

CONSULTATION RESPONSE

Amended proposal: Trans-European transport network (TEN-T) revised guidelines

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E U R O P A

Response to the “Call for evidence”: Amended proposal: Trans-European transport network (TEN-T) revised guidelines

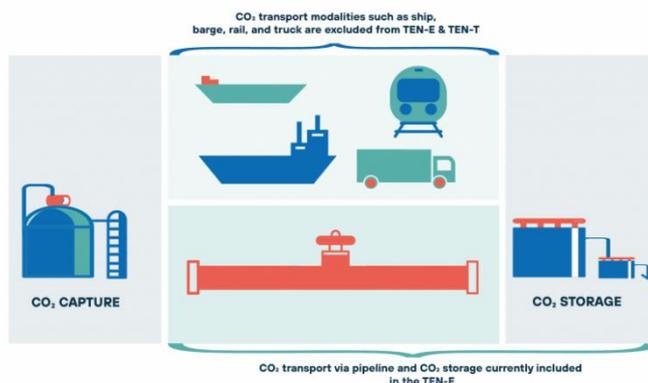
Bellona Europa greatly welcomes the launched call for evidence on the TEN-T Regulation in the wake of a new geopolitical reality and the REPowerEU strategy. In addition to the outlined changes in line with the “Solidarity Lanes” Commission Communication and the need to update the TEN-T maps and connectivity to Ukraine and Moldova, we urge that the important role of the green and just transition is not only kept in the proposal, but also expanded to include multiple transport modalities for transporting CO₂ to storage from industrial emitters.

It was with disappointment we noted upon the adoption of the revised TEN-T Regulation guidelines on the 14th of December 2021 that multiple transport modalities for transporting CO₂ to storage had not been included as eligible for PCI status. Neither had much needed wording recognizing the importance of such transport modalities been included. This leaves a vital part of the CCS value chain not covered by both the TEN-E and TEN-T Regulations. This is not only an opportunity cost in failing to spark market development and project deployment, but also a lack of recognition for multiple transport modalities that could risk sending a *negative* market signal to market participants. This, despite the crucial role to be played on Europe’s decarbonisation pathway of these transport modalities as part of the Carbon Capture and Storage (CCS) value chain. As mentioned by Fred Selhorst, Business Development Manager at Belgium-based shipping company Victrol, at Bellona Europa and CATF 6 April event on the TEN-T¹:

“today, investment in shipping is seen as risk capital, and for sure for CO₂ as this market is not existing, it is seen as risk capital so we need to move forward there to have the right funding schemes and the right investment schemes for potential investors”.

Fred Selhorst, Business Development Manager, Victrol (Belgium) [Link to full article](#)

RECOGNITION AND SUPPORT FOR MULTIPLE TRANSPORT MODALITIES IS STILL LACKING. THIS REDUCES FLEXIBILITY AND INCREASES THE OVERALL COST OF DECARBONISATION.



CCS vital to net-zero also following REPowerEU

In light of the urgent need to reduce Europe’s dependency on fossil fuel in general and Russian gas in particular, the need for CCS to decarbonise industry remains unaltered. As was highlighted in Bellona Europa’s analysis following the launch of

¹ [Bellona Europa and CATF Event on TEN-T: Importance of Multiple Modalities transporting CO₂ to Storage - Bellona.org](#)

the REPowerEU strategy², deploying additional renewable electricity generation is key – but how we use this electricity will determine to what extent we are able to wean Europe off fossil gas in general and Russian gas in particular. Notably, not all process emissions can be reduced by use of hydrogen, one example being the calcination of limestone, which represent 60%³ of all CO₂ emissions from cement production. As such, the cement and lime sectors will largely depend on access to permanent CO₂ storage for their decarbonisation. With a particular reference to the transport sector, CCS also has an important role to play, both directly and indirectly.

In its current form, with multiple transport modalities falling outside both the TEN-E and the TEN-T Regulations, we are missing the direct and indirect contributions of CO₂ capture, transport and storage to the decarbonisation of the transport sector. Carbon capture and storage enables industry to decarbonise at a quicker pace, reducing the reliance on renewables and freeing up low-carbon power for other applications including electrification in the transport sector. It is also vital in the production of low-carbon hydrogen, kick-starting a market for hydrogen-derived fuels such as ammonia – in sectors such as marine and shipping.

