

## Offshore Coordination project

### Consultation feedback form

We launched our consultation on **30 September 2020** and it closes on the **28 October 2020**.

Please use this form to send in your written feedback. If you would like to feedback via this route. We are also working with stakeholders to receive verbal feedback. Please contact us if you would prefer to provide feedback verbally.

We would like to publish responses to our consultation following its closure. Please can you confirm whether you would like us to treat your response confidentially by selecting one of the options below: (delete those that do not apply)

**Consultation response from North Norfolk District Council, Council Offices, Holt Road, CROMER. NR27 9EN.**

**Person completing the response:- Steve Blatch, Chief Executive**

- **Non-confidential – you can publish the full response**

*Throughout the consultation document we have asked some questions on our three reports that we would like your feedback on to shape our final documentation. These are below and do not need answering if you do not have views. If you would like to provide any other feedback, please feel free to do so.*

### Holistic Approach to Offshore Transmission Planning Report

Q1. Do you agree with our assessment of the key technology and system risk barriers coming from the Holistic Approach to Offshore Transmission Planning Report?

**North Norfolk District Council (NNDC) is supportive of the appraisal of options for the future strategic transmission of offshore wind generated electricity. NNDC is one of the terrestrial authorities most affected to date through multiple offshore wind schemes seeking landfall and onshore cable routes for electricity connecting into the National Grid. To date there are two operational schemes (Sheringham Shoal and Dudgeon); with four more schemes (Vattenfall Norfolk Vanguard; Vattenfall Norfolk Boreas; Orsted Hornsea Project Three and Equinor Sheringham Shoal and Dudgeon extension) at various stages of development / consenting. NNDC raised the desirability of there being a strategic approach to connections in to the National Grid some three years ago – so very much welcomes the current options appraisal and would wish to engage positively with this process moving forward.**

In terms of key technology, clearly it is the national interest for transmission technology to enable as much of the electricity generated out at sea to be transmitted at distance for use by consumers without significant loss and without resulting in significant environment impact in doing so. Whilst NNDC are not necessarily experts in transmission systems, the knowledge gained through participating in various DCO processes suggest that HVDC is the more efficient of the transmission options compared with HVAC. Furthermore, HVDC will typically require fewer cables and will not have the reactive power compensation issues of HVAC which require substations at specified intervals when greater transmission distances are involved. Whilst HVDC technology is relatively new

to the off-shore wind sector, it is clear that the technology is maturing leading to a narrowing of cost differentials between the transmission types. This technology is also now being favoured by many developers (including for Vattenfall Vanguard and Boreas). It makes sense to NNDC, given the overall benefits from using HVDC technology, for a strategic transmission infrastructure project to favour this transmission type will allow greater consistency across future projects and help drive down costs of electricity generation. The UK has an opportunity to be at the forefront of delivering class leading HVDC transmission technology and the knowledge and expertise gained can be used to support green growth.

Q2. Do you have any proposals on how to most effectively bring the technology to market for when needed?

**NNDC strongly supports the principles of adopting a strategic approach to connections to the National Grid infrastructure which reduces the need for multiple landfall points and multiple onshore cable corridors.**

The current approach to the construction of these individual schemes appears rather ad-hoc with different schemes being granted different grid connection offers with seemingly no recognition of the cumulative impact of the construction programmes of different schemes operating to different timescales across similar geographic areas. In some cases, cables from different schemes have crossed leading to questions as to the strategic oversight of these grid connection offers.

Bringing the offshore ring main technology to market will in itself require a development consent order application and it will be important at that stage to consider the potential impacts of this option compared to other alternatives.

The District Council recognises that creation of an off-shore ring main or interconnector cable might mean larger sub-station infrastructure being required at key strategic landfall points when connecting HVDC to alternating current to distribute to consumers via 400kV transmission networks. However, it is hoped that such infrastructure could be more easily accommodated on brownfield sites or within areas of port-related / industrial activity than in more rural and environmentally sensitive environments which currently appear to represent the closest point to shore from the offshore wind development location and the offered grid connection.

Whilst there are many benefits of a ring-main there are also many challenges including environmental impacts from cables in shallower waters many of which are likely to cross designated Marine Conservation Zones. It will be important also to understand how each developer will likely 'plug-in' their project to the ring-main and what physical impact this will have not only on land but out to sea in terms of effect on seascapes.

North Norfolk District Council nonetheless recognises and supports the ambitions of the UK Government to see a significant further expansion of offshore wind generation in the period to 2050 and thinks this more strategic approach to transmission is already overdue. This is evident given that, with the need for further technical development and consenting processes, it is unlikely that any solution could be developed and implemented before 2030. This means that many schemes already proposed – including those impacting on North Norfolk (Vattenfall Norfolk Vanguard; Vattenfall Norfolk Boreas; Orsted Hornsea Project Three and Equinor Sheringham Shoal and Dudgeon extension) are all likely to be developed in advance of any offshore transmission system being developed.

Q3. Do you have any additional evidence to inform the assessment we have made?

**No.**

Q4. Do you have any further feedback on the report?

**No.**

## Cost-benefit Analysis Report

Q1. Do you agree with our assessment of the costs and benefits?

North Norfolk District Council recognises that the provisional schemes outlined in the consultation report have the potential through economies of scale and a more strategic approach to save consumers approximately £6bn between now and 2050; with the largest savings estimated to be around the onshore network which is already believed to be nearing operational limits. Development of an integrated offshore transmission system(s) would seem to address this capacity issue through investment in new purposely designed infrastructure using the most current and best available technology rather than seeking to “retro-fit” or upgrade existing grid infrastructure.

However, any monetary savings to consumers has to be carefully balanced against impacts and costs to the environment from whatever strategic solutions are progressed. We must never lose sight that the purpose for choosing wind energy is not only to secure reliable non-fossil dependent electricity and reduce annual carbon dioxide emissions it is also to help protect our natural resources. Any adverse impacts on the environment through harnessing wind power and transmitting electricity has to be properly and fairly weighted in any cost-benefit analysis report.

Q2. Do you have any other evidence to support or challenge the assessment made?

See comments at Q1 above.

Q3. What do you see as the potential impact on the environment of these proposals, particularly the reduction in the number of assets and landing points?

North Norfolk District Council believes that a more strategic approach to offshore transmission will represent the most efficient approach to the future supply of offshore wind generated electricity into the National Grid – both in terms of cost, technology and impact on the environment.

At present, speaking from a North Norfolk perspective, multiple schemes achieving landfall in North Norfolk and then requiring cable corridors to connect into the National Grid has seen large areas of the North Norfolk District proposed for disturbance for onshore landfall and cable corridor routes. Whilst the long-term impact of this infrastructure on the landscape might be quite benign, the impact of the construction programme on the environment, landscape, ecology and farmland (soil structure and therefore agricultural yields) is significant.

Certainly in North Norfolk landfall sites have been proposed within the Norfolk Coast Area of Outstanding Natural Beauty and then cable routes developed through sensitive landscape and ecological areas including areas of high landscape value, river valleys, woodland and farmland – often disturbing established hedgerows and field margins.

Whilst the District Council recognises that the development of any strategic offshore transmission infrastructure will require detailed environmental appraisal on