

Innovation Fund workshop

Carbon Capture & Utilisation (CCU) sector

19 September 2019, Blue Point, Brussels

Organized by CO₂ Value Europe as part of H2020 project IMPACTS9 (842214)

Minutes

Damien Dallemagne, Secretary General of CO₂ Value Europe (CVE), welcomed the approximately 120 attendees and expressed his excitement for the interest shown in this event. This is a sign of the active involvement of the CCU community for large scale projects bringing significant CO₂ reductions and contributing to the EU goals for GHG emissions mitigation.

The workshop started with a presentation of DG CLIMA on the principles of the Innovation Fund (IF), the selection process, its scope, its expectations and its timeline. It is expected that 1.5 billion € will be the total budget of the first IF call mid-2020. Projects that are not considered mature enough after the first phase of evaluation, may use the Project Development Assistance to reach the required maturity level. The Commission will be assisted by two consultants to develop the detailed methodologies and definition of evaluation criteria (e.g. climate impact, cost efficiency) to be used for the first call. To ensure that this process takes into consideration the reality of CCU projects, the Commission invited CCU project owners to share (under confidentiality) real data and/or to discuss their specific project. A list of projects willing to do so will be provided to the Commission by CVE.

The European Investment Bank presented some lessons learned from NER300, the precursor of the IF, and reiterated its preparedness to manage the IF as well. The joint Research Centre then presented draft elements of the methodology for the calculation of the GHG emissions avoidance of candidate projects. It is the objective to ensure as much consistency as possible in the methodologies required to evaluate environmental impact in the various ongoing EU policy initiatives (e.g. REDII, IF, Finance Taxonomy).

The following session was dedicated to the discussion of the responses given by CCU project owners to the questionnaire compiled by DG CLIMA and sent to the participants prior to the workshop. The questionnaire included questions on the five project selection criteria, the milestones, the project development assistance and the knowledge sharing process. The Commission welcomed the feedback and responded to the questions from the audience. Several of the issues raised (e.g. GHG avoidance methodology, degree of innovation, scalability) will be clarified during the coming weeks and progress will be communicated through the Innovation Fund Expert Group, in which CO₂ Value Europe represents the CCU community. Some important points can be summarised as follows:

- Project owners would like some clarity on the definition of relevant costs
- LCA is fundamental for measuring GHG emission reductions across the entire value chain
- Further guidance is required on the exact methodology for evaluation of the GHG avoidance potential
- The degree of innovation can be broadly defined, but projects must be at pre-commercial stage

- Market statistics are maybe not very helpful information for a market that is under development
- There can be a variety of milestones for the gradual disbursement of the fund
- Project Development Assistance (PDA) is useful; a limit to its amount is project-dependent
- Knowledge sharing is important, but should be done without jeopardizing any proprietary information
- Sector associations (such as CO₂ Value Europe) have an important role to play in disseminating information

Twelve projects were presented (5 min each) to give to the Commission a first overview of the diversity of potential projects from the CCU sector (see agenda below), recognizing that an additional number of project owners probably decided not to reveal their project concept at this point. The presenters gave brief information on the status of their project, the TRL of their technologies, the estimated CAPEX and OPEX, and the scale of inputs and outputs. The product spectrum included fuels for transport (e.g. methanol, jet-fuel), chemical products (e.g. urea, wax) and construction materials at a scale of several thousand tons of product per year. Locations mentioned for building the future installations included Belgium, Germany, Iceland, the Netherlands and Norway.

In the afternoon, participants discussed further funding possibilities for CCU projects within H2020 as well as the place of CCU in Horizon Europe.

Damien Dallemagne, in his closing words, thanked the audience for its participation and highlighted the importance that CCU technologies have gained over the last two years and the need to keep the momentum to achieve tangible, large-scale GHG emissions reduction.

Agenda

10h00	<p>Welcome and introduction <i>Damien Dallemagne, Secretary General of CO₂ Value Europe</i></p>
10h10	<p>Overview of Innovation Fund (IF) (TRL projects > 6), 20 min <i>Roman Doubrava, EC - DG CLIMA</i></p> <p>Lessons learnt from the NER 300 programme, 10 min <i>Roland Schutze, European Investment Bank</i></p> <p>General Q&A (clarifications on the general principles/rules of the IF), 15 min</p> <p>Principles for calculating GHG emissions avoidance, 20 min <i>Robert Edwards, Joint Research Centre</i></p> <p>Q&A on GHG calculation methodology, 15 min</p>
11h30	<p>Brief presentation of various CCU demonstration projects <i>CCU HUB GHENT / CRI / VTT / Climeworks / Twence / Port of Antwerp / NordicBlueCrude / SUNFIRE / Minijos Nafta / TNO / HeidelbergCement / Linde</i></p>
12h15	<p>Networking lunch</p>
13h00	<p>DG CLIMA questionnaire about the specific applicability of IF for CCU projects</p> <ul style="list-style-type: none"> - <i>Presentation of compilation of answers/opinions from CCU project owners</i> <i>Anastasios Perimenis, CO₂ Value Europe</i> - <i>Response by DG CLIMA & further dialogue with participants as needed</i> <p>ART Fuels Forum, 5 min <i>Despina Tzoulaki, Exergia</i></p>
14h30	<p>End of IF workshop + networking break</p>
15h	<p>Funding opportunities for CCU projects (TRL 3-7): focus on last H2020 calls, 10 min <i>Anastasios Perimenis, CCU Officer of CO₂ Value Europe</i></p> <p>Presentations of project ideas, 40 min <i>LEITAT / Uppsala University / Axelera / NOVA.ID.FCT</i></p> <p>SUNRISE/ENERGY-X initiative, 10 min <i>Anita Schneider, EERA</i></p>
16h	<p>Horizon Europe, 30 min <i>Carmine Marzano, EC – DG RTD</i></p> <ul style="list-style-type: none"> - <i>Status of Horizon Europe (Clusters, Missions, EIC, ...)</i> - <i>Opportunities for CCU projects in Horizon Europe</i>
16h30	<p>Closing words <i>Damien Dallemagne, Secretary General of CO₂ Value Europe</i></p>
16h45	<p>End of the day</p>

