Stakeholder consultation on draft of economic Terms and Conditions (T&C) of the 2024 Innovation Fund Auction for RFNBO hydrogen production

Feedback table

Instructions

Thank you for taking the time to provide written feedback on the **draft Terms and Conditions (T&C) of the 2024 Innovation Fund auction for RFNBO hydrogen production**. We further hope to see you in person or virtually at our workshop on **12 June 2024**, to discuss the feedback provided

We invite you to provide feedback in the below table on the different design elements of the auction scheme for renewable hydrogen production. Given the high number of interested stakeholders and our ambition to review all relevant feedback in very short time, please mind the following:

- Short, concise feedback, e.g. in bullet points is sought. If you have overall, high-level feedback, please provide it at the beginning restricting yourself to a few paragraphs.
- Please substantiate your feedback with evidence.
- Don't feel obliged to provide feedback on all points in the table.
- Please indicate what type of stakeholder you are and whether you intend to bid

Please send your feedback via email to <u>clima-auctions@ec.europa.eu</u> by 6 June 2024.

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Information about the respondent and general feedback

Name: The Danish Government

Position: NA

Company / Institution / Member State: Member State, Denmark

Type of Stakeholder (e.g. "H2 project developer", "H2 offtaker", "industry association", "Member State" etc.): Member State

Intention to bid in IF24 auction: NA

General feedback (optional): The Danish Government welcomes the opportunity to comment on the European Commission's Stakeholder consultation on the draft of economic Terms and Conditions (T&C) of the 2024 Innovation Fund Auction for RFNBO hydrogen production.

I. General auction design elements

No.	Design Element	Specific implementation in Innovation Fund renewable hydrogen auction	Feedback	Substantiating evidence, data sources, back- ground information
1.0	Objective of the auction	To cost-efficiently support the production of renewable fuel of non- biological origin (RFNBO) hydrogen within the EEA.	Denmark welcomes the objective of the auc- tion.	
1.1	Auctioned good	RFNBO hydrogen produced from water electrolysis in line with re- quirements put forward in the Renewable Energy Directive (Di- rective (EU) 2018/2001) and its Delegated Acts C(2023) 1086 final and C(2023) 1087 final. The RFNBO hydrogen needs to be produced by new production ca- pacity (i.e. capacity for which at the time of application start of works did not yet take place) in order to ensure an incentive effect of the subsidy.	Denmark welcomes the scope of the auction. It is crucial to uphold the limited scope to only cover RFNBO-certified hydrogen, as sector-spe- cific targets in various legislative acts are ex- pected to require a significant ramp-up of the EU production capacity for RFNBO hydrogen.	
1.2	Constraining value	The total available Innovation Fund budget of EUR [TBC] million is the constraining value of the auction and is known in advance. For the specific basket for maritime sector, the budget will be EUR [TBC] The total RFNBO hydrogen volume for which support will be awarded derives from the total available budget and the individual bids with their respective bid prices and volumes. The European Commission may decide to make use of a budget flexibility rule of up to an additional 20% of the total budget availa- ble based on the pipeline of the projects received.	A general scrutiny reservation remains con- cerning the allocated budget, as the budget for the overall constraining value of the auction is still unknown. Denmark is cautiously against the introduction of baskets, as it is considered inefficient to tar- get a specific sector, rather than to seek the broadest base for the auction. A design with baskets will not necessarily result in an auction, where the producers with the lowest marginal production price win.	
1.3	Support type	Output-based support (payment per unit of verified and certified RFNBO H2 production).		
1.4	Reference price	No reference price needs to be defined for a fixed premium auction.		
1.5	Support form	Fixed premium		
1.6	Safeguards against over-sub- sidisation	Ensuring competition through market testing, total available budget, a ceiling price, and feedback on the level of competition from one round to another.		

