



Response to the public consultation: Summary of the received input and the DEA's responses

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Introduction

On June 24 2024, the Danish Energy Agency ("DEA") invited potential bidders and stakeholders to participate in a public consultation on the deployment of the CCS Fund.

The public consultation provided an opportunity for potential bidders and stakeholders to submit written input regarding the DEA's main assumptions and considerations regarding the CCS Fund's impact on competition and proportionality of the State aid. The provided feedback will serve as input for the DEA's final design of the tender materials and conditions.

The public consultation ran until August 20 2024, and the DEA received responses from 27 stakeholders.

The consultation was conducted following the Commission's Guidelines on State aid for climate, environmental protection and energy 2022 ("CEEAG"),¹ which require that a response summarizing and addressing the input received during the consultation be published. This memo constitutes the DEA's responses to the input received during the public consultation.

Background

On September 20 2023, a majority in the Danish Parliament signed the Agreement on a strengthened framework for CCS in Denmark (in Danish: "Aftale om styrkede rammevilkår for CCS i Danmark"). The agreement merged the second phase of the CCUS Fund and the GSR Fund to one combined fund (the "CCS fund") initially planned for two tender rounds in June 2024 and June 2025. However, based on new insights from the DEA's market dialogue and experience with previous CCS tenders, the plan was changed to one overall tender round with negotiation.

The fund will provide subsidies for the development of the value chain for carbon capture, transport and storage ("CCS"). The purpose of the CCS Fund is to achieve CO₂ emission reductions and/or negative emissions by permanently and geologically storing fossil, biogenic and/or atmospheric CO₂. The overarching aim of the CCS Fund is to contribute to the realization of Denmark's climate targets as outlined in the Danish Climate Act (in Danish: "Klimaloven").² The DEA is responsible for administrating the CCS Fund, which is scheduled for deployment

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¹ Communication from the Commission, Guidelines on State aid for climate, environmental protection and energy 2022 (2022/C 80/01).

² Consolidated Act no. 2580 of 13 December 2021 on the Climate (Available in Danish at: <https://www.retsinformation.dk/eli/lt/2021/2580>).



between the years 2029-2044. The CCS Fund's total budget amounts to 28,916,800,000.00 DKK.

Market dialogue of the CCS fund

After the agreement to establish the CCS Fund was signed, the DEA previously (deadline January 15 2024) conducted a market dialogue on the CCS Fund, in which 18 industry actors participated. Based on the feedback from this market dialogue and the political objectives set out in the political agreement, the DEA designed a suggestion for the CCS Fund scheme. On the basis of this suggestion for a scheme, the DEA initiated on June 24 2024 a two-stringed public consultation:

- The first part invited potential bidders, stakeholders and interested parties to submit general comments on the design of the scheme, such as the tender procedure, specific contractual elements, the subsidy model, financing, etc.
- The second part covered questions concerning competition impact and the proportionality of the scheme. More specifically, the questions covered the following topics:
 - Technologies eligible for State aid
 - Method and estimate of subsidy per ton CO₂e emissions avoided (per reference project)
 - Proposed use and scope of the competitive bidding process
 - Main parameters for allocation of the aid including for enabling competition between different types of technologies/bidders
 - Main assumptions used to demonstrate the incentive effect, the necessity and the proportionality of the aid

Press releases in Danish and English initiating the public consultation were published on the DEA's website on June 24 2024.³ The press releases included a memo outlining the CCS Fund scheme ("Invitation to CCS Public Consultation"), including a description of the technologies available for aid under the scheme and a short reasoning for excluding others, the main costs and income sources, the tender process used to allocate the aid and the main contractual features governing the possible aid grants. An appendix ("Appendix 3 – Requirements Specification") to the memo listing specific requirements (minimum requirements 1-5 and general requirements R-1 to R-12) that bidders in the tender process must fulfill, such as the deadline for the delivery of the promised quantity of stored CO₂, was also

³ The Danish press release is available at: <https://ens.dk/presse/energistyrelsen-aabner-hoering-om-milliardpulje-til-co2-fangst-og-lagring>. The English press release is available at: <https://ens.dk/en/press/danish-energy-agency-opens-public-consultation-multi-billion-fund-co2-capture-and-storage>.



included. The public consultation memo also contained a list of questions covering the five themes above.

The questions are enclosed in annex A1, which also includes every input received to part two of the public consultation, A2. All answers received in part two are summarized and addressed in the following section. Relevant input received in part one of the public consultation is also included in the summary.

Summary of the input received and the DEA's responses

As pertains to the feedback related to the topic of **technologies eligible for aid**, the stakeholders generally expressed support for the DEA's demarcation in the CCS Fund. Concerning eligibility, certain projects such as biochar produced through pyrolysis are de facto delimited from the CCS Fund. The DEA received no answers during the public consultation questioning the eligibility.