Multimodal transport of CO₂ to permanent storage are key to Europe's industrial decarbonisation plan

Several planned projects for carbon capture and storage already rely on multiple transport modalities for part of their CO₂'s transportation to storage. Such mobile modalities for transport are particularly important in the initial phase of market development and to scale-up industrial decarbonisation across Europe. Below is an overview of the main areas and aspects where multiple modalities have a particularly important role to play on Europe's pathway to net-zero.

1. Key to scale-up industrial decarbonisation across all of Europe

Mobile transport modalities such as rail, truck, ships and barges, are key to ensure equitable access either directly to storage or to pipelines linked to storage. Given the unequal distribution of CO₂ storage sites across Europe and the significant cost and investor risk associated with immobile transport infrastructure such as pipelines, mobile transport modalities can help avoid regional disparities in access to storage sites. This will ensure equal opportunities for industrial decarbonisation across Europe. By making it possible for smaller industrial emitters to start decarbonising, mobile transport modalities for CO₂ will also substantially contribute to wide-scale market development, reducing the overall cost of carbon capture and storage.

Additionally, there are terrains and geographies not well suited for the construction of pipelines, where multiple transport solutions are without doubt the most cost-effective solutions, as outlined by [Swedish Stockholm Exergi](#) as part of Bellona Europa's previous campaign on the TEN-E Regulation. See also our online website for interviews with actors and stakeholders in [Denmark](#), [Spain](#) and [Norway](#).

In our efforts to highlight the need to update the TEN-T Regulation to include multiple transport modalities, our ongoing campaign #TenTTuesday aims at highlighting perspectives from relevant actors and stakeholders on the ground in different EU Member States. A selection of these interviews and quotes are listed below, with a recent particular focus on the CEE region. We also want to draw your attention to the ongoing CCS4CEE project, and the recently published report: "Building momentum for

² [Using REPowerEU to its full potential - Bellona.org](#)

³ [Climate change: The massive CO₂ emitter you may not know about - BBC News](#)

the long-term CCS deployment in the CEE region”⁴, where different roles for multiple transport modalities are also discussed.

“It is also important to understand the whole value chain when we talk about CCS. It’s not enough to develop and implement technology for carbon capture if we don’t have an option to both transport and store it. I think as mentioned earlier, pipelines have an important role to play, but we don’t have pipelines right now. In the meantime, we need to find other means of transport. In some case this is to overcome a transitional period, but in other cases multiple transport modalities are more suitable than pipelines – like ship or rail. We need to be open to different solutions that would lead us to the final goal. This is something that is often somehow misunderstood: the one size fits all solutions is not always ideal in reaching the final goal. So we need to develop all these options, all modalities for transporting CO2 to storage.”

Tomaž Vuk, Management Board Member, Saloniit Anhavo (Slovenia) [Link to full interview.](#)

“To kick-start CCS deployment, financial support for first movers is needed to lower risks. Platforms that bring relevant stakeholders around one table to facilitate discussions and coordination among them are also needed. There are several ways in which the national government can support CCS deployment in Hungary according to Hungarian stakeholders: through tax breaks and tax credits, green certification schemes, or public procurement procedures. Not least, due to the relatively small geographical area of Hungary and the long lead times of CO2 pipeline projects, stakeholders point to the need for support for multiple transport modalities, namely by road and rail – the importance of which Bellona has been highlighting in its campaign around the TEN-E and TEN-T Regulations”

Hanna Biro is a Policy Analyst at Bellona Europa, reporting in [this blogpost](#) about Hungarian stakeholders coming together to discuss CCS challenges and opportunities in Hungary.

“In all scenarios we need a mix of solutions. There will always be plants which are remote where we need ship or rail solutions”...We believe that there is such a high demand for these types of CO2 transport, that they will never be stranded assets going forward”.

Winston Beck, Director Government Affairs EU, Heidelberg Cement (Locations across Europe) [Link to full article](#)

“...the ship-based solution provides flexibility, to reach at least 350 industrial emitters across Europe and maybe more. They have total emissions of around 300 million tons per year. That itself illustrates the opportunity, and that needs to be recognized”

Kim Bye Bruun, Communications and Government Relations Director, Northern Lights (Norway) [Link to full interview](#)

⁴ [Document Title Lorem ipsum doloris sunt est quidam. \(ccs4cee.eu\)](#)

2. Increasing Europe's CO2 storage potential

As explained by Carbon Collectors in an interview⁵ with Bellona Europa, there is an inherent opportunity cost if multiple transport modalities lag behind or are not included as part of the developing CO2 transport and storage network. This is both for smaller storage sites not being developed, and for smaller emitters not to be connected to existing storage sites as the significant up-front investments in a pipeline make the transport cost per ton of captured CO2 very high.

