

# The future of carbon removals: setting the right EU standards

05<sup>th</sup> June 2023

**Biomass-based technologies and practices for Carbon Dioxide Removal**

NEGEM Project

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**BiOenergy**  
EUROPE

#bepartofbioenergy



# About Bioenergy Europe



Common voice of European bioenergy since 1990



Unites 40+ national associations and around 150 companies



Hosting the European Pellet Council (EPC)



Quality & Sustainability Certifications



## Our Services to members:



EU Policy Monitoring & Influence



Market Data



Visibility



Networking



Free & Discounted Events

# ABOUT BIOENERGY EUROPE

## Companies



## Associations



## Academia



# Our Working Groups

Members Only



## Domestic Heating

Next Date: 27<sup>th</sup> September 2023

Promotes biomass in the domestic heating sector and discusses building regulations, air emissions and stove & boilers certifications.



## Pellets

Next Date: TBC

Discusses common issues and opportunities regarding the development of the European pellet market (residential, commercial, industrial) and proposes actions to overcome current barriers.



## Agro-biomass

Next Date: TBC

Promotes underutilized biomass feedstocks (e.g. residues from agriculture, dedicated perennial lignocellulosic crops) through ad hoc policies.



## Wood Supply

Next Date: TBC

Provides with active exchanges of data, market trends and news in legislation.



## Competitiveness

Next Date: 16<sup>th</sup> November

Provides updates on key existing and emerging policy topics determining the competitiveness of bioenergy sector within the EU (e.g. carbon tax, state aid)



## Sustainability

Next Date: 14<sup>th</sup> June 2023

Monitors climate and energy legislation impacting the European bioenergy sector and advocates for an efficient EU sustainability policy for biomass for heating and electricity production.



## Carbon Dioxide Removals

Next Date: 25<sup>th</sup> October

Establishes an interactive forum to explore policy options for the creation of negative emission certificates and incentives within EU energy and climate policies.