However, a few stakeholders expressed concerns and urged careful consideration of fairness and competition in the tender process to ensure that there are no unfair advantages to projects which have already received state aid or tax exemptions. A few stakeholders also wished for a greater emphasis on balancing storage and utilization of CO₂.

The DEA considers the tender to be designed in such a way that maximizes competition between different industry actors and that the tender should contain a mechanism that will equal the playing field in regard to state aid and tax exemptions.

As for the **methods and estimate of subsidy per ton CO₂e emissions avoided** for a list of reference objects, the DEA stated in the market dialogue memo that the analysis was based on the method and assumptions of the EU Innovation Fund's methodological principles for the net calculation of GHG emission avoidance.

In general, stakeholders note discrepancies and underestimations, which may impact the validity and accuracy of the calculations – in particular regarding indirect emissions (or unaccounted emissions) and the project duration. Stakeholders suggest increased flexibility in regard to innovations, project-specific factors, incentive mechanisms. A stakeholder also suggested a clear distinction between emission avoidance and removal – a note that the DEA has incorporated into the tender material.

The overall conclusion is that the DEA's methods and estimate leads to an underestimation of the need for subsidy.

Regarding the **proposed use and scope of competitive bidding processes**, the DEA included a short description of the suggested tender procedure, including the



sub-criteria used to rank the bids. Stakeholders emphasized the importance of maximizing participation (in terms of the number of tenderers to be pre-qualified, but also in relation to equal treatment of CO₂ sources) and also of transparency in the negotiation rounds, and are supportive of the DEA's decision to merge the tenders into one single competitive bidding process.

Additionally, some stakeholders suggested a tighter timeline between bid submissions and contract awards to reduce costs and enhance competition. The DEA has made adjustments to the timeline.

Several stakeholders expressed concerns regarding the DEA's possibility of accepting bids after the indicative offer ("INDO") – as opposed to after the best and final offer ("BAFO"). The DEA has forfeited the possibility to accept bids after INDO in the final tender material.

The DEA also referred to the description of the suggested tender procedure when asking for comments concerning the **main parameters for the aid allocation process including for enabling competition between different types of technologies/bidders**.

In regard to *award criteria*, the stakeholders express general support for the DEA's evaluation approach for aid allocation using a weighed mechanism (80% subsidy, 20% project maturity). Stakeholders, however, wish for a more detailed guide on the sub-criterion for project maturity.

Stakeholders call for increased clarity on how the evaluation-technical supplement will be calculated - particularly regarding CO₂ tax savings - urging the DEA to specify the methodology used and consider uncertainties in these projections. The DEA has taken this note into consideration and has made changes to the tender material to reflect this problem – to ensure clarity and fairness.

In regard to the *tender design*, emphasis is placed on the importance of including the entire CCS value chain in maturity assessments, requiring the identification of both point sources and storage sites by BAFO. Concerns about fairness in competition amongst different sectors are highlighted, recommending distinct evaluation criteria to reflect the unique challenges and emissions profiles of each sector.

Stakeholders also note that while there are perceived benefits to conducting the tender in a single round rather than two, this change poses challenges for projects previously aimed at the second round, as they now have less time to prepare their proposals, creating an uneven competitive landscape. Concerns about the long timeline between BAFO and fund allocation could increase project costs, prompting a suggestion to move the allocation date forward.



The DEA, however, considers the main parameters for the aid allocation to be fair and believes that the award criteria ensure sufficient competition between different technologies.

Concerning the **main assumptions used to demonstrate the incentive effect, the necessity and the proportionality of the aid**, the DEA sought feedback on carbon credits, the techno-economic assessment, which demonstrates the business case behind different CCS projects, and the adjustment mechanism.

In regard to *carbon credits*, stakeholders assert that subsidies are essential for the viability of BECCS projects, highlighting that the sale of certified negative emissions alone is insufficient for profitability and, thus, not enough to incentivize CCS. The stakeholder emphasizes that the adjustment of state aid based on biogenic CO₂ integration into the ETS should apply to both mandatory and voluntary scenarios, as both impact project revenues. The DEA agrees with the stakeholders' note regarding the immaturity of the voluntary carbon credit market, which makes it difficult to estimate potential short- and long-term contributions to revenue streams, and that subsidy is vital for the development of CCS value chains.

In regard to the *techno-economic assessment*, the stakeholders express that some of the assumed financial elements are misaligned with the expected cost base and revenue streams. In particular, costs of transport and storage are underestimated – indicating that the need for the aid is greater than assumed.

