# ZEP input to the detailed design of the ETS Innovation Fund: Recommendations for the Delegated Act governing the Innovation Fund

## Introduction

In March 2016 ZEP provided detailed recommendations for the design of the Innovation Fund Delegated Act, based on lessons learnt by CCS projects from across Europe including previous NER 300 projects. These recommendations can be found appended to this document and remain ZEP's core input to the Commission on the design of the Innovation Fund.

This updated paper provides input to the Commission on how the Innovation Fund Delegated Act can specifically support the development of CCS "Market Makers". The Market Maker concept was developed by ZEP in its earlier work on developing a business case for $CO_2$ Transport and Storage and in its "Executable Plan" for CCS.

This new work has been undertaken following a request from DG Climate Action Director, Mr. Artur Runge-Metzger.

## Why 'Market Makers'?

Multiple studies have demonstrated that a key barrier to widespread CCS deployment is the lack of business case for private sector investment in early $CO_2$ transport and storage (T&S) projects[1]. ZEP's work has shown that there are three main reasons for this:

1. **Requirement for timely investment in storage appraisal.** In some cases, this may need to take place up to 10 years before an emitter can deliver $CO_2$ for storage. There is no rational case for private sector investment in storage appraisal absent of a firm commitment to CCS deployment.

2. **Cross-chain risk between different actors in the CCS chain.** For CCS projects involving different entities managing the capture, transport and storage of $CO_2$, the commercial model needs to deliver predictable revenue streams to actors at each stage of the chain, with protection against cross-chain default. As an example, if $CO_2$ is not delivered as expected to a storage site then this can undermine investment in the project as a whole. This creates a big risk for developers/operators that is priced into the overall cost of a project, raising costs or simply making the project uninvestable.

3. **Liabilities associated with $CO_2$ storage resulting from the CCS Directive.** The requirement on storage operators to monitor and address $CO_2$ leakage from storage translate into unbounded liabilities due to the long time horizon associated with permanent storage and unknown future $CO_2$ emissions penalties if a leak were to occur.

[1] Ref: ZEP Business Case for Storage; CCSA Lessons Learned; IEA 20 years of CCS; Crown Estate: CCS – Balancing the carbon cycle, 2016



ZEP Secretariat,
Carbon Capture and Storage Association
6th Floor, 10 Dean Farrar Street, London, UK
www.zeroemissionsplatform.eu

In order to unlock early investments in CCS, ZEP has advocated for an approach whereby investments in T&S Infrastructure are underpinned by the public sector through direct investment and/or appropriately structured regulation. Publicly backed T&S Infrastructure can help to mitigate investment risks for the private sector, stimulate CCS by creating an investment model, and enable emissions intensive industries to address future increases in the cost of emitting $CO_2$ by providing access to the infrastructure they need to decarbonise.

ZEP has put forward an approach to T&S infrastructure based on Market Makers. Market Makers will compensate for a lack of market for $CO_2$-storage, by developing CCS infrastructure and then contracting with industrial emitters for the delivery of $CO_2$. Emitters will be required to pay a T&S fee that covers the costs of $CO_2$ T&S and a small element of capital repayment, which is then used to refinance the Market Maker. Over time the Market Maker can be privatised or disbanded as a commercial market for $CO_2$ storage develops.

ZEP has previously proposed that EU funds should be made available to support the development and capitalisation of strategic $CO_2$ Market Makers. The Innovation Fund can play a key role in supporting the development and deployment of CCS[2]. ZEP welcomes the provisional agreement on the overarching framework for the new Fund and believes that the legislative basis creates a framework in which CCS 'Market Makers' can be supported, subject to appropriate criteria.

**Recommendations**

1. Principles
   - Explicitly reference the value of CCS Market Makers in supporting the development and deployment of CCS.
   - Ensure that Innovation Funds are compatible with other sources of EU funding and are not deducted from other sources of funding (as was the case with the EEPR funding). The requirement for co-funding by Member States is encouraged but not mandated to allow for the eligibility of other sources of funding.

2. Eligibility criteria
   - ZEP strongly advises against the categorization of CCS projects and technologies as established under the NER300 as these proved unduly restrictive. Projects should instead align with the targets set out in the SET- Plan Implementation Plan for CCUS as these have been endorsed as strategic priorities by the Commission, Member States and stakeholders.
   - ZEP recommends specific inclusion of Market Makers within eligibility criteria, as Market Makers will be essential to enabling a wide range of industrial CCS projects.
   - Projects should be able to demonstrate long term value to EU decarbonisation. Projects should be compatible either with Member State 2050 decarbonisation roadmaps, or with longer-term EU objectives, including net zero emissions during the second half of the century.

[2] Element Energy report



ZEP Secretariat,
Carbon Capture and Storage Association
6th Floor, 10 Dean Farrar Street, London, UK
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3. Selection procedure
   - Projects should not be assessed on the cost of avoided emissions alone. Instead, a more-rounded approach to project assessment should be taken in line with the revised ETS Directive, which requires projects to "*have the potential for widespread application or for significantly lowering the costs of transitioning towards a low-carbon economy".* Market Makers could meet these criteria in a number of ways:

     - Supporting emissions reduction across multiple sectors

     - Transboundary projects, e.g. where CCS T&S infrastructure can support emissions reductions in multiple countries or regions, including but not limited to Projects of Common Interest for $CO_2$ transport.

     - Providing backbone infrastructure that can enable continued decarbonisation over many years, as new streams of $CO_2$ are added.

   - Market Maker projects should not be required to estimate the total amount of $CO_2$ stored, rather the total capacity of the CCS infrastructure that will be made available to industrial emitters. This enables the addition of further $CO_2$ streams over time, up to the capacity of the transport and storage facility.

   - ZEP welcomes the recommendation set out in the Commission's summary report that projects should be selected based on project viability and robustness of business model. The inclusion of a market maker can demonstrate how the separate parts of the CCS chain will be managed including cross-chain risk.

4. Disbursement of revenues
   - Market Makers require early funding to enable $CO_2$ storage appraisal and investment in infrastructure ahead of any industrial investment in $CO_2$ capture. Therefore ZEP welcomes the inclusion of milestone payments within the revised Directive. Milestone funding that is not linked to verified avoided emissions can usefully be assigned for storage appraisal and development of infrastructure.

   - The funding rate should be established with sufficient flexibility to enable a range of different $CO_2$ emitters to access the T&S infrastructure developed by Market Makers at different times, i.e. if 100% capacity of the pipeline isn't achieved until year 20 of operation then no penalty should be applied to the Market Maker/T&S operator.

4. Post-award conditions
   - Under NER300 projects were required to enter into operation within four years or lose their funding, which created a significant risk. Instead projects should establish realistic deployment pathways with milestones and appropriate incentives to ensure timely delivery.

5. Transitional Arrangements
   - It is important that clarity is provided in the Delegated Act on the utilisation of the bridging fund between NER300 and the EU Innovation Fund and that any supporting EC decision or EIB internal regulation is in place to allow immediate utilization of the Innovation Fund in 2021.



ZEP Secretariat,
Carbon Capture and Storage Association
6th Floor, 10 Dean Farrar Street, London, UK
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