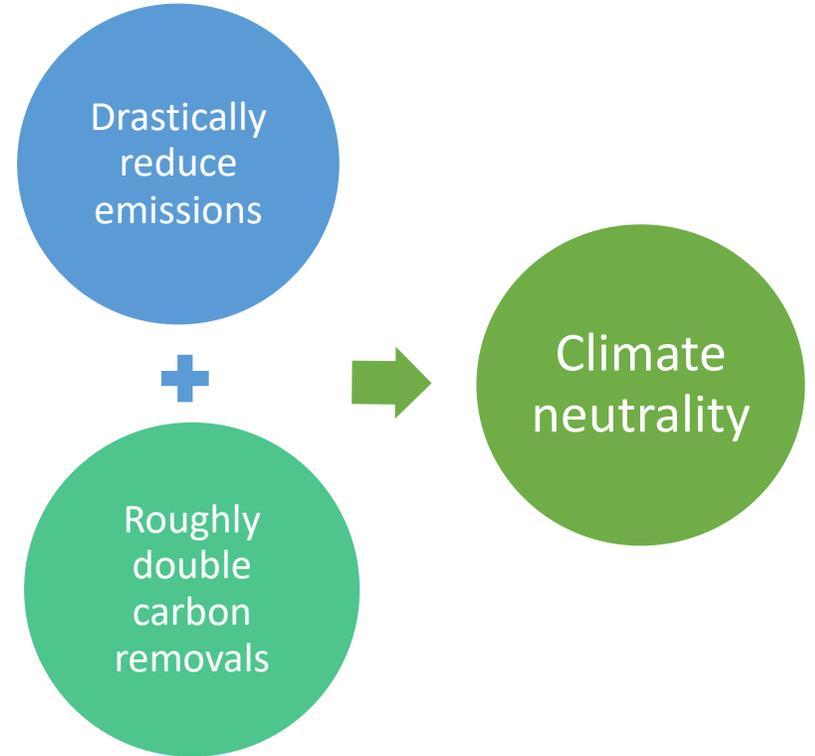
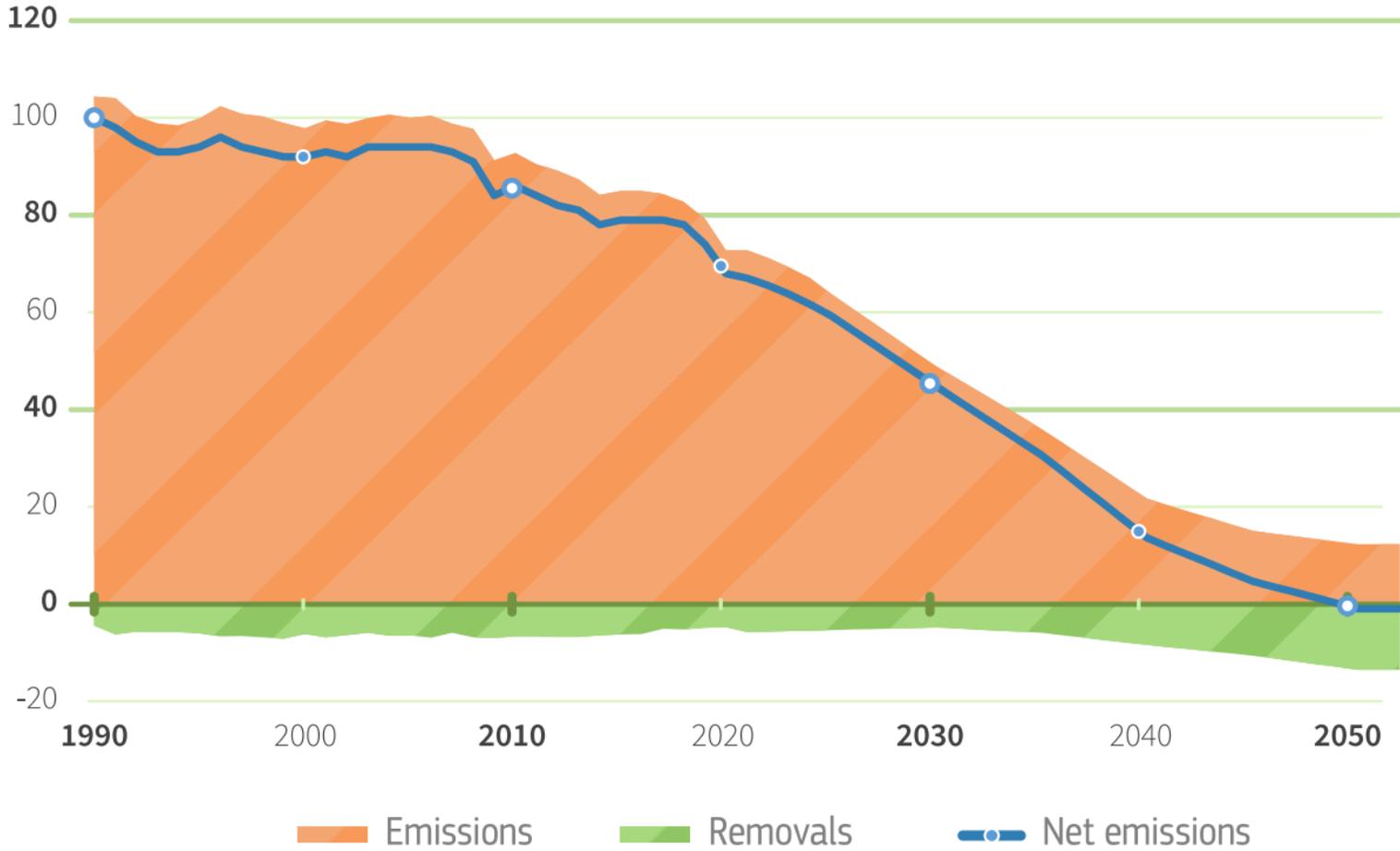


## Task Force National Advocacy

Next Date: TBC

Provides regular updates for national associations on relevant EU policies and enhances cooperation between EU and national levels.