The DEA believes that the *adjustment mechanism* is sufficient to ensure that overcompensation is avoided to the highest possible extent. The DEA will continue to reduce the subsidy pay-out with 90% of the excess income generated by carbon credits, as opposed to recommendations by stakeholders. Likewise, the DEA will continue to operate with a clawback in relation to EUA and CO₂-related tax savings. The DEA has, however, based on recommendations, made changes to the way CO₂-related tax savings are calculated and no longer operate with a simple tax fraction (as relates to the CO₂ tax and emission tax).

In line with the majority of the answers received, the DEA will continue to assume that bidders will *factor potential savings concerning operation of the capture plan, transportation and storage into their offered rate* and will, therefore, not adjust the aid level during the contract period. The DEA takes note of the answers received, stating that adjusting the aid rate for such cost disincentivizes optimizing the operation. The DEA, therefore, believes that adjusting the aid for such savings could hamper the development of the CCS industry.

The DEA received mixed input in regard to the stakeholders' preference of *method 1 versus method 2 in relation to projection of EU Allowances*. The DEA will use method 1 which entails using the annual projection values of EUA for the period



2029-2044 provided by the Ministry of Finance in the key figures catalogue (in Danish: nøgletalskataloget) as the baseline values to be used for the DEA's adjustment of the subsidy during the contract period. This approach represents a more realistic price framework.

Lastly, in regard to the question of the possibility of selling new carbon credits during the contract period resulting in *excess carbon credit income* compared to BAFO, stakeholder consensus is that it is unlikely for bidders to generate significant excess income due to the risks and uncertainty associated with the immature carbon credit market. Most carbon credits are expected to be sold in advance through forward agreements at FID. Tenderers instead advocate for more flexible or reduced clawback mechanisms.

The DEA has taken note of this consensus but has not made changes to the clawback mechanism regarding excess carbon credit income.

In regard to the **general comments** on the design of the scheme, such as the tender procedure, specific contractual elements, the subsidy model, financing, etc., the DEA received concerning, especially, the timeline for the tender.

Based on input from the public consultation, the DEA has made changes of noteworthy significance to the **tender timeline**.

Some stakeholders described the proposed timeline as distorting competition as a result of the amalgamation of the funding rounds – projects that had planned to bid in the first tender round were perceived to have an advantage as compared to those, who had planned to bid in the second round.

Pre-qualification was deemed to be too early for those bidders, who had plans to set up new companies in order to bid.

Stakeholders was also considered INDO as being too early and that BAFO should be as late and as close to the award of the contracts as possible – and that the latter affects the opportunity to get a price guarantee from their sub-suppliers.

Stakeholders, however, expressed that award of the contracts should not be awarded later than April 2026 if their internal schedule for commencement of operation was to be kept.

Similarly, a significant number of stakeholders expressed concern regarding the timeline due to lack of FID for onshore storage in relation to BAFO (November 2025). This would result in non-binding offers from storage operators, which would lead to increased risk, fewer offers and higher prices



As a result, the DEA has adjusted the entire timeline – apart from the award of the contracts - to reflect the expressed concerns. The new tender timeline is:

Pre-qualification 2025, INDO August 2025, BAFO December 2025, award of contract April 2026. Similarly, based input from the public consultation, the DEA has also made changes to the regulation regarding the possibility of **making changes to the transport and storage solutions** during the contract period.

Another more significant change that the DEA has implemented as a response to the input received from the public consultation is the **deletion of the minimum point requirement** (previously 5) in regard to the sub-criteria “project maturity” for the evaluation of offers. Stakeholders expressed great concerns on what operators must accomplish or live up to in order to be granted the required minimum 5 points. There was a lack of clarity in the public consultation material. Likewise, stakeholders pointed out that project maturity eventually would weigh more than the proposed 20% in the evaluation model with the minimum point requirement.

Stakeholders also raised concerns about **pre-qualification requirements** linked to positive equity in the given financial year as this could be a problem for new companies or consortiums with special structures. The DEA has, in the final tender material, solved this problem by adding a possibility for newly started companies to document a positive opening balance.

Some stakeholders also expressed concerns regarding the model for **guarantee**. The market expressed that the guarantee should correspond to 2 years of penalties – not 3, that ENS should allow bidders to provide other forms of guarantees (e.g. a parent company guarantee), that the guarantee should have a fixed expiration date, and/or should be removed or significantly reduced. The DEA has abided these concerns. The guarantee is halved after the penalty period, so that it only covers the termination fee and a buffer.

Lastly, stakeholders expressed concerns of lack of transparency regarding how many candidates the DEA would **pre-qualify**. As a result, the DEA has chosen to specify this number and has landed on “up to 10”.