No.	Design Element	Specific implementation in Innovation Fund renewable hydrogen auction	Feedback	Substantiating evidence, data sources, back- ground information
		No claw backs.		
1.7	Ranking of bids	Price-only ranking		
1.8	Bid components	1) Fixed premium ("bid price") in EUR/kg of RFNBO hydrogen pro- duction (basis for ranking of bids), expressed with two digits after the comma. 2) Expected average yearly volume of RFNBO hydrogen production in kg per year over a 10 year production period. The maximum grant amount is therefore calculated as: $\begin{bmatrix}Bid \ price \ in \frac{\epsilon}{kg}\end{bmatrix} * \begin{bmatrix}expected \ average \ yearly \ volume \ in \frac{kg}{year}\end{bmatrix} * 10 \ years$ 3) The new electrolyser capacity in MWe that will be installed and verified as being operational by the time of entry into operation.		
1.9	Minimum and maximum yearly production thresholds	No upper or lower limits to the expected average yearly production as stated in the bid. However, the maximum grant amount requested by each proposal must stay within 1/3 of the total available Innovation Fund budget for the auction (see points 1.2 and 2.3). In the case of the specific basket for maritime sector, the maximum grant amount requested by each proposal must stay within 1/2 of the total available budget in this basket.	As a general remark, the limit of the maximum grant amount requested should based on a monetary value. This essentially means setting a set maximum monetary size of the possible grants e.g. a max- imum of 500 mio. EUR over 10 years, instead of having the maximum size of the grant some- what arbitrarily decided before the fund budget is set. This would ensure that it is possible in ad- vance to weigh the trade-offs between the ad- vantages of having a maximum size of the grants and the losses from larger projects not being feasible within the auction design.	
1.10	Production flexibility rules	Semi-annual production can be increased up to 140% compared to half of the expected average yearly volume of RFNBO hydrogen pro- duction as stated in the bid (see point 1.8). Semi-annual production beyond 140% is possible but not supported by grant payments. The total grant amount is restricted to 100% of the maximum grant amount. See points 4.2 on severe underperformance and 4.3 on semi-annual payment schedule.		

No.	Design Element	Specific implementation in Innovation Fund renewable hydrogen auction	Feedback	Substantiating evidence, data sources, back- ground information
1.11	Grant duration (disbursement pe- riod)	The grant agreement will end ten years after the Entry into Opera- tion of the project (unless the total RFNBO Hydrogen production volume as stated in the bid is reached earlier, due to the production flexibility rules (see line 1.10). See also point 4.2 on grant agreement termination.		
1.12	Indexation of support	No indexation.	Denmark is hesitant to have no indexation of the support. Not indexing the support will leave the possibility of the support being hol- lowed out by inflation, which brings additional risk to the bidder, ensuring relatively higher bids for the fund. Indexing the support – for instance, with the general or energy-specific inflation, would limit this possibility.	
1.13	Technology baskets, differen- tiation by regions or actors	There will be two budget baskets: (i) a budget of EUR [TBC] million will be earmarked for projects with maritime off-taker(s) and (ii) a general basket. The remainder of the budget is earmarked for pro- jects which do not have off-takers in the maritime sector. For more information on the clearing mechanism, please refer to line 3.8. For a definition of an off-taker in the maritime sector, please refer to Section 3, Qualification Requirements. If a portion of the budget remains unawarded in the maritime bas- ket, that amount will be transferred to the general basket.	Denmark is hesitant to limit takers for the auc- tion – and in particular against budget baskets by regions, technologies and actors – as long as there is not a demonstrable difference in the hydrogen produced or other externalities in the production.	
1.14	Method and estimate of sub- sidy per ton of CO2e abated	The value of the subsidy per tonne of CO2e abated will be calcu- lated by CINEA and does not have to be provided by the applicant / does not form part of the evaluation. The expected CO2e abatement per kg of renewable hydrogen pro- duced will be calculated using the 2021-2025 ETS benchmark of 6.84 t_CO2e/t_H2. This is a conservative estimate in not taking into account additional carbon abatement due to substitution effects in the RFNBO H2 end use application.		
1.15	Resilience related require- ments for the electrolyser	The bidder will have to provide as part of its electrolyser procure- ment strategy (see section 3) information about (i) percentage of the value of the electrolyser allocated to critical raw materials, (ii) end of	Denmark welcomes the possible inclusion of resilience-related requirements for electrolyser	