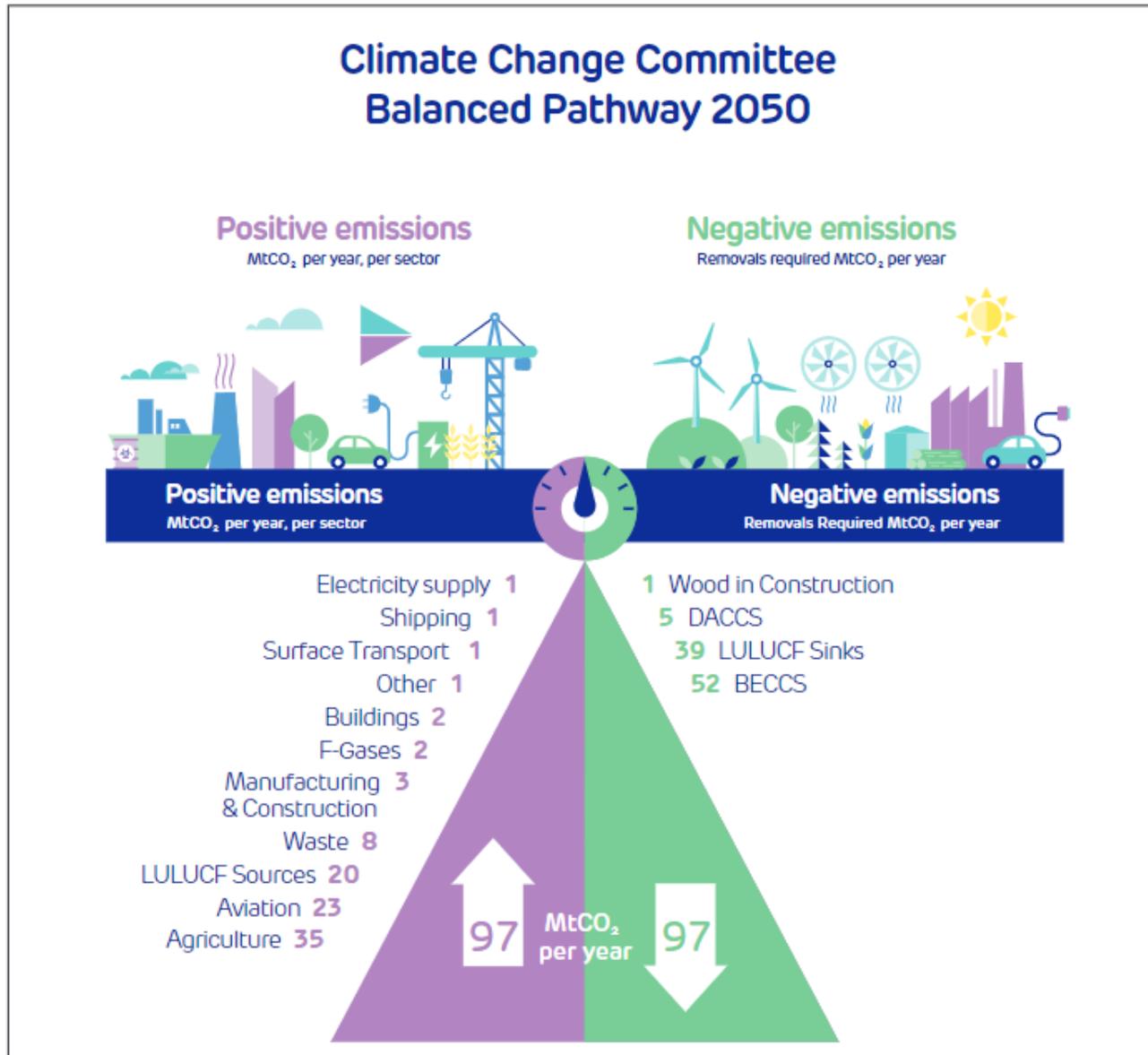
# CONTEXT



GHG projections for climate neutrality  
1990 GHG emissions = 100  
Source: EU 2030 Climate Target Plan

# ROLE OF BIOENERGY IN THE DECARBONISATION

- In 2019, EU-27 emissions were 3 610 MtCO<sub>2</sub>
- Even if we sharply reduce emissions, some sectors will be hard to abate
- Agriculture, Aviation, Industry will likely continue to have some emissions



- To balance these emissions, carbon will have to be removed
- One projection shows that **50% of needed carbon removals could come from BECCS**

