

Denmark moves forward on North Sea 'energy island'



AFP/ Copenhagen

Denmark has said that it has approved plans to build an artificial island in the North Sea that could generate wind power for at least 3mn households.

Parliament in June adopted a political environmental framework aimed at reducing the country's CO2 emissions by 70% by 2030, which included plans for the world's first "energy hubs" on the island of Bornholm in the Baltic Sea and in the North Sea. On Thursday, parliament went further by approving a plan to place the North Sea hub on an artificial island, with a wind power farm that will initially supply 3GW of electricity.

That could later be scaled up to 10GW – enough for 10mn households – according to the ministry of climate, energy and utilities, much more than needed for Denmark's population of 5.8mn.

"Clearly this is too much for Denmark alone and this also why we see this as a part of a bigger European project," Climate Minister Dan Jorgensen told AFP, adding that Denmark wanted to

also export excess energy to the rest of Europe.

Plans also include the use of “electrolysis” to extract hydrogen for use in the production of renewable fuels for things like maritime transport.

The island, “the largest construction project in the history of Denmark”, is to be majority owned by the Danish government in partnership with private companies and is expected to cost around 210bn Danish kroner (\$34bn, €28bn).

Rather than a traditional offshore wind power farm, the island will function as an “energy hub” allowing connections from other countries’ wind power farms and cables to efficiently distribute the incoming energy.

Its final size is yet to be decided but it is expected to cover between 120,000-460,000sq m, according to the ministry.

The total number of wind turbines has not been finalised either, but estimates range between 200 and 600 units at “a previously unseen scale”, with the tip of the blades reaching as high as 260m (850’) above the sea.

While the project is a step in the plan to provide enough energy to electrify Denmark, Jorgensen also said they hoped the project could offer guidance for bigger countries looking to transition their societies in the face of climate change.

“We know that as a small country, only responsible for about 0.1 percent of the world’s greenhouse gas emissions, it doesn’t matter that much to the climate what we actually do in Denmark,” he said. “We hope that it will have a bigger influence by influencing others.”

The project’s next steps include environmental impact assessments and talks with potential investors, so construction is still some years off.

According to the ministry, initial construction is likely to begin around 2026 and finished sometime between 2030 and 2033.