



UPDATE TO NEIGHBOURS REGARDING POTENTIAL ONSHORE HVAC BOOSTER STATION

Dear Resident,

As you may know, DONG Energy is proposing to develop a new offshore wind farm (Hornsea Project Three), in the North Sea, to be sited over 120 km off the north Norfolk coast. The proposed wind farm could generate up to 2,400 MW of electricity, enough to meet the average daily needs of well over 2 million UK homes¹.

The Project is currently in the pre-application phase for a Development Consent Order (DCO), which is the process by which Nationally Significant Infrastructure Projects (NSIPs) apply for consent. This process involves consultation with local landowners, statutory bodies and local communities, to get their feedback on our plans as they develop. This consultation, alongside ongoing environmental assessments and technical and feasibility studies, will help inform our final proposal that will be submitted as part of our consent application in quarter two 2018. A consent decision is anticipated by the Secretary of State by the end of 2019. If successful, construction of Hornsea Project Three is anticipated to take place between 2022 and 2025.

Electricity generated by the offshore wind farm, will be brought onshore near Weybourne via buried cables, crossing Norfolk to the west of Norwich, and connecting into the existing Norwich Main National Grid Substation, just south of Norwich. The Project will require a new onshore substation near to the existing National Grid Substation (within 3 km of Norwich Main substation at Dunston) and possibly an onshore High Voltage Alternating Current (HVAC) booster station near to the coast if required.

Why do you need an HVAC booster station?

Electricity can be carried using different types of current, an alternating current or a direct current. At present, all UK offshore wind farms use High Voltage Alternating Current technology (HVAC). However, over greater distances a booster station is required to mitigate against power losses between the offshore wind farm and the National Grid connection point. High Voltage Direct Current (HVDC) technology is more commonly used to transmit electricity from one country to another in the form of an interconnecter, but HVDC technology has yet to be applied to any UK offshore wind farms. Due to the significant distance from shore to the wind farm, Hornsea Project Three is considering both options and will apply for consent for both HVAC and HVDC transmission systems. If an HVDC system is used, it will not require a booster station. Depending on the outcome of the assessment process and technical feasibility, the HVAC booster station (if required) could be situated offshore and/or onshore. This will not be known for several years and will not be confirmed until after the consent decision is made.



Components of a typical offshore wind farm

¹This figure assumes a load factor of 42% and a household consumption of 4.1 MWh per year. Source: DECC (July 2015). *Only required if a HVAC transmission system is selected.

Where could it be located?

Due to technical reasons, the onshore HVAC booster station would need to be located as close to the cable landfall at the coast as possible, whilst recognising and mitigating environmental sensitivities. Hornsea Project Three has sought to identify sites for the potential onshore HVAC booster station within a search area approximately 10 km from the coast (this was first presented at the community consultation events in October/November 2016). The substation would require an area of up to 25,000 m² and could be up to 12.5 m high.

Our constraint mapping exercise and initial feedback from informal consultation indicates that the southern half of this search area is preferable for locating this substation. We have identified three potential sites for locating the substation within this area and are currently consulting on these options (see Figure 1 - an interactive map can also be found on our website). At the consultation events, attendees had the opportunity to complete a feedback form and mark out features on our foam board maps that they would like us to be aware of as we further refine our plans.

Community Consultation

As you may be aware, we have just finished our second round of community consultation events (Phase 1.B) (these ran from 2nd – 10th March 2017), where we presented the latest information on the proposed development. If you could not/did not attend one of these events, this information is also available on our Project website www.dongenergy.co.uk/hornseaproject3.

At these events, it was brought to our attention that members of the community did not feel fully informed with regards to the potential need for an HVAC booster station. This had not been our intention and we have prepared this note to provide you with more information on this aspect of our proposal and the opportunities for you to comment on our plans.

We will hold another round of community consultation events in late Summer 2017, details of which will be publicised nearer the time. For more information on our plans for community consultation please see our Statement of Community Consultation (SoCC), available on our website and at your local Community Access Point.

How can I have my say?

You can submit feedback on our proposal at this stage by either completing a feedback form online² or by contacting us directly via the channels listed below. We understand that a note has been circulated locally by a resident who has raised concerns on this topic and that understandably there is a lot of interest in this aspect of our proposal. The note is very useful and encouraged many people to engage at our events, which was extremely helpful for the Project. However we would like clarify a couple of points:

1. Labelling of onshore HVAC booster station options – Please refer to the labels on the enclosed map when providing feedback on this aspect of our proposal (options flow 'B', 'A' and 'C' when reading west to east/left to right). If there are any specific features that you would like to bring to our attention in or near to the proposed sites, please clearly state what these are and provide geographic references (or mark on the map in Figure 1) if possible. You are welcome to use local names for the three options if this helps identify them further.

2. Deadline for responses to our consultation – The feedback deadline (31st March 2017) mentioned on the locally circulated leaflet specifically relates to receiving feedback forms completed at or after our second round of community consultation events (Phase 1.B). You can comment on our proposal at any point during the consultation period (up to submission of our DCO application in quarter two 2018) by contacting us directly (details below). Feedback forms/comments received after the 31st March will still be considered by the Project, however we will not be able to include these in the Consultation Summary Report for the recent events. This report will be published on our website, so that you understand what views were expressed at this stage. They will, however, still be captured in the final Consultation Report submitted with our consent application in 2018.

We want to be as transparent as possible during this consultation, so that you understand how our plans are developing, when you can comment on these and how we propose to address your comments. If you do have any questions or want to comment on our proposal, please contact us directly via one of the channels below.

Furthermore, if you would like to sign up to our mailing list to be kept informed you can *Register Your Interest* online or contact us directly.





Visit our website: www.dongenergy.co.uk/hornseaproject3

Send us an email: contact@hornsea-project-three.co.uk



Call our Freephone information line: 0800 0288 466



Send us a letter: Hornsea Project Three Offshore Wind Farm, c/o Emily Woolfenden, DONG Energy Power (UK) Ltd, 5 Howick Place, Victoria, London, SW1P 1WG

²An online version of this feedback form is available here: https://www.research.net/r/9JX5G8D



Figure 1: Map showing the onshore HVAC booster station options and associated cable corridors.