# IEA Net Zero Scenario: Modern Bioenergy Important

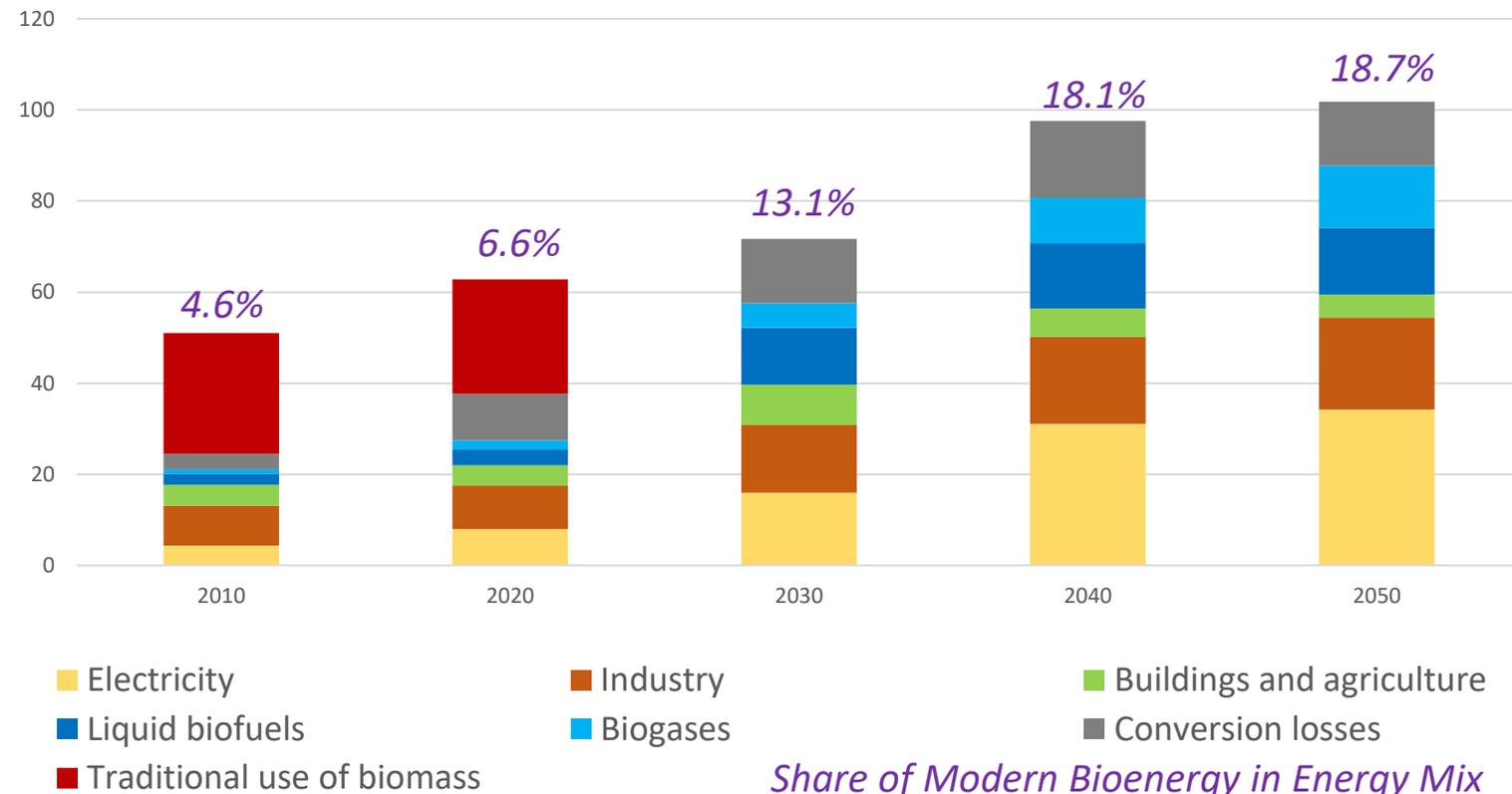
Although bioenergy increases, it stays within lowest estimates of sustainable biomass availability

Bioenergy versatile, storable, and dispatchable energy; key for balancing intermittent renewables

By 2050, predicted 10% of all bioenergy will use BECCS, estimated 1.3 billion tons of CO<sub>2</sub>

Most BECCS in biofuels (45%), electricity (40%), and remainder in heavy industry (15%)

