

## Answers to questions raised through the second marked dialogue for the Energy Island in the North Sea

**Office/department**  
Center for Energy Islands

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The Danish Energy Agency (DEA) has received questions regarding the second market dialogue for the procurement framework for the construction and co-ownership of the Energy Island in the North Sea. Currently, it is not possible for the DEA to provide adequate answers to all of the questions, since analysis of a wide range of issues are still ongoing. Highlighted in red below are the DEAs current answers to the questions.

### **Business model**

1. How can one get access (download or link) to the DEA's integrated project (and socio-) economics analysis model for Energy Island (i.e. including both island, transmission system and OWF economics)?

The DEA finds the question reasonable and understands the necessity for further elaboration on the subject. To accommodate the request the DEA will consider how to share this kind of information with the market prior to tender launch considering also, how to handle what can be regarded as sensitive information. Also, see the answer to the question below.

2. What assumptions have the DEA used when modelling the project economics for the total island project?

The answer to the first and second question is described in the consultation material on the profitability analysis of the energy islands, in Danish called "Analysemetoder vedrørende energiøernes økonomi og rentabilitet". See the consultation on the Danish Consultation Portal [here](#) (only Danish).

3. What is the DEA's view on maximum GW capacity to be linked to the energy island in the long run?

The political agreement is 3 GW capacity. However, the agreement also states that the Energy Island has to be able to accommodate additionally 7 GW OWF production in the long run, totalling an expected maximum design capacity of 10GW OWF. As part of the 2022 state budget agreement there is a [political recommendation](#) to define a 10 GW OSW target by 2040.

4. What assumptions have the DEA used for transmission cables and hydrogen pipeline sizing and what is the timeline?

**Danish Energy Agency**  
Carsten Niebuhrs Gade 43  
1577 København V

T: +45 3392 6700  
E: [ens@ens.dk](mailto:ens@ens.dk)

[www.ens.dk](http://www.ens.dk)

So far, there is no clear-cut answer to this question as it depends on several factors that have not yet been fully investigated. However, further information on these matters is expected to be reflected in the third market dialogue.

5. What are the boundary conditions being considered by the DEA to de-risk the project for participating investors? (e.g. will CfD be offered?; pricing – will an offshore bidding zone model redistribute congestion rent to OWF developers?; tax breaks?, other?)?

The DEA is currently analysing different risk mitigation options, but no conclusions have been made for now. Further information on these matters is expected to be reflected in the third market dialogue.

6. Is it correctly understood that a fixed minimum income to island only investors will be guaranteed by the state (and paid by the TSO) regardless what happens downstream of the island (i.e. whether transmission system and OWFs will be build)?

No decision has been made regarding a possible guaranteed stream of payments to investors for the initial island. Further information on these matters is expected to be reflected in the third market dialogue.

7. If point 6 is correctly understood, could you kindly share what the fixed Island return could look like?

See the answer to point 6.

8. What incentives (e.g. an option to build a multiple GW OWF) are the DEA prepared to consider (if any), to ensure OWF developers will invest in the island?

It has not been decided if or what incentives will be included in the tenders of OWF and the tender for the construction and co-ownership of the artificial island. Our working assumption is to separate the tender for the construction and co-ownership of the artificial island with the tender for OWFs, to reduce the complexity and increase the OWF competition.

#### Framework

9. Knowing that current political commitment to '3GW OWF' will not require an island, will the DEA through its political engagements will seek political commitment for the envisioned 10GW, before commencing the island tender?

The political agreements for the Energy Island confirms the first 3GW OSW and furthermore states that the Energy Island has to be able to accommodate a 10 GW OSW build up. It is a political decision and not up to the DEA to decide the size of the initial island. However, the Danish State has according to the Finance Act of 2022 committed to the plans for increased OWF capacity through allocation of further funds to accelerate the development process. See also answer to question 3.

10. To ensure the 'right island' with relevant cost-effective infrastructure is built to meet the need for the future island users activities (i.e. the OWF developers),

will the DEA ensure this by offering a 'carrot' to OWF investors, who also participate in island only tender (i.e. to safeguard optimal future island blue print)? E.g. ref above point 8.

No decision has been made regarding the tender of OWF. The main function of the Energy Island is to collect and transmit offshore wind power with the goal of creating the cheapest possible build out of large-scale offshore wind. Thus, it is a priority for the DEA to ensure that the tenders of both the island and the OSW are constructed in a way that ensures a high degree of competition but also a solution for the island that does not increase the cost for the OWF unnecessarily. Therefore, a central focus will be on functional requirements and not on who the bidder is.

11. In order to speed up the project timeline, keep cost down and resolve the likely congestion rent value distribution challenge, will the DEA consider to allow private parties to build, operate and own the interconnectors to DK and non-DK countries (similar to some gas pipelines)?

No. The political agreement for the energy islands is that state-owned TSO Energinet will build, operate and own the interconnectors. Energinet has monopoly for operating and owning all transmission of high voltage power in Denmark.

12. What is the DEA's outlook on green hydrogen for Danish industry and are there any plans in place to incentivize the transition to green hydrogen?

A national strategy regarding PtX is currently under development and is expected to be published around the turn of the year.

### Feasibility

13. The DEA mentioned in our meeting that one of its analysis suggested an island was better than an offshore platform for a wind farm of size XX GW. Can the DEA share mentioned analysis?

The only publicly available analysis of the cost-benefit between the two solutions is an analysis conducted by COWI "Cost benefit analyse og klimaaftryk af energier i Nordsøen og Østersøen" (in Danish only) ([link](#)). On page 93, a figure (11-3) illustrates that a 10GW platform island is more expensive than an artificial island.

14. Could you share any feasibility work including costs that has been done for the energy island? And the comparison between an island and the offshore platform?

See answer to question 13.

15. What are the key health, safety, security and environmental considerations that should be taken into account?

This is part of the functional requirements currently under development by the technical advisor Sweco and Kammeradvokaten (primary attorneys to the Danish state). This will be included in the tender material. It is too early to share any details on this matter so far.

### Stakeholders

16. What other key stakeholder groups, beyond the core island project stakeholders, do the DEA foresee to be part of the overall engagement process (e.g. fisheries, wildlife, others)?

In terms of Stakeholder Engagement, the DEA and Energy Islands Programme intends to involve all key stakeholder groups that voice an interest, both through the SEA/EIA consultations and local engagement dialogues in the geographically involved areas (e.g. fisheries, wildlife, local business etc.).