Condor H_2
A RH_2INE zero-emission shipping project

Analysis of the fit of Condor H2 in the Innovation Fund 2024 call

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1 Goal of the document

This document was created to analyse the challenges/ blockages Condor H2 would run into if they would apply for funding in Innovation Fund – round 2023.

The outcome of the analysis can be used as input for the maritime call that is being prepared.

2 Analysis of fit with Award Criteria

Award criteria overview, with numbering.

	Award criteria	Minimum pass score	Maximum score
1	Degree of innovation	9	15
2	GHG emission avoidance potential		
2a	Absolute GHG emission avoidance	n/a	2
2b	Relative GHG emission avoidance	n/a	5
2c	Quality of the GHG emission avoidance calculation and minimum requirements	3	5
	Total GHG emission avoidance potential	n/a	12
3	Project maturity		
3a	Technical maturity 3 5	3	5
3b	Financial maturity 3 5	3	5
3c	Operational maturity 3 5	3	5
	Total Project maturity	n/a	15
4	Replicability	9	15
5	Cost efficiency		
5a	Cost efficiency ratio	n/a	12
5b	Quality of the cost calculation and minimum requirements	1.5	3
	Total Cost efficiency	n/a	15
	Total (without bonus)	n/a	72
6	Bonus points		
6a	Bonus point 1	n/a	1
6b	Bonus point 2	n/a	2
6c	Bonus point 3	n/a	3
6d	Bonus point 4	n/a	4
	Total (with bonus)	n/a	76

Comments & question per scoring element:

2.1 Degree of innovation

2.1.1 Call text

In the maritime and aviation transport sectors, support can be provided to, e.g. breakthrough innovative technologies, including energy efficiency, sustainable alternative fuels, electrification, as well as zero-emission propulsion technologies, such as wind technologies, including innovative infrastructure in the maritime sector, notably for EU container transhipment ports.
Projects in this topic should contribute to building industrial capacity, technology leadership, supply chain resilience and strategic autonomy within the EU.

Innovation in relation to the state of the art (15 points): degree to which the project goes beyond incremental innovation on a scale from intermediate to breakthrough innovation, including scaling-up (see Annex 1 for examples) taking into account the European level as reference point (or, for INNOVFUND-2023-NZT-GENERAL-SSP topic, the European or national level); quality, soundness and reliability of the information provided in the proposal.

2.1.2 Bottleneck

Making the maritime sector more sustainable cannot be achieved through pilots alone. It is also rolling out to multiple ships. There is often a chicken-egg situation (infrastructure versus number of sustainable ships that can use this infrastructure). We have a strong impression that scaling up projects will not score highly on this criterium. This has also been verbally confirmed by the EC.

3 GHG emission avoidance potential

3.1.1 Call text

The call makes a distinction between absolute and relative GHG emission avoidance. The absolute GHG emission is the difference between the expected GHG emissions of the project and the GHG emissions in the reference scenario during 10 years after entry into operation. The relative GHG emission avoidance is the absolute GHG emission avoidance divided by the GHG emissions in the reference scenario over the same 10 year period.

The relative GHG emission avoidance must be:

- for all topics except INNOVFUND-2023-NZT-PILOTS: at least 50%
- for INNOVFUND-2023-NZT-PILOTS topic: at least 75%.

In case of issues in the quality of the calculation (including reliability and margin of uncertainty of key parameters and/or assumptions), points may be reduced.

3.1.2 Bottleneck

GHG emissions are relatively low for inland water transportation, especially if calculated per ton of goods transported. This is also one of the reasons that we plead for a separate specific call for the maritime sector.

4 Project maturity

4.1.1 Call text

The technical feasibility of achieving the expected project outputs within the project's operational environment; understanding of technology and related technical risks and proposed risk mitigation measures; quality, soundness and reliability of the information provided in the proposal.

Financial maturity is the ability to reach financial close as soon as possible and no later than 48 months after signing the grant agreement taking into account: credibility of the business model, business plan and financial model; expected project profitability and credibility of the support of the project shareholders to fund the project; robustness and credibility of the strategy to secure key contractual framework including supply and off-take contracts; soundness of the financing plan along the project milestones and of the expected sources of financing, including private-sector contributions, Member State support or other types of public support, where relevant; solidity of

expected debt terms, level of negotiation with debt funders and capital structure in line with the project risks and returns; understanding of the project's business and financial risks, and quality of proposed risk mitigation measures; quality, soundness and reliability of the information provided in the proposal.

