

Europower 25.02.2025 (translation):

– Shall we really also put bottom-fixed wind parks on HOLD?

Paal Norheim is critical to the decision to also pause the development of bottom-fixed wind.



Photo: Paul Kleiven / NTB

- Paal Norheim

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This article represents the opinion of the author

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As is well known, a Fiscal Policy Committee has recently concluded that the offshore wind investment in Norway should be put on hold, at the same time as the government's recent decision to postpone the announcement of the next bottom-fixed wind farm, Sørvest F.

This is somewhat sensational, especially because the state has already allocated NOK 23 billion to the first bottom-fixed offshore wind farm, Sørliche Nordsjø II (SNII).

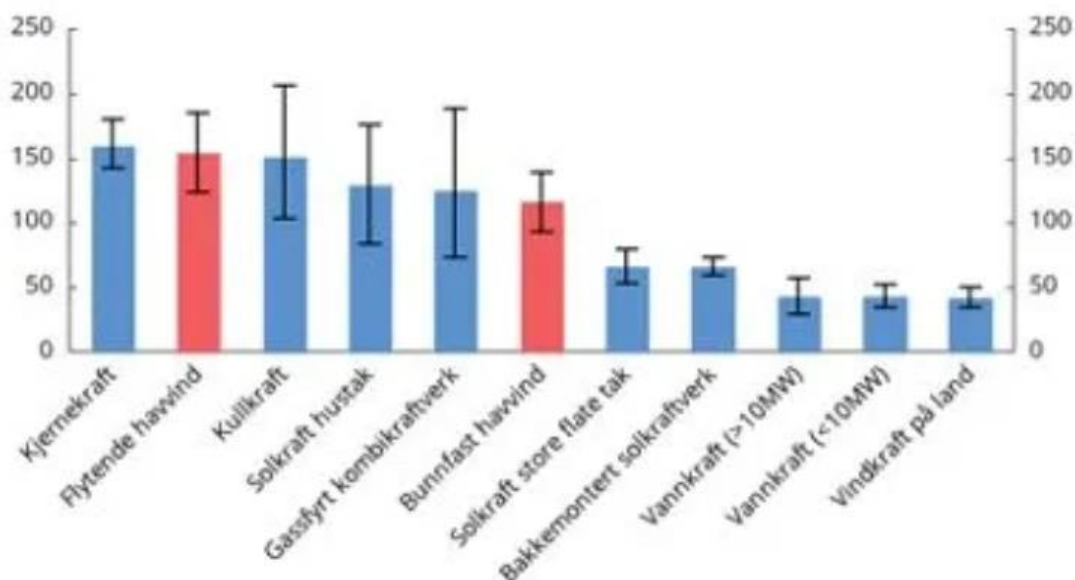
One of the main reasons for this investment was precisely to lower the costs of future bottom-fixed offshore wind projects. In the government's press release from the award in March 2024, it was clear: "We will build on this foundation in the coming years by announcing new areas and new auctions".

In the debate about Norwegian offshore wind, it seems that future offshore wind in Norway is primarily associated with floating solutions, despite the fact that there is potential for around 10 GW of capacity from defined areas suitable for bottom-fixed offshore wind. With new technology, this capacity can probably be increased a good deal.

Nevertheless, we are now seeing a shift towards a unilateral focus on floating offshore wind, which raises questions about both economic profitability and strategic priorities.

What does the report from the Fiscal Policy Committee actually say about offshore wind?

After reading what is written about offshore wind in the 46-page long report, I am mildly surprised by the general conclusion that offshore wind must be put on hold. On page 31 of the one can find the following figure 5.2:



The report states that this figure shows costs for energy production over the lifetime - LCOE (øre per kWh), and that the range in the figure shows high and low estimates.

As can be seen from this, there are reasonably large differences in the profitability between floating and bottom-fixed offshore wind. Furthermore, it can be assumed that in the estimate for bottom-fixed offshore wind, it is probably the lower part of the cost range that is most realistic, because such developments are based on proven and known technology from existing bottom-fixed offshore

wind farms, and that it can be expected that experience with the development of SNII will bring down the costs.

Here it can be mentioned that for the Doggerbank project in the English sector, where Equinor is the operator and together with Vårgrønn owns 60 %, the water depth is up to 63 meters, compared to approximately 60 meters for SNII. And, on the Scottish Seagreen project, which was put into operation in October 2023, 114 bottom-fixed offshore wind turbines have been installed in up to 59 meters of water depth.

