

GONE WITH THE WIND

Foregone revenues in the Danish Thor tender

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14 December 2021

A competitive tender process for the Thor offshore wind farm recently concluded in Denmark. The German energy developer RWE was awarded the rights to develop the farm, accepting a contract for differences (CfD) with what initially seems like an incredible strike price of 0.01 ore/kWh.

A CfD with a strike price of 0.01 ore/kWh at face value implies that all revenue which RWE generates from energy production will have to be passed on to the Danish state. The outcome has thus been heralded as a huge success for the Danish Energy Agency (DEA). Wind farms have gone from previously being an expense to now becoming a source of income.¹

However, the outcome is not as positive as it initially seems. In this brief note, we explain why the tender actually was not a huge success (or at least it could have

been a bigger success) – and how the DEA made a big mistake with its tender design.

WHAT HAPPENED?

The Thor tender was a bidding process to determine which energy developer would be granted the rights to build the Thor offshore wind farm – a project off the coast of the Danish island Funen to provide 1 GW of capacity.

Five² out of the six bidders that participated in the tender bid the ‘minimum’ strike price of 0.01 ore/kWh. Since five bidders bid the same price, the winner of the tender was decided by a random draw.

In practice, a CfD with a strike price of zero means that the developer must pass on any and all revenue generated from energy production to the Danish state. It is

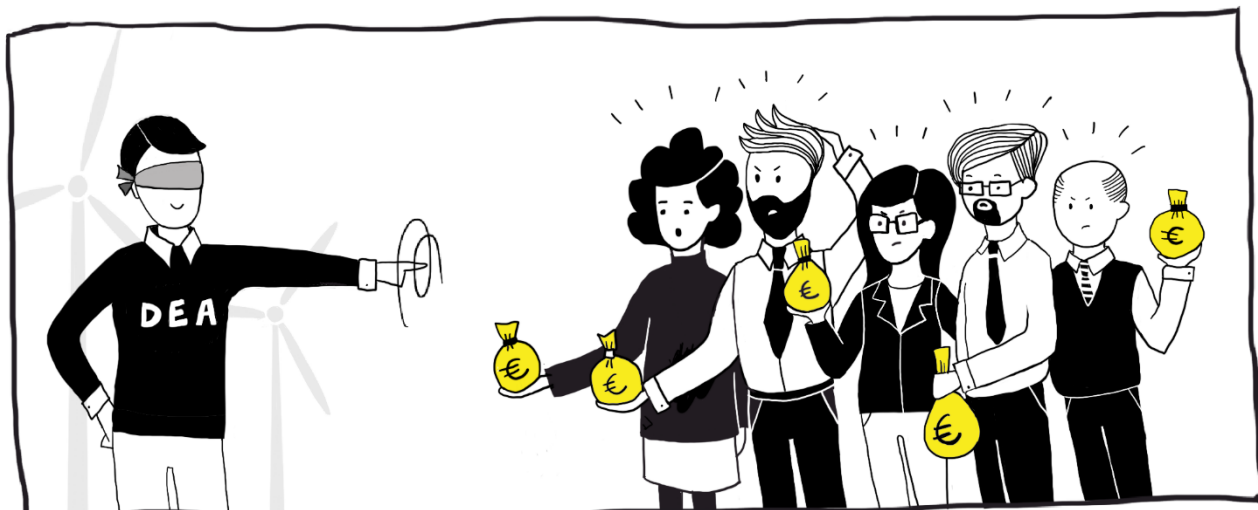


Illustration: sofie jensen

¹ See for example <https://winddenmark.dk/nyheder/thor-udbud-sikrer-staten-milliarder>

² These five bidders were: Ørsted, CIP and Anel, Total Energies and Iberdrola, Vattenfall, RWE (<https://energiwatch.dk/Energinyt/Re-newables/article13516237.ece>)

not immediately apparent why any rational bidder would be interested in accepting such a contract.

The reason for this is that there is a cap on the payment streams that can be made from the winning bidder to the state, set at 2.8 billion DKK.³ In other words, after the first 2.8 billion DKK, the CfD is fulfilled, and the winning bidder is able to retain the revenues from any further production at the market price. A bid of 0.01 ore/kWh was thus essentially equivalent to an offer to pay 2.8 billion DKK to the Danish state for permission to build the offshore wind farm.

WAS THE THOR TENDER REALLY A BIG SUCCESS?

The Thor tender was successful in ensuring the rollout of green energy without requiring any state subsidy. However, the DEA's tender design blocked it from becoming an even greater success.

As explained above, five bidders essentially offered the 'maximum' price of 2.8 billion DKK for the rights to develop the farm. This suggests that some or all of these bidders would in fact have been willing to pay more than 2.8 billion DKK – but were not able to do so within the tender rules, meaning that the winner had to be determined by a random draw.

By setting a cap of 2.8 billion DKK, the DEA thus seems to have severely underestimated the potential value of the farm. The Danish state could have made even more revenue had the rules had allowed for it.

A sentence from the DEA's tender material (which was subsequently deleted) provides evidence of the fact that the DEA underestimated demand, stating that: "caps are set at a level so high that with the current electricity price forecasts the DEA does not deem it likely that the caps will be reached."⁴

It was not impossible for the DEA to anticipate aggressive demand. Several recent offshore wind tenders have closed with very aggressive bids. In UK CfD round 3, for example, winning strike prices were 18% below forecasted market prices.⁵ Similarly, UK Leasing Round 4 also produced 'staggeringly' high prices, indicating a very high willingness to pay for the rights to develop offshore wind.⁶

Indeed, the DEA itself forecasts that the contract cap of 2.8 billion DKK will be reached within approximately 3 years, leaving the winning developer with another at least 27 years to generate market revenues.⁷

The Thor tender thus was not a huge success for at least two reasons:

First, the state should have made more than 2.8 billion DKK – bidders would have been willing to pay more but were not able to. The outcome will allow RWE to generate substantial 'windfall' profits.

Second, it was not necessarily the 'best' bidder that won the contract. The whole purpose of having a tender (i.e. a competitive bidding process) is to allocate a scarce resource in the most efficient manner (to the bidder that wants it the most). By having to choose the winner at random, the DEA cannot be sure that the most efficient bidder won. The process is also essentially unfair: Ørsted, CIP and Anel, Total Energies and Iberdrola, and Vattenfall all lost out to RWE – but might have won in a fair competitive bidding contest.

³ See Annex 3.9 of the tender conditions (available at <https://www.ethics.dk/ethics/eo#/bfb4d610-bfa1-4bfe-8808-6deb212e27cb/publicMaterial>)

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⁵ Winning strike prices: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/915678/cfd-

<ar3-results-corrected-111019.pdf>; reference prices: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/799074/Allocation_Round_3_Allocation_Framework_2019.pdf

⁶ See <https://www.ft.com/content/b0033490-a901-4745-905e-b01749c4faaa>

⁷ <https://ens.dk/en/press/thor-wind-farm-build-thor-offshore-wind-farm-following-historically-low-bid-price>