Operational maturity: credibility and level of detail of the project implementation plan covering all project milestones (which must include at least financial close, entry into operation and annual reporting after the entry into operation) and related deliverables; relevance and track record of the project management/team and soundness of the project organisation; state of play and credibility of the proposed plan for obtaining required permits, intellectual property rights or licences and other regulatory procedures; soundness of the strategy for ensuring public acceptance; ability to reach entry into operation in line with market standards in the sector or faster; understanding of the project's implementation risks, including risks stemming from dependencies on other projects falling outside the boundaries of the project, and credibility of proposed risk mitigation measures; quality, soundness and reliability of the information provided in the proposal.

4.1.2 Bottleneck

Maturity of the project can be a challenge for Condor H2, depending on how this is exactly assessed. The projects do not have a positive business case yet, because of the high cost of H2. There is some uncertainty about (green) H2 supply.

Certifications for ships cannot be guaranteed in advance. Only once the funding is available, can contracts with suppliers be finalized and can the detailed design process start. Once the detailed design is finalized, you can also start the approval processes.

5 Replicability

This is not a problem for projects like Condor

5.1.1 Call text

Replicability in terms of further deployment: plans for project's/technology/solution transfer to other sites (regionally or across the EU economy or globally where relevant), including potential for technology transfer beyond sector, where relevant; related expected additional emission avoidance. For projects to a large degree dependent on subsidies, potential to become cost-competitive and financially viable over time in the absence of subsidies.

5.1.2 Bottleneck

Some challenges are specific to the maritime sector. The call text mentions "beyond sector". This can therefore be difficult.

6 Cost efficiency

6.1.1 Call text

if the cost efficiency ratio is higher than 2000 EUR/t CO2-eq, the score is zero points, and the proposal will be rejected.

6.1.2 Bottleneck

The expected cost per reduced t CO2-eq is lower than 2000 EUR. Therefore this is not a bottleneck.

However, the cost per t CO2-eq reduction is relatively high for inland shipping on hydrogen. Therefore the score may be low.

7 Bonus points

7.1.1 Call text

Bonus 4: For Maritime sector projects only: demonstrated potential to decarbonising the maritime sector and reducing its climate impacts. (1 point).

7.1.2 Bottleneck

Our strong impression is that one bonus point does not have much impact. This is in view of the number of points to be awarded for other criteria.

8 Conclusion

On several elements, the scoring that will be awarded is very unsure. It depends on the interpretation of the call text and the assessment of the evaluators.

We have seen from previous Innovation Fund calls that consortium submitted maritime proposals that have been rejected several times, even after adjustment to previous feedback.

The preparation of a proposal is a very intense, costly process. This process needs to be funded, which is more difficult if the chances of success are difficult to assess.

Therefore, Condor H2 concludes that a proposal to Innovation Fund, under the current circumstances in the project and the current conditions/ rating is not realistic.

9 Summary

	Award criteria	Minimum pass score	Maximum score	Comment for Condor H2
1	Degree of innovation	9	15	Very questionable how H2 inland ships would score, because pilots have already been implemented and the current focus is on scaling.
2	GHG emission avoidance potential			
2a	Absolute GHG emission avoidance	n/a	2	GHG emissions per ship are relatively low for inland water transportation, especially if calculated per ton of goods transported.
2b	Relative GHG emission avoidance	n/a	5	
2c	Quality of the GHG emission avoidance calculation and minimum requirements	3	5	There is still quite some discussion about emission calculations. However, if we can use a standard used by min I&W NL (like for emission labels) than it should be acceptable.
	Total GHG emission avoidance potential	n/a	12	
3	Project maturity			
3a	Technical maturity 3 5	3	5	High (pilots/ demonstrators already implemented)
3b	Financial maturity 3 5	3	5	Medium
3c	Operational maturity 3 5	3	5	Condor should score high on this. We have this in our own hands. However, certification could be an element which has a negative effect on the score
	Total Project maturity	n/a	15	
4	Replicability	9	15	Medium
5	Cost efficiency			
5a	Cost efficiency ratio	n/a	12	Medium
5b	Quality of the cost calculation and minimum requirements	1.5	3	Medium
	Total Cost efficiency	n/a	15	

	Total (without bonus)	n/a	72	
6	Bonus points			
6a	Bonus point 1	n/a	1	
6b	Bonus point 2	n/a	2	2
6c	Bonus point 3	n/a	3	
6d	Bonus point 4	n/a	4	
	Total (with bonus)	n/a	76	