

REVISION OF THE TEN-E REGULATION

Large-scale deployment of cross-border, European CO₂ transport and storage infrastructure is crucial to reach the EU's objective of net-zero GHG emissions by 2050

What should the revised TEN-E guidelines include?

- **All modes of CO₂ transport**, such as pipelines, ships, barge, truck, and train, allowing all European industries and regions to connect to European infrastructure, enabling decarbonisation and a just transition. This should be harmonised in relevant legislation connected to TEN-E regulation e.g. EU ETS.
- **CO₂ storage as an essential part of CO₂ infrastructure**, as it is a key element to deliver climate change mitigation.
- **Repurposing and retrofitting of natural gas pipeline networks** for the transport of CO₂ and low-carbon gases, such as clean hydrogen.



What can CO₂ transport and storage infrastructure offer?

- Crucial to **connect CO₂ emitters in industrial clusters to storage sites**, opening access to permanent geological storage of captured CO₂. CCS and CO₂ infrastructure are prime options for the decarbonisation of energy-intensive industries where electrification is too costly or not feasible.
- Putting cross-border CO₂ infrastructure in place will initiate the production of **early volumes of clean hydrogen from natural gas with CCS** and pave the way for a clean hydrogen economy.
- Europe is well positioned to develop **cross-border, shared CO₂ transport and storage infrastructure** – via pipeline and other modes of transport. Upcoming CCS projects, including those in the fourth European Projects of Common Interest (PCI) list, rely on CO₂ shipping to connect capture and storage sites.



Challenges and actions to be taken

- To realise a climate-neutral Europe, around **600 million tonnes of CO₂ per year*** of unavoidable emissions will need to be stored, involving capture of just under 15% of annual emissions (based on 1990 levels).
- An estimated **150-200 million tonnes of CO₂ transport and storage*** would be needed annually, if the entire European steel industry became carbon-neutral through CCS.
- A **total storage capacity of 300 GtCO₂*** has been estimated in Europe, with ongoing appraisal activities to identify investable storage sites; this shows that CO₂ storage can likely continue beyond 2050.



**For further information and references, view ZEP's [response](#) to the revision of the TEN-E Regulation*



Kickstarting a European clean hydrogen economy

- Provisions for the development of dedicated hydrogen infrastructure to support the production and transportation of hydrogen, which is essential to deliver the climate neutrality objective under the European Green Deal.
- Drive the transition towards a climate-neutral economy, capitalising on the potential and opportunities of large-scale decarbonisation of European industrial and energy sectors.

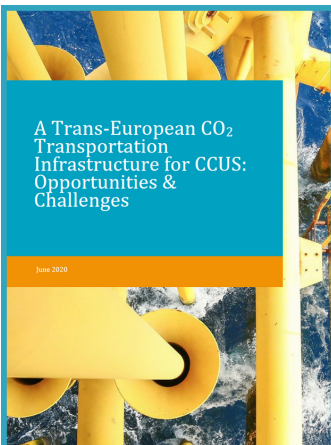
European Projects of Common Interest

The revised TEN-E regulation will drive the next selection of Projects of Common Interest (PCIs). It is vital:

- To ensure the next PCI lists put the EU on the right track to achieve climate-neutrality by 2050, creating opportunities for cross-border CO₂ and hydrogen infrastructure projects to be further developed and scaled up.
- To create a level playing field and the conditions for long-term investment for CO₂ emitters across Europe, at the least non-discriminatory third-party access to cross-border CO₂ transport and storage infrastructure should be regulated.



'A Trans-European CO₂ Transportation Infrastructure for CCUS: Opportunities & Challenges'



This ZEP report looks at the challenges and opportunities for CO₂ transport in Europe, including pipelines and other modes of transport. It provides an overview of CO₂ transportation, particularly in industrial clusters, and highlights the importance of developing dedicated business models, as well as enabling policy framework, for CO₂ transportation.

This report is particularly relevant in the context of the European Green Deal, as CO₂ infrastructure is crucial to deliver large-scale decarbonisation across industry and energy sectors, which will be necessary to achieve climate-neutrality.

CO₂ infrastructure must become a core competence of the EU as a driver of decarbonisation, outlined in the European Green Deal, and as a caretaker of the single market. Policymakers must send a strong signal in support of cross-border CO₂ infrastructure in Europe and encourage industry to invest in the technology. Download the report [here](#).

Find out more about the Zero Emissions Platform at zeroemissionsplatform.eu

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