"...by using flexible transport solutions, storage sites that otherwise might have been too small or too complex for pipelines can be developed. This can help increase the total CO2 storage potential in Europe"

Mette Jørgensen, External Affairs Manager, Carbon Collectors (The Netherlands) [Link to full interview](#)

3. Key to a well-functioning more competitive market without monopolistic tendencies

Additionally, the potential of multimodal transport of CO2 to reduce monopolistic tendencies and ensuring a level playing field in the market are important factors that should not be disregarded, and fits into the EU competency and areas responsibility, as put also by Carbon Collectors:

"Currently, as only pipelines and storage are recognised as PCIs under the TEN-E, this does not contribute to facilitating a level playing field between fixed and flexible transport solutions of CO2 to storage. While pipelines have an important role to play, it is a transport solution that can only transport from one fixed location to another fixed location. This can create a monopoly situation if not regulated properly. By focusing on fixed infrastructure in all cases, you run the risk of stranded assets and lock-ins when large investments are made in new pipelines."

Mette Jørgensen, External Affairs Manager, Carbon Collectors (The Netherlands) [Link to full interview](#)

Legal basis for multiple modalities transport CO2 to storage in the TEN-T Regulation

The TEN-T regulation defines the projects eligible for important recognition as a Project of Common Interest (PCI), as well as administrative and funding assistance from the Connecting Europe Facility (CEF).

There are clear references in the legal text of the TEN-T on the importance of possible synergies with other networks, such as the TEN-E (Article 5.1(f)). But despite this, the TEN-T includes no mention of the importance played by multiple modalities transporting CO2 to storage, nor its direct or indirect contribution to decarbonise the transport sector. Carbon capture and storage enables industry to decarbonise at a quicker pace, reducing the reliance on renewables – freeing up renewables to where they can be more efficiently used: one such example being the transport sector. It is also vital in the production of low-carbon hydrogen, kick-starting a market for hydrogen-derived fuels such as ammonia – in sectors such as marine and shipping

⁵ <https://bellona.org/news/eu/2022-06-to-avoid-climate-disaster-timing-is-everything-flexible-transportation-solutions-for-co2-to-storage-key-to-speed-up-deployment>

With the ongoing revision of the TEN-T Regulation, the time has come for the European Union to put its money where its mouth is, and provide important support for multiple transport modalities in the TEN-T. The signalling effect to the market of such a development would, on its own, reduce perceived investor risk and incentivise market development.

We therefore urge the European Commission to include clear references to multiple modalities transporting CO₂ to storage in the relaunched TEN-T regulation, based on the information provided to this call for evidence, through one of the options offered below. We look forward to an opportunity to discuss this with you in greater detail, and hope this is useful in your ongoing work.

Different options for inclusion of multiple transport modalities in the TEN-T Regulation:

Option 1: Full recognition, wording of encouragement and PCI status for full or parts of projects transporting CO₂ to storage via multiple transport modalities such as rail, truck, barge and ship. No administrative support or funding included.

Option 2: Full recognition, wording of encouragement and PCI status for full or parts of projects transporting CO₂ to storage via multiple transport modalities such as rail, truck, barge and ship. Administrative support included, funding not included.

Option 3: Full recognition, wording of encouragement and PCI status for full or parts of projects transporting CO₂ to storage via multiple transport modalities such as rail, truck, barge and ship. Administrative support and funding included.

Option 4: Full recognition, wording of encouragement and PCI status for full or parts of projects transporting CO₂ to storage via multiple transport modalities such as rail, truck, barge and ship. Administrative support and funding included for parts of PCI projects in the TEN-E including multiple transport modalities.

For Bellona Europa and CATF's brief explainer on the TEN-T Regulation and the need to include multiple transport modalities, please [see here](#).

About Bellona

Bellona Europa is an independent, non-profit organisation that meets environmental and climate challenges head on. We are solutions-oriented and have a comprehensive and cross-sectoral approach to assess the economics, climate impacts and technical feasibility of necessary climate actions. To do this, we work with civil society, academia, governments, institutions, and industries.

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