



EU CCUS policy: Net-Zero Industry Act & upcoming Commission's Communication

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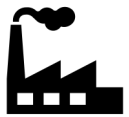
European Roundtable on
Climate Change and
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New momentum for CCS in the transition to net-zero

Consensus has been built over time: Without CCS it is difficult to achieve climate neutrality by 2050.

- Intergovernmental Panel on Climate Change (IPCC)
 - *“Studies have shown the importance of CCS for deep mitigation pathways (Krey et al., 2014a; Kriegler et al., 2014b), based on its multiple roles to limit fossil-fuel emissions in electricity generation, liquids production, and industry applications along with the projected ability to remove CO2 from the atmosphere when combined with bioenergy.” [\(See more\)](#)*
- International Energy Agency (IEA)
 - *“CCUS is an important technological option for reducing CO2 emissions in the energy sector and will be essential to achieving the goal of net-zero emissions. CCUS can play four critical roles in the transition to net zero: tackling emissions from existing energy assets; as a solution for sectors where emissions are hard to abate; ” [\(See more\)](#)*

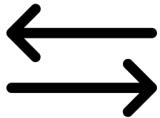
Barriers



CAPEX and OPEC uncertainty



Public perception



Chicken and egg Dilema



Policy uncertainty



Lack of a revenue model



Regulatory uncertainty

Finalized	
In progress / Disbursement of funds	

Policy and regulatory landscape in progress: different tools

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	Capture	Storage	Use	Transport
Carbon pricing	EU-ETS Directive			
	CBAM Regulation ?			
Rules and standards	CCS Directive			
		IED Directive ?		
		TEN-E Regulation		TEN-E Regulation
	EU-Taxonomy Regulation			EU-Taxonomy Regulation
	EU Regulation on Carbon Removal Certification			
Targets			REDirective (RFNBOs)	
			ReFuel Aviation Regulation (SAFs)	
			FuelEU Maritime Regulation	
		Net-Zero Industry Act Regulation		
Policy / Strategy	Energy System Integration Strategy and EU hydrogen strategy			
	Sustainable Carbon Cycles communication			
Financial Support / State Aid	CEEAG (guidelines)			
	Innovation Fund			
				Connecting Europe Facility
	Recovery and Resilience Facility			
	Horizon Europe			
	Just Transition Fund			

- This table does not distinguish between carbon captured at the stack and carbon captured from the air.
- This table aims to provide a broad understanding of the nature of the tools used to foster the deployment of CCUS in general and does not reflect some of the specificities of the policies and regulations covered.

Policy and regulatory landscape in progress

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Finalized	
In progress	

File (legislative and non legislative)	What does it cover?
CCS Directive (2009)	Regulatory framework and guidelines for the safe geological storage of CO2
Energy System Integration Strategy and Hydrogen strategy (2020)	Carbon capture and storage (CCS) is likely to play a role in a climate-neutral energy system. In particular, CCS can address hard-to-abate emissions in certain industrial processes / Role for low-carbon hydrogen during the transition
EU-Taxonomy Regulation (2020)	Art. 10 Substantial contribution to climate change mitigation: use of environmentally safe carbon capture and utilization (CCU) and carbon capture and storage (CCS) technologies that deliver a net reduction in greenhouse gas emissions.
CEEAG (2021)	All technologies that contribute to the reduction of greenhouse gas emissions are in principle eligible, including aid for the production of low-carbon energy or synthetic fuels produced using low-carbon energy, aid for energy efficiency including high-efficiency cogeneration, aid for CCS/CCU.
Sustainable Carbon Cycles Comm. (2021)	By 2030, at least 20% of the carbon used in products has to come from sustainable non-fossil sources; and by 2030, 5 million tonnes of CO2 have to be annually removed from the atmosphere and permanently stored through technological solutions.
Reg. on a Certification of Carbon Removals (2022)	First EU-wide voluntary framework to certify high-quality carbon removals. The Commission's proposal does not cover the capture of fossil carbon for Storage (CCS) or Utilisation (CCU).
Rev. TEN-E Regulation (2022)	CO2 storage included. CO2 transport modalities other than pipelines will not be included. CO2 transport for utilization will be allowed. Focus on industrial installation and not power installation.
Rev. EU-ETS Directive / MRR (2023)	Allowances should be surrendered for emissions unless they are stored in a storage site in accordance with Directive 2009/31/EC, or they are permanently chemically bound in a product.
CBAM Regulation (2023)	Currently, there is no recognition of CCS in Art. 6 (calculation of carbon), Art. 9 (calculation of costs) or Annex III (methods for calculating embedded emissions). Methodology for calculating actual emissions and costs is being developed.
Rev. Renewable Energy Directive, Rev. FuelEU Maritime and Rev. ReFuel Aviation (2023)	Mandatory targets for possibly CCU-derived fuels.
Net-Zero Industry Act Regulation (2023)	Objective to reach an annual 50Mt injection capacity in strategic CO2 storage sites in the EU by 2030, with proportional contributions from EU oil and gas producers.
Industrial Emissions Directive & BREFs	It requires operators of combustion plants that use geological storage of CO2 to conduct an assessment on CCS projects.

Net Zero Industry Act

- Net Zero Technologies and Net Zero Strategic technologies, strategic technologies benefit from:
 - priority treatment from national authorities in terms of permitting procedures
 - Easier access to public procurement or financing
 - They are also supported by a 40% EU annual manufacturing target
- CCS one of 8 strategic technologies
 - Allows Net Zero Strategic Project status facilitates projects and enables them to receive permit in 18 months
 - In EU, Operation by 2030, Apply for a storage permit

Net Zero Industry Act – CO2 injection capacity

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- Annual injection capacity of at least 50 mt of CO2 by 2030
- ‘CO2 injection capacity’ means the annual amount of CO2 that can be injected in an operational geological storage site, permitted under Directive 2009/31/EC, with the purpose to reduce emissions or increase carbon removals, in particular from large scale industrial installations and which is measured in tonnes per annum;
- Oil and Gas Sector
 - Individual targets for producers in EU to contribute on a pro rata basis to the 2030 target depending on their production between 2020-2023
- Member states
 - Require oil and gas producers to make data available
 - Detail their progress

Questions

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- How does the Net Zero Industry Act and the Inflation Reduction Act approach CCS? What is the impact on EU competitiveness?
- Does the Net Zero Industry Act provide a viable investment proposition?
Why yes, why not?

Possible elements of the EC Communication

- Public acceptance / perception
- Regulatory certainty / definitions
- Transportation infrastructure
- Governance
- Incentives for the value chain
- Ambition / use
- International Dimension