Input to DG CLIMA on the Innovation Fund – challenges for CCS projects and lack of alignment with the Taxonomy

The Zero Emissions Platform (ZEP) would like to thank the European Commission for a transparent process leading up to the planned first call of the Innovation Fund. ZEP appreciates the opportunity to provide feedback and engage with DG CLIMA at the Expert Group meetings, as well as in bilateral meetings, and is thankful for the timely updates provided at the ZEP Advisory Council meetings and network meetings.

However, ZEP would like to highlight some issues that arise in the current state of design of the Innovation Fund:

- In the application process, there are still difficult challenges for CCS projects, including the need to address the cross-chain CCS risks (counterparty risks) between the different parts of the project chain (production, capture, transport, storage).

- There is a lack of alignment between the Innovation Fund and the European Taxonomy for Sustainable Finance (Taxonomy) – in particular, we note with some concern that the Innovation Fund has defined the emissions factor for electricity input as zero, based on the assumption that all grids across every member state will be zero-emission/net-zero by 2050. In the shorter term, this means that successful projects under the Innovation Fund may in fact increase emissions, which risks the Fund later receiving backlash from EU citizens and civil society.

ZEP believes that these issues are considerable and could have negative effects on the possibility to reach the EU target of net-zero GHG emissions by 2050. Below, these issues are described further, and possible solutions are highlighted.

Challenges for CCS projects

Referring to previous input submitted by ZEP, the Innovation Fund remains the best set-up to fund full chain, integrated, point-to-point CCS and single CO_2 capture projects. The design of the Fund neglects the most crucial part of the cross-sectorial CCS chain (development of permanent storage for multiple sources of CO_2) and means that the challenges associated with cross-chain risks, i.e. CCS specific risks associated with flows of CO_2 and revenues between different actors in optimised commercial CCS chains, remain. In ZEP's view, this will harm the ability of the Fund to support the development of large-scale CCS hubs (as outlined in ZEP's Executable Strategy) and will hinder the ability of European industrial regions to decarbonise quickly and cost-effectively.

Bearing in mind the lessons learned from the NER300, the Innovation Fund has opened up the possibility for CO_2 capture project promoters to apply for project funding under the Innovation Fund, where transport and storage of CO_2 would be included as a service

provided by a third party, based on an agreement (or vice versa regarding a storage project promoter). Prior to the final investment decision, no firm agreement between the parties in a CCS value chain is possible. Hence, even the introduction of the possibility to use letters of intent between the parties will not be sufficient to decrease the counterparty risk, and uncertainty remains around how irresolution in one part of the CCS chain may affect another (for example, if a capture project does not achieve having 75% of its intended emissions reductions stored). Even if the Commission provides clarifications and guidance around this point, it will still be the case that third parties will have to price in risks accordingly, which will unnecessarily increase the cost of the project.

The inter-dependence between the parts of the CCS value chain spills over into multiple challenges:

- To help manage and mitigate potential cross-chain risks and still achieve the emissions avoidance, it will be necessary to recognise that capture and storage projects are co-dependent. A favourable/an enabling approach would therefore aim to allow capture projects and storage projects to apply separately for funding under the Innovation Fund with a reference to each other, but with an individual performance guarantee, whereby the capture projects needs to demonstrate that the installation can capture the claimed emissions, but will not be penalised if the transport and storage is not available. Similarly, the transport and storage provider needs to demonstrate that it can receive and store the claimed volumes of captured CO2, but it should not be penalised if the capture project cannot deliver. This way, multiple capture projects can be developed simultaneously, while transport and storage projects can support multiple capture projects, hence optimising the infrastructure without the need to include high premiums for counterparty risk.

- CO_2 storage development is prioritised for Europe and is one of the key targets in the SET-plan CCUS implementation plan. Still, the Innovation Fund does not allow for the possibility to develop storage capacity independently from capture projects (emission avoidance). An alternative would be to introduce a “storage capacity availability requirement” for a storage operator, setting a targeted storage capacity availability. Storage development usually supersedes capture development. Therefore, a successful storage development project in one round of the Innovation Fund will attract capture projects (at a lower cost) in a following round of the Innovation Fund.

- The Innovation Fund will have real value for CCS if it can be the basis for the development of CO_2 transport and storage infrastructure, which can support the EU’s long-term climate ambitions. Such infrastructure can give benefits to several sources of CO_2 for abatement. When several capture projects in a cluster apply for funding under the Innovation Fund together with a transport and storage project, allowing for sharing infrastructure and reducing costs, the current design binds them collectively to the overall emission reduction target. If one or several of the capture projects will not go forward with FID, most likely the emission reduction target will be impossible to fulfil by the remaining promoters. Reducing

the overall emission reduction ambition in the applications will negatively influence the level of competitiveness of a CCS project's application. A recalibration of the emission avoidance target at FID - based on positive FID taken by project promoters - would reduce this risk significantly. Regardless of the methodology chosen, a project that is part of a cluster of projects should not be penalised for the failure (or unsuccessful application) of other projects in that cluster.