For floating offshore wind, where there is currently no fully developed and proven technology, one can similarly assume that it is the upper part of the cost range that is most realistic.

Despite this, the report concludes: "As can be seen from figure 5.2, offshore wind (in red) is among the most expensive forms of power production, and budget support is expected to increase significantly in the coming years". However, the report also states that "The development of offshore wind, and particularly floating offshore wind, is not economically profitable".

It is difficult for the undersigned to understand that the main conclusion in the report therefore also applies to bottom-fixed offshore wind to the same extent as to floating offshore wind, given the significant differences in experience, technology and cost structure.

Use of Chinese turbines

In the report from the Fiscal Policy Committee, the following can be read: "Furthermore, DNV expects that the costs of developing offshore wind will be significantly higher than previously estimated, partly because, for reasons of security policy, cheap turbines will no longer be bought from China".

For me, such a statement is difficult to understand, as the use of Chinese turbines has probably never been assumed in any previous cost estimates. This also, in my opinion, calls into question the credibility of the report's evaluation of offshore wind.

Why is the difference between floating and bottom-fixed offshore wind not nuanced?

Based on my argument above, it is shocking to say the least that the report does not differentiate between floating and bottom-fixed offshore wind development at all, but only categorically states as a main conclusion that investment in offshore wind must be put on HOLD. By understanding the difference between these two forms of offshore wind development, one can see that the need for additional subsidization of bottom-fixed turbines is far less, compared to if one were to only invest unilaterally in floating offshore wind, as the government's strategy is now.

The postponement of the announcement of the Sørvest F area, i.e. the expansion of SNII, and the general focus only on floating offshore wind, shows little respect for the developer of SNII.

It is perhaps reasonable to assume that for the company Ventyr, in which Belgian Parkwind and Swedish Ingka Invest each own 50 percent, one of the reasons that they chose to take as much financial risk as they allegedly did, and in the end came out victorious from the bidding against Equinor, was that they assumed that by being responsible for the development and operation of SNII, they would have a competitive advantage in the next bottom-fixed developments. This applies in particular to the aforementioned Sørvest F.

The latest signals from the government indicate that the future of bottom-fixed offshore wind farms is now highly uncertain.

Pre-allocation of individual players within the offshore wind industry

Considering the recent Enova allocation of NOK 1.2 billion for a project consisting of a wall with 40 turbines with a capacity of 1 MW each, the report from the Fiscal Policy Committee states: "Effective business policy is characterized by general framework conditions that are neutral across industries and businesses, and do not give special advantages or disadvantages to individual players". And further that "It is problematic that the government designs support schemes in close dialogue with the vendors". And furthermore: "However, the state has poor assumptions, and the report came out only a week after the aforementioned award from state-owned Enova, to a strange concept, where the testing of this technology does not benefit anyone other than the supplier itself".

While almost the entire industry is waiting for the testing of floating turbines with capacities of 15 MW and above (the reference project in the government's consultation note for Utsira Nord specifies 22 MW turbines), and verification of technology for foundations that will support such large turbines, Enova therefore chooses an allocation that in no way matches the needs of the industry. And furthermore, where the supplier himself says that a full-scale solution, which is supposed to consist of a wall with 126 small turbines, will not be available for Utsira Nord.

This should perhaps come out more in the main conclusions from the report. When the government simultaneously deprioritizes bottom-fixed wind, the distribution of support schemes also seems arbitrary.

Does one have no faith in investment in Norwegian technology development for bottom-fixed offshore wind?

In the report, you can also read the following conclusion: "As long as the development of offshore wind is more expensive in Norway than in our neighboring countries, it is unlikely that technological development will make offshore wind profitable in Norway".

In my opinion, this overlooks important innovations in bottom-fixed offshore wind. As mentioned in previous debate posts, we are in our company developing a technology that will be able to double the capacity of bottom-fixed offshore wind turbines, by also using the forces from the waves, and

proven technology from land-based hydropower plants. While other companies, among other things, are working with technology to be able to increase the water depth for bottom-fixed turbines.

Conclusion

The government's decision to put offshore wind on HOLD is poorly justified. It is incomprehensible that the Fiscal Policy Committee in its report does not distinguish between floating and bottom-fixed offshore wind, and that the government is planning a policy that could weaken Norway's competitiveness in offshore wind.

It is time to reassess the strategy and ensure that bottom-fixed offshore wind also gets the attention it deserves, and ensure that maximum benefit is obtained from the NOK 23 billion already invested in bottom-fixed offshore wind in the Norwegian sector.