No.	Design Element	Specific implementation in Innovation Fund renewable hydrogen auction	Feedback	Substantiating evidence, data sources, back- ground information
		 life / recycling strategy plans, (iii) responsible business conduct, (iv) compliance with safety and performance requirements and standards, and (v) public subsidies received for the production of the electrolyser. Beyond information gathering, the European Commission is looking into incorporating and operationalising solid resilience aspects through the auction design (e.g in the form of non-price criteria, or pre-qualification criteria) in line with the Union's international obligations. In the light of stakeholder comments in response to this consultation and a stakeholder event in June 2024, further discussions between the Commission's services will take place before the final Terms & Conditions will be published in Q3 2024. 	procurement as a means to safeguard the resil- ience of the Union. This inclusion should, how- ever, be based on the same criteria as laid out in the Net Zero Industry Act. Thus, guiding prin- ciples should be based on equal requirements for all actors ensuring a level playing field. It should also be considered that resilience-re- lated requirements would likely lead to higher bidding prices and thus require more support to equal the effect on the green transition.	

II. Qualification requirements

No.	Design Element	Specific implementation of the Innovation Fund renewable hydro- gen auction	Feedback	Substantiating evidence, data sources, back- ground information
2.1	Qualification requirements	 For further details on qualification requirements see section 3 of the Terms & Conditions. <u>Admissibility</u>: Strict respect of submission deadlines, use of forms provided by the granting authority and submitted through the Funding and Tenders Portal, and compliance with presenting all required documentation (Application Forms), together with mandatory documents and supporting documents, including a Gantt chart outlining the project timeline and a financial information file (with a template-based financial model and bid components)) 		
		<u>Eliqibility:</u>		
		Proposals must relate to projects located in the EEA.		
		• Project and budget size in the limits expressed in point 2.3		

No.	Design Element	Specific implementation of the Innovation Fund renewable hydro- gen auction	Feedback	Substantiating evidence, data sources, back- ground information
		 The bid amount may not exceed the ceiling set in point 3.7 Compliance with legal entity checks (compliance with EU exclusion situation limitations (default, prosecution, etc). All beneficiaries will have to be validated. No geographical limitation on origin of members of the consortium. Signed self-declarations, see section 3 of the Terms & Conditions (also part of Application Form Part B) <u>Relevance and Quality.</u> The proposals will be evaluated on a pass/fail basis on relevance, technical, financial, and operational maturity assessed based on the documents listed in section 3 of the Terms & Conditions and their description in Application Form B. After evaluation and before grant agreement signature, an additional financial capacity check will be made, to ensure that applicants have stable and sufficient resources to successfully implement the projects and contribute their share. 		
2.2	Completion guarantee	A completion guarantee covering 10% of the maximum grant amount (see point 1.8) will be requested. The guarantee must be is- sued by a bank or financial institution (rated at least BBB-/Baa3) and must be able to be called by the granting authority if the project does not reach approved entry into operation within 3 years after signing the grant agreement (see point 4.1). The completion guarantee shall be issued at the latest two months after receiving the evaluation result letter inviting the selected ap- plicants for grant agreement preparation. It shall be valid from the date of issuance until six months after the maximum time to entry into operation (i.e. after verification that the electrolyser capacity stated as part of the bid production capacity is operational). The du- ration of the completion guarantee is expected to be at least 3 years and 11 months, and it will have to be issued no later than two months after the receipt of the invitation letter. A template will be made available and will have to be used. If entry into operation is reached earlier, the guarantee can be re- leased earlier.	As a general point, the requirements for a completion guarantee should be considered alongside all other qualification requirements. Increasing the requirements for a completion guarantee could have several adverse effects. Firstly, it could lead to higher bidding prices, as bidders would include the cost of additional security in their bids. Secondly, it would favor larger companies, which can more easily manage the risks asso- ciated with posting securities and diversify these risks within their portfolios. This would make it much harder for smaller companies to compete. Additionally, larger projects might need to be divided into smaller sub-projects to meet the guarantee requirements, potentially delaying the full realization of the project's capacity.	