Bioenergy demand in the IEA Net Zero Scenario, 2010-2050 (EJ)



## Climate Law

- EU objective of **climate neutrality** by 2050 and net removal thereafter

## Land Use, Land Use Change and Forestry (LULUCF) Regulation

- ambitious target for net carbon removals in soils, forests and wood products: **-310 MtCO<sub>2</sub> by 2030**

## Communication on Sustainable Carbon Cycles

- roadmap to enable carbon removals:
  - **carbon farming** should contribute to 2030 target for LULUCF
  - **industrial solutions** should remove at least -5 MtCO<sub>2</sub> in 2030

## MAIN GOALS OF THE PROPOSAL



**Accelerate** the deployment of verifiable, **high-quality carbon removals**



Encourage industries, farmers and foresters to adopt **effective carbon removal solutions**



**Counter greenwashing, focus on high quality removals and build trust** by focusing on trustworthy removals



Ensure the EU's capacity to **quantify, monitor and verify** carbon removals



Stimulate a wide variety of result-based **financing options** by private or public sources

Carbon can be removed and stored in three broad ways:



**Carbon farming**, such as restoring forests, soils, and management of wetlands and peatlands



**Permanent storage**, such as bioenergy with carbon capture and storage, or direct air carbon capture and storage



**Carbon storage in long-lasting products and materials** such as wood-based construction



**Capture of fossil carbon for Storage (CCS) or Utilisation (CCU) is not covered:** these technologies help to recycle or store new fossil CO<sub>2</sub> emissions, preventing that they add to CO<sub>2</sub> already in the atmosphere, but do not remove carbon from the atmosphere

# Criteria for a EU Certification System

The EU certification framework can only be used to certify carbon removals that meet the following **QU.A.L.ITY** criteria



## **Quantification**

Carbon removal activities are measured accurately and deliver unambiguous benefits for the climate



## **Additionality**

Carbon removal activities go beyond standard practices and what is legally required



## **Long-term storage**

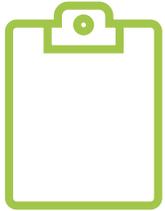
Certificates clearly account for the duration of carbon storage and distinguish permanent storage from temporary storage



## **Sustainability**

Carbon removal activities must support sustainability objectives such as climate change mitigation and adaptation, biodiversity, circular economy, water and marine resources