Participants

Last Name	First Name	Company
Aho	Mika	St1
Andersen	Casper	Greater Copenhagen EU Office
Baumgartner	Jens	sunfire GmbH
Beckers	Greta	CO2 Value Europe
Born	Jan-Peter	N.V. HVC
Boulanger	Philippe	Carbon Recycling International
Bruinen	Ariane	Kellen Company
Bulut	Metin	VITO
COSTANZO	Giuseppe	
Dallemagne	Damien	CO2 Value Europe
De Coninck	Eric	ArcelorMittal
De Lannoy	Rose	ENGIE
De Vries	Ronald	Twence B.V.
Dearnaley	Jill	Econic Technologies
Denayer	Stef	Cleantech Flanders
Devaux	Fabrice	Total
Doubrava	Romand	EC - DG Climate
Duarte	Maria João	Mitsubishi Hitachi Power Systems Europe
Edwards	Robert	Joint Research Center
Elfers	Matthias	EEW Energy from Waste GmbH
Englebert	Benoit	Keppels Seghers
Floristean	Alexandru	Hydrogen Europe
Garufi	Davide	CRH
Geffraye	Geneviève	CEA
Gerstner-Riewer	Bastian	Mitsubishi Hitachi Power Systems Europe
Granstrom	Per Olof	ZEP
Grimbergen	Reinier	TNO
Haesevoets	Guy	BNPParibas Fortis
Hage	Fred	Linde PLC
Haselton	Thomas	Minijos Nafta
Hermida	Gonzalo	CEPSA
Hietanen	Jukka	St1 Oy
Holen	Gunnar	Nordic Blue Crude
Holmes	Geoff	Carbon Engineering Ltd
Huynh	Han	ENGIE Laborelec
Ihuel	Benoit	Veolia Environnement
Ipema	Karin	OCAP CO2
Kampert	Thea	Bloc
Kraus	Nicolas	hydrogeneurope
Lafontaine	Patrick	na
Lehtonen	Juha	VTT Technical Research Centre of Finland
Losada	Laura	Bioenergy Europe

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Maillard	Philippe	VEOLIA
Mamrillová	Daša	Envien group
Manar	Oscar	Commission
Maon	Françoise	CO2 Value Europe
Marenne	Daniel	Engie
Mendoza Villafuerte	Pablo	AECC
Mikulandric	Robert	Atlas Copco
Miracca	Ivano	Saipem S.p.A.
Mohai	Laszlo	suez
MORIN	Vincent	LAFARGEHOLCIM Innovation Center
Nadzon	Lesya	Linde PLC
Nasiri	Amin	LEITAT Technological Center
Nevin	Ronan	Fingleton White & Co. Ltd
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Pisani	Derrick	Econsulta sprl
Plaskiewicz	Natalia	Eurelectric
Postma	Petrus	Bloc
Rae	Doug	Carbon Engineering
Raschka	Achim	nova-Institut
Russinger	Lisa	Uniper
Schelwald	Rene	Port of Rotterdam
Schneider	Anita	EERA/SUNRISE project
Schutze	Roland	European Investment Bank
Sen	Indraneel	Uppsala University
Serafini	Ludovica	bioenergyeurope
Shaw-Taberlet	Jen	Axelera
Siepierski	Guilherme	solvay
Smeets	Filip	Hydrogenics Europe NV
Smyrnakis	Christos	European Investment Bank
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Stefansson	Benedikt	CRI
Steyvers	Jan-Willem	Attero
Sundby	Tom Henrik	Nordic Blue Crude
Sutter	Daniel	Climeworks AG
Taton	Paul	Revcoo
Thomas	Denis	Hydrogenics
Timmerije	Michiel	AVR Afvalverwerking B.V.
Tzoulaki	Despina	Exergia
Unger	Antonio	SUEZ
Van der Meer	Rob	HeidelbergCement
Van Eijk	Soledad	TNO

Van Loon	Tijmen	SkyNRG
Van Mierloo	Peter	Orbix nv
Van Osselaer	Didier	Havenbedrijf Antwerpen
Van Vulpen	Ben	ACT
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VanKraaij	Hanna	portofantwerp
VELKOVA	Maria	EC - DG Climate
Vergunst	Frank	ACT
Wayenberg	Ben	airclub
Westgeest	Alfons	Kellen
Whiriskey	Keith	Bellona Europa AISBL
Wulf-Andersen	Julie	NordDanmarks EU-Kontor
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Aresta	Michele	IC2R srl
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