No.	Design Element	Specific implementation of the Innovation Fund renewable hydro- gen auction	Feedback	Substantiating evidence, data sources, back- ground information
		A letter of intent from a bank or financial institution to issue a com- pletion guarantee will be required as part of the proposal. A tem- plate will be made available and will have to be used (no changes to the template are allowed). The enforcement of completion guarantees is further explained in point 4.2.	On the positive side, stricter completion guar- antees would provide more assurance that projects will be completed. It could also re- duce the risk of fund misuse, as the conse- quences of not completing projects would be greater.	
2.3	Minimum or maximum re- striction for project size and for bid volume	 Maximum grant amount restriction for each bid: 1/3 of the total available budget defined for the auction basket. In the case of the specific basket for maritime sector, the maximum grant amount requested by each proposal must stay within 1/2 of the total available budget in this basket. Minimum technical requirements: 5 MWe of newly installed electrolyser capacity (which must be in a single location; virtual pooling of capacity is not permitted). 	The limit of grant amounts available to each proposal should be evaluated based on the to- tal budget of the auction as there is a trade-off in disallowing bigger projects. In general, the smaller the budget, the larger the share that each project can take home should be.	
2.4	Off-taker restrictions	No off-take restrictions in the overall auction. However, limitations apply within each budget basket. Please refer to section 1.13		
2.6	Regulations for transporting hydrogen	Infrastructure costs can be priced into the bid but there is no explicit mechanism to offset comparative disadvantage of projects with in- frastructure costs.	Denmark welcomes the design element. It would be inefficient to let projects offset infra- structure costs in the bid, as a lower infrastruc- ture cost implies a lower total cost of produc- tion, transport and utilization of the hydrogen. It makes terms and conditions less transparent for bidders.	
2.7	Consideration of "General measures" ¹	See section 4 of the Terms & Conditions on cumulating support under auction with other public support.		

¹ (e.g. green premium stemming from regulations)

No.	Design Element	Specific implementation of the Innovation Fund renewable hydro- gen auction	Feedback	Substantiating evidence, data sources, back- ground information
2.8	Cumulating support under auction with other public sup- port for RFNBO hydrogen pro- ducer	See section 4 of the Terms & Conditions on cumulating support un- der auction with other public support.		
2.9	Cumulating support under auction with other public sup- port for RFNBO hydrogen off- taker	See section 4 of the Terms & Conditions on cumulating support un- der auction with other public support.		
2.10	Exclusion of cross-subsidisa- tion of "grey" hydrogen	Beneficiaries will need to provide certification that the total volume of hydrogen produced by the supported capacity achieves at least 70% GHG savings following the rules set out in the Delegated Act C(2023) 1086 supplementing Directive (EU) 2018/2001 (on average during the disbursement period of the scheme). The certification will be required as a deliverable for the last work package (independent third-party certificate or audited reports).	Denmark supports the requirement of exclud- ing cross-subsidisation of "grey" hydrogen. The requirement aligns with RED III's emphasis on and requirements for green hydrogen and pro- vides safeguards for the green value. Further- more, sector-specific requirements for RFNBO uptake in ReFuelEU Aviation and FuelEU Mari- time are expected to increase the demand for hydrogen certified in line with DA C(2023)/REDIII.	

III. Design elements defining the auction procedure

No.	Design Element	Specific implementation in Innovation Fund renewable hydrogen Auction	Feedback	Substantiating evidence, data sources, back- ground information
3.1	Competitiveness of the pro- cess	No discrimination against participants in auction. Transparency on requirements and sufficient lead times to prepare bids. Total available budget with possible 20% budget flexibility is a limit- ing constraint. No ex-post adjustments of auction rules.	Denmark welcomes the focus on competitive- ness and non-discriminatory aspects.	

No.	Design Element	Specific implementation in Innovation Fund renewable hydrogen Auction	Feedback	Substantiating evidence, data sources, back- ground information
3.2	Single vs. multiple-item auc- tion	Multiple-items		
3.3	One-stage or two-stage auc- tion	One-stage.		
3.4	Auction type	Static auction.		
3.5	Pricing rules	Pay-as-bid.		
3.6	Minimum prices	No minimum price.		
3.7	Ceiling prices	Disclosed ceiling price: 3.50 €/kg of hydrogen produced as a maxi- mum bid for the fixed premium. The same ceiling price would apply to both the general basket and the maritime basket of the auction. rounds.	Denmark acknowledges the reduced disclosed ceiling price, as the clearing price of the first auction was considerably below the ceiling price.	
3.8	Clearing mechanism and mar- ginal bid	 Bids are awarded based on the bid price until the total budget available for the auction is allocated. Proposals whose requested grant amount fits within the Innovation Fund call budget will be also assessed against operational capacity and the relevance and quality award criteria, on a pass/fail basis. The last bid that exceeds the total budget available will be added to the reserve list. The European Commission may decide to make use of a flexibility rule of up to an additional 20% of the total budget available. The maritime basket will be cleared first. If a portion of the budget remains unawarded in the maritime basket, that amount will be transferred to the general basket. If a portion of the budget remains unawarded in the general basket, that amount will be transferred to the maritime basket and the clearance of the latter revised with the additional available budget. Any remaining budget afterwards will be transferred to the next auction. 		

