launched a 12-week public consultation (*see item 5*).

A representative from DG ENER will give an update on the way forward.

11.b. CCUS Forum WG on CO₂ infrastructure

The WG on CO₂ infrastructure, which is co-chaired by ZEP, held its latest meeting on 2 June and will deliver its final report at the end of June.

It is a strong clear message that is being delivered to the EC by the very large group of stakeholders, setting out the key actions needed regarding CO₂ transport and storage in order for Europe to reach climate neutrality by 2050. This report will also include key guidelines and principles for standards and network codes focusing on the CO₂ transport part of the value chain. For this, the EC asked ZEP to support a Europe-wide expert group, that is now finalising its work on definitions for temperature, pressure and purity, and recommendation for specific research efforts to close knowledge gaps.

There will be an update at the meeting.

Agenda Item 12: ZEP and IWG9 actions, next meeting dates

12.a. 2023 meeting dates – for information

ZEP Advisory Council and IWG9 Plenary (Wednesdays)

- 13 September
- 13 December

ZEP Advisory Council Executive Committee (Tuesdays)

- 11 July
- 10 October
- 7 November

Network Technology

- 28 September
- 23 November

Network Policy & Economics

- 26 October