# How will this work in practice?



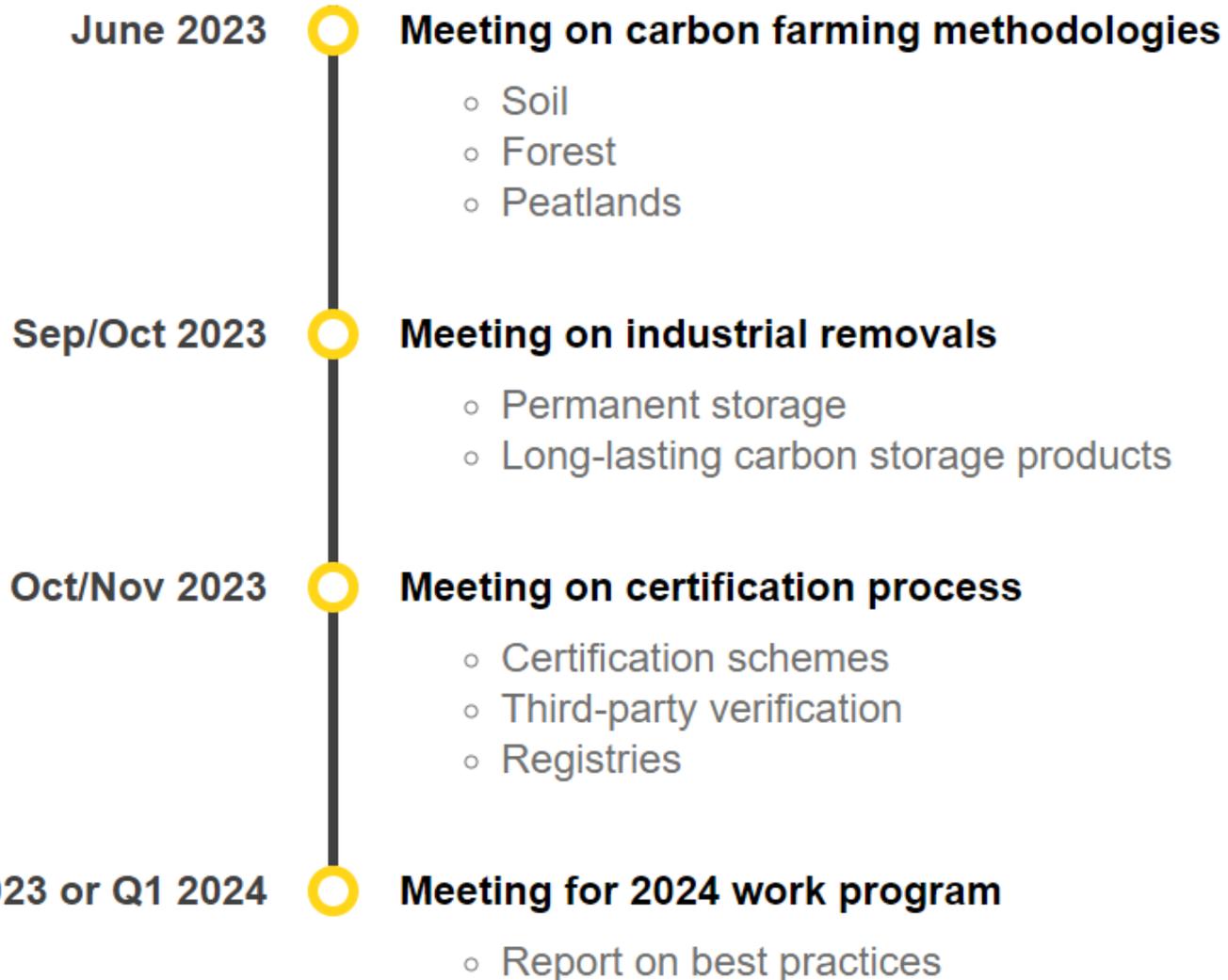
- an operator applies to a certification scheme approved by the Commission.



- an independent certification body carries out periodic audits of the carbon removal activity to verify the compliance with the Q.U.A.L.I.T.Y criteria and, if positive, it issues a certificate of compliance.



- the certification scheme registers the certificate and certified 'net carbon removal benefit' generated by the carbon removal activity in a public registry.



## Kick-off meeting: 07 March 2023

- The Expert Group comprises of around **70 members**, securing a broad and equitable representation of independent experts and stakeholders from national authorities, public entities, businesses, industry, non-governmental organisations, certification bodies and research institutions in the field of carbon removals.
- **The framework itself - certification criteria and rules - will be worked on by the European Parliament and the Council.**
- **The EU Commission, and its Expert Group, will instead focus entirely on defining the right carbon dioxide removal methodologies.**

# THE EU DECISION-MAKING PROCESS

**EC** - Represents the EU's general interests and submits legislative proposals



Co-legislators



**Council** – Ministries from EU Member States meet under different thematic groups. Work is coordinated under a rotating presidency with each country leading the Council for 6 months at a time

**EP** - The files are shared among political groups, they first go through the Committees and then then are voted on by the full Parliament (Plenary). Most work in is concentrated with just a handful of MEPs, the rapporteur (person holding the pen and writing reports), shadow rapporteurs, and rapporteurs for opinion.

Once the Council and Parliament approve the same text, it becomes law and is published in the Official Journal



ITRE



AGRI



ENVI



TRAN



BUDG

etc.

# Key players in the European Parliament

**LEAD COMMITTEE: ENVI – Environment, Public Health and Food Safety**



Lidia Pereira  
PT, EPP



Hlaváček,  
CZ, RE **renew europe.**

**AGRI:**  
Agriculture  
and Rural  
Development

**ITRE:**  
Industry, Research  
and Energy



Buşoi  
RO, EPP



Wölken  
(DE, S&D)



Wiesner  
(SE, RE) **renew europe.**



Niinisto  
(FI, Greens)



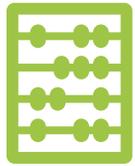
Griset  
(FR, ID)



Zalewska  
(PL, ECR)



Wallace  
(IE, GUE/NGL)



- Welcome the aim to **minimise administrative burden**, also by developing standardised approaches for the different technologies – including BECCS.