No.	Design Element	Specific implementation in Innovation Fund renewable hydrogen Auction	Feedback	Substantiating evidence, data sources, back- ground information
3.9	Tiebreaker rule	 For proposals with the same bid price, a priority order will be determined according to the following approach: Successively for every group of ex-aequo proposals, starting with the lowest bid price group, and continuing in descending order: Proposals with the overall smaller maximum grant requirement will be considered to have higher priority. If this doesn't allow to determine the priority, proposals located in a country²with fewer funds awarded previously under the Innovation Fund will be considered to have higher priority. If this also doesn't allow to determine the priority, then proposal with a shorter time until entry into operation are considered to have higher priority. 	A design where tiebreaker rule 1 favors the larger maximum grant would ensure that more of the total allocated auction budget is utilized. This rule would only apply to the final bids, with an additional condition that if the remaining budget after the last bid is larger than the next highest maximum grant, that grant is skipped in favor of the next one in line. Furthermore, this approach would encourage producers to bid their maximum amounts in- stead of smaller ones if they think they are among the last winning bids. This optimizes in- centives in the auction.	As an example - if there is 10 mio. funding left and there is projects for Under the current scheme, you get 1. 1 million – 9 million remains 2. 2 million – 7 million remains 3. 5 million – 2 million remains For a total of 1+2+5 = 8 million in funding With the alternative you get 1. 7 million – 3 million remains 2. 5 million is skipped since 5 million > 3 million 3. 2 million – 1 million remains 4. 1 million – 0 million remains 5 For a total of 7+3+1 = 10 million allocated in fund- ing. This is 2 million more than under the previous scheme.
3.10	Minimum volume of bidders	All conditions are set ex ante; the auction volume will not be adapted to the observed participation, except for the possibility of applying of a budget flexibility rule of up to 20% of additional budget.		

² From the EEA.

No.	Design Element	Specific implementation in Innovation Fund renewable hydrogen Auction	Feedback	Substantiating evidence, data sources, back- ground information
4.1	Maximum time to entry into operation	3 years. The maximum time to entry into operation is defined as the period between signature of the grant agreement and entry into operation.	Denmark is hesitant to reduce the maximum time to entry into operation from 5 to 3 years.	 Access to RE is considered a crucial factor in the bidding. I.e. many Danish actors are ex- pected to utilise RE from the offshore wind tenders with a deadline for entry into oper- ation in 2030.
				2) Data from the pilot auction indicates that several projects are expecting to use EU electrolyser technology. If the entry into op- eration deadline is reduced, it should be considered whether EU manufacturers have enough production capacity to meet the demand.
				3) A three-year period to obtain the correct approvals and complete a plant project could pressure the authorities' processing time. If the commissioning time is changed, it should be considered whether there is enough time for informed processing of projects, particularly to ensure the safety of both people and the environment.
				4) If the maximum time to entry into operation is reduced, it could be considered to intro- duce differentiated timelines depending on the plant's end product. A reduced period for commissioning could impact projects aimed at producing PtX fuels such as ammo- nia and methanol. These projects are more advanced and likely require more time for commissioning.
4.2	Sanctions in case of non-com- pliance with support require- ments	If the maximum time to entry into operation is exceeded, the grant agreement will be terminated, and the granting authority will call the completion guarantee described in point 2.2 A project entering into operation should be able to demonstrate as operational a nameplate capacity of at least 100% of that expressed	Unclear wording on the termination of grant agreement. Could be beneficial to outline what "may be terminated" implies.	