- CO_2 transport and storage infrastructure should be developed around an optimal design, regardless of whether transport is developed as an integrated part of the application or as a service provider. For pipelines, overcapacity should be allowed in the application to help improve value for money and cost-effectiveness, and to create new industrial decarbonisation opportunities for other emitters not directly involved in the first phase of projects. ZEP proposes that a project should be able to include the total design in the determination of the relevant cost and that an appropriate calculation for the oversized elements should be considered when evaluating the cost/tonne selection criteria.

Lack of alignment between the Innovation Fund and the Taxonomy – emission factor zero on electricity input

When assessing how a project can contribute to decarbonisation (avoided emissions), all the emissions related to the project must be taken into account – including emissions from the energy input. This must be the basis of the monitoring regardless of initiative/programme. In order to have a clear evidence-based assessment/emissions accounting, a life-cycle analysis (LCA) should be mandatory. The emissions from the electricity input will be a reality until Europe's electricity systems are genuinely zero carbon and the fact that the Innovation Fund's first call does not take them into account will skew the final selection, giving technologies that use larger amounts of electricity an unfair advantage. This will also cause problems for the projects involved going forward in the Innovation Fund process, cause confusion and create major public perception risks to both the Innovation Fund, the Commission and the projects themselves.

Building installations now that would increase emissions in the next decade will impact carbon budgets negatively and, given the increased baseload demand, may delay the energy transition rather than facilitate it.

The regulation on the European Taxonomy for Sustainable Finance was approved on 18 June 2020 and its basic principles are clear – when evaluating the CO_2 abatement potential of a given technology, all related emissions should be taken into account, including from any electricity inputs. The ongoing transposition of the screening criteria into legal text in the delegated act, to be adopted at the end of the year, will not alter these.

It has been declared that the Innovation Fund has taken a "wider" and "more generous" approach than the Taxonomy and that the Taxonomy's principles are not taken into account because the implementing acts have not yet come into force. The Taxonomy

regulation is approved, the Taxonomy Platform will be operational in September and the regulation will have come into force by the time of the second call of the Innovation Fund.

ZEP regrets that the wider approach adopted in the first call of the Innovation Fund and the lack of alignment with the Taxonomy will have negative consequences.

Firstly, this would send the message that electricity intensive projects, such as CCU projects – using large amounts of electricity – are favoured. In turn, this will have negative implications for CCS and especially for the development of shared European CO2 transport and storage infrastructure, the crucial enabler for Europe-wide decarbonisation. The fact that real energy emissions are not taken into account will also trigger reactions from policymakers, as well as from other societal actors, such as NGOs and green, climate oriented politicians, and, not least, from private and industrial investors and financial institutions. Whilst the Commission's approach/intention may seem "generous", actually it will risk the integrity of the entire Innovation Fund and potentially lead to a situation where third party financiers, complying with the Taxonomy, are unable to invest in Innovation Fund projects.

Secondly, taking a "wider" approach on this first Innovation Fund call will have a direct negative effect for the projects involved. Giving approval to projects based on the above-mentioned approach for the first call and then applying Taxonomy principles for the second call will not be the "generous" or "innovative" first step that was wished initially. Instead, it will most probably allocate resources to projects that will have very limited possibilities to qualify for the second steps under more realistic conditions. This cannot be seen as good value for money. This could create a rush on the First Call and "push out" other projects that may have been successful if the emission factor on energy input had been set in a realistic way.

Thirdly, it is crucial to send clear signals and create a good basis for investment decisions. The Taxonomy is clearly one of the European Commission's main pillars for the transition towards net-zero, referred to in the proposed Climate law – and, at the same time, highlighting CCS as an enabler for any economic activity to become sustainable. In a situation where Europe is already struggling with a non-functioning European carbon price, sending signals to industrial stakeholders that the European Commission's funding initiatives are not aligned will make it even more difficult for investors. This is even more timely and crucial at a point when Europe is discussing how to reinitiate its economy in a sustainable and forward-looking way.

In order not to skew the project selection for the Innovation Fund calls – giving projects using larger amounts of electricity an unfair advantage – and not to trigger negative reactions from policymakers as well as other stakeholders, there is a need to find a realistic emissions factor for electricity input.

ZEP recommends the alignment of the principles in the Innovation Fund with the European Taxonomy.

ZEP recognises the strong need to scale up the production of hydrogen and has therefore recommended the European Commission to make an addition to the European

Taxonomy's screening criteria – the 100g CO_2/kWh threshold – for electricity input to manufacturing, see attached paper. This addition will enable the scale up without risking the carbon budget and the energy transition. ZEP recommends this to be the principle also for the Innovation Fund.