Exploring Not Just WHAT is Going on, But WHY and HOW
Next Steps for Carbon Removals in the EU
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Moderator:
Kate Abnett
European Climate and Energy Correspondent
Reuters

Speakers:
Christian Holzleitner
Head of Unit, DG Climate Action
European Commission

Helen Bray
European Policy Director
Carbon Engineering

Keith Whiriskey
Deputy Director, Europe
Bellona Europa

Pascal Siegwart
VP Carbon Markets & Economy
TOTALENERGIES
Pathway to climate neutrality
Sustainable Carbon Cycles

- Drastically reduce our reliance on carbon
- Upscale carbon removal solutions that store carbon for the long term
- Recycle carbon from waste, biomass or directly from the atmosphere
Sustainable Carbon Cycles

Carbon farming

Industrial capture, use, transport, and storage of carbon
Sustainable Carbon Cycles

Policy Communication on Sustainable Carbon Cycles
• 14 December 2021

Legislative proposal on carbon removal certification
• Q4 2022
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‘Next Steps for Carbon Removals’

Presentation to EUROPEAN CLIMATE SUMMIT 2021

Pascal Siegwart
08/12/2021
Objectives of the CCS+ Initiative

- Unlocking and scaling-up CCS-related climate action in carbon markets, with a focus on project-based methodologies for the Voluntary Carbon Market and Article 6.
- Delivering a high-integrity, integrated methodological framework for generating carbon credits from the full suite of CCS activities.
- Broad scope and collaborative approach ensure impactful results and a cost-efficient approach.

- CCS+ activities represent key technology solutions for achieving both emission reductions and carbon removals.
  - CCS could play a critical role in reducing emissions from fossil sources as well as supporting circular economy (utilization) efforts.
  - CCS technologies could also generate permanent carbon removals when combining CCS with CO$_2$ from biomass (BECCS) or with direct air capture (DACCS) or other bio-CCS.
Work plan

Development of **complementary toolsets** for “compliance” purposes under various regulatory schemes:

- **Supra-national level**
- **National level**
- **Regional level**
- **Project level** (methodology framework + modules)

**MRV FRAMEWORKS**
- Policy instrument design (Article 6, Subsidy schemes, tax rebates, ...)
- Cross-border accounting
- VCM and compliance markets

**INNOVATION**
- Financing, piloting & scaling

**Complementary toolsets**
- Compliance with voluntary carbon markets
- Compliance with Article 6 transactions
- EU compliance (e.g. EU ETS)
- Compliance with other regional and domestic ETS
- Compliance with baseline-credit schemes
- Compliance with domestic regulations
- Linkage to CCS Protocol and regulatory incentives (45Q)
Join us

Contact the Secretariat via mail:
info@ccsplus.org
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Carbon Engineering’s contribution to net zero

Permanent CO₂ removal & ultra-low carbon intensity products
CE Pilot Plant – ~300 t/y
Operational since 2015

CE Innovation Centre – ~1000 t/y
Operations expected 2021

Norway Commercial DAC Plant – ~0.5-1 Mt/y,
Conceptual design underway

Canada AIR TO FUELS™ Plant
Up to ~100M L/y,
Operations expected ~2026

US Commercial DAC Plant – Up to 1 Mt/y,
Operations expected 2024

UK Commercial DAC Plant – ~0.5-1 Mt/y,
Operations expected 2026

GFGS Project AtmosFUEL
Up to 100M L/y
Feasibility study

Global Projects

*Project capture/production figures provided in terms of engineered capacity
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What is Carbon Dioxide Removal?

1. Carbon dioxide is physically removed from the atmosphere
2. The removed carbon dioxide is stored out of the atmosphere in a manner intended to be permanent
What is not CDR?

**Emissions**

- CCU fuel use
- Permanent geological storage
- Atmosphere

**Emission Reduction**

- CCS
- Stored carbon is extracted
- Atmosphere

**Avoidance is not, and can never be** Carbon Dioxide Removal
Removals by Supply not Demand

Removing CO₂ from atmosphere generally more onerous and expensive than not emitting

- Removals are a premium product - permanent storage & extensive MRV
  - Very low-cost removals are not likely to be high quality
  - Quality removals cannot be priced lower than emission reductions (yet)

- Potential scale still large - but not unlimited
  - Theoretical potential more likely to decline than increase
  - Who can use & who cannot use removals in decarbonisation strategies
  - Sandboxing removals can limit emissions deterrence (moral hazard)

Demand: **HIGH** / Supply: **LOW** = Pressure to artificially increase supply
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