IV. Design elements defining rights and obligations

No.	Design Element	Specific implementation in Innovation Fund renewable hydrogen Auction	Feedback	Substantiating evidence, data sources, back- ground information
		in the bid. The entry into operation needs to be approved by the granting authority.		
		Further, the grant agreement may be terminated and the grant re- duced if the verified and certified RFNBO hydrogen production falls on average below 30% of the expected yearly average volume as stated in the bid for three consecutive years. This average will be cal- culated over a rolling 3 year period.		
		If the project cannot certify that the overall total amount of hydrogen produced achieves at least 70% GHG savings (see point 2.10), the grant may be reduced.		
		If a project was awarded under the maritime basket, it will have to demonstrate during implementation that at least 60% of the total vol- ume of hydrogen production as stated in the bid will be directed to a maritime off-taker. If the project is not able to demonstrate signed contracts for 60% of the production volumes with a maritime off- taker at the moment of reaching Financial Close, it will be terminated. At the end of the implementation period, the project will have to demonstrate the compliance with this requirement. Non-compliance will result in proportional reduction of the maximum grant.		
4.3	Payment schedules	Semi-annual (every 6 months after entry into of operation)		
4.4	Reporting requirements	Until entry into operation, projects will have to report annually on their progress and on key milestones such as reaching financial close and entry into operation. After entry into operation, projects will report periodically alongside their requests for payment. Reports will concern the verification and certification of the produced volume of RFNBO hydrogen. The beneficiaries will need to provide certification that the total vol- ume of hydrogen produced during the support period achieves at least 70% GHG savings according to the rules set out in the Delegated Act C(2023) 1086 supplementing Directive (EU) 2018/2001 (calcu- lated and certified at the end of the support period of the scheme). Certification can be provided by a third party or through audited re- ports. Beneficiaries awarded under the maritime basket will report periodi-		
		Beneficiaries awarded under the maritime basket will report periodi- cally, alongside their request for payment, on the status of off-takers		

No.	Design Element	Specific implementation in Innovation Fund renewable hydrogen Auction	Feedback	Substantiating evidence, data sources, back- ground information
		 and the sectors towards which the production of hydrogen is being directed. The beneficiaries will report periodically, alongside their request for payment, on the absence of cumulation as stipulated in the section 4. To fulfil the call objective of price discovery and contribution to market formation, the bid components of successful applicants³, will be published. Bid prices of non-successful applicants will be published in an anonymized way. Off-take prices of all proposals will be published in an anonymized and aggregated way to avoid identification of applicants or their customers. 		

V. Design elements defining the auction and framework conditions

No.	Design Element	Specific implementation in Innovation Fund renewable hydrogen auction	Feedback	Substantiating evidence, data sources, back- ground information
5.1	Scheduling/auction frequency	To be defined based on participation received in previous auctions.	Clarity on frequency would be useful for mar- ket actors, and could further efficiency and pre- dictability. The developers face uncertainty due to spo- radic planning. This potentially forces less ma- ture projects to participate in an auction before they are truly ready. This increases the risk of immature projects receiving support, which could lead to wasted funds or potentially re- duce the effectiveness of the support.	
5.2	Timing of the auction (early stage or late-stage auction)	Late-stage auction.		

³ Namely bid price, volume and capacity as well as the name of the applicant, anonymized and aggregated off-take prices as stated in the financial information file.

No.	Design Element	Specific implementation in Innovation Fund renewable hydrogen auction	Feedback	Substantiating evidence, data sources, back- ground information
5.3	Granting authority	Climate, Infrastructure and Environment Executive Agency (CINEA)		

VI. Qualification Requirements

No.	Design Element	Feedback	Substantiating evidence, data sources, background information
6.1	Admissibility		
6.2	Eligibility		
6.3	Assessment of renewable elec- tricity sourcing strategy		
6.4	Assessment of the hydrogen off-take and price hedging strategy		
6.5	Assessment of electrolyser procurement strategy		
6.6	Assessment of environmental permits		
6.7	Completion guarantee letter of intent		
6.8	Assessment of maturity		

VII. Rules for cumulation of support

No.	Design Element	Feedback	Substantiating evidence, data sources, background information
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7.1	Cumulation Rules	

VIII. Other Comments

No.	Design Element	Feedback	Substantiating evidence, data sources, background information
8.1			