- The **purpose of certification is unclear**. No mention of the incentive/market framework/business model for engineered carbon removals. The integration with EU ETS should be considered in the longer run.



- Number and scope of **delegated and implementing acts should be minimised** to ensure that political questions are not being left solely to the Commission



- **Focus on maintaining regulatory coherence is crucial** – EU ETS, Renewable Energy Directive, CCS Directive etc.

*g) 'permanent carbon storage' means a carbon removal activity that, under normal circumstances and using appropriate management practices, stores atmospheric or biogenic carbon for several centuries, including bioenergy with carbon capture and storage and direct air carbon capture and storage;*

- This definition should be more inclusive to **allow the inclusion of biochar carbon removal (BCR)**.
- BCR represents a durable and permanent CDR technology that can sequester carbon for thousands of years.
- The European Commission's own impact assessment already included a detailed analysis of biochar so the latter should be taken into account



# Article 7 Sustainability: Criteria Should Be Harmonised

A carbon removal activity shall have a **neutral impact on or generate co-benefits** for all the following sustainability objectives:



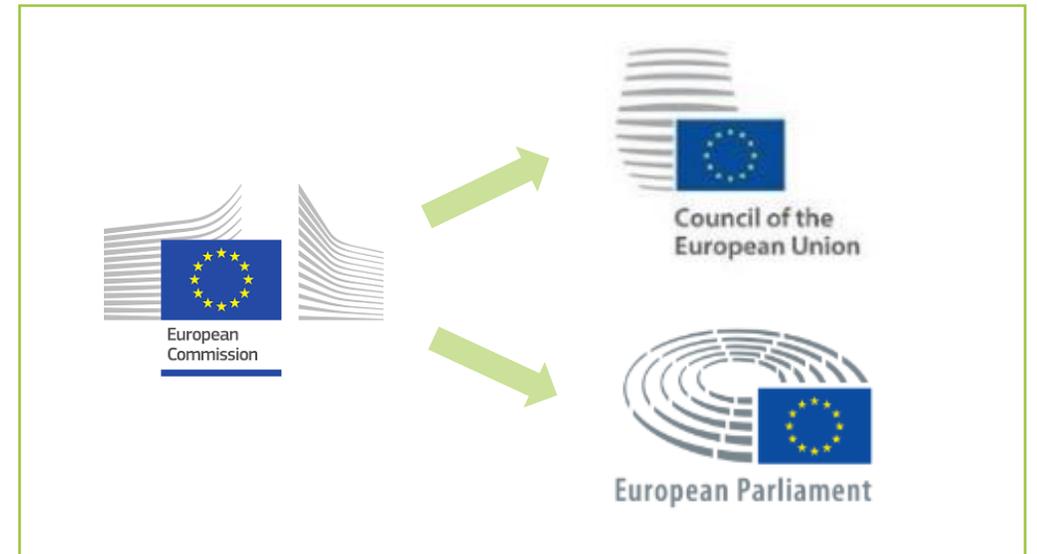
- a) *climate change mitigation beyond the net carbon removal benefit referred to in Article 4(1);*
- b) *climate change adaptation;*
- c) *sustainable use and protection of water and marine resources;*
- d) *transition to a circular economy;*
- e) *pollution prevention and control;*
- f) *protection and restoration of biodiversity and ecosystems.*

- Article 7.1 should use the same wording as Article 3 of the Taxonomy Regulation (EU 2020/852): **b) does not significantly harm any of the environmental objectives** set out in Article 9 in accordance with Article 17;
- Article 7.2 which aligns with the delegated acts in Article 8 should prevent any overlapping or conflicting requirements for sustainable bioenergy production contrary to REDIII.



# Next Steps

- Deadline for ENVI amendments : 31st May
- Vote in ENVI Committee: September
- Vote in EP Plenary: 16<sup>th</sup> October



# European Bioenergy Future

28 - 30 November 2023  
Brussels, Belgium

» Save the Date!

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INTERNATIONAL

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**BiOenergy**  
EUROPE



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FUTURE  
2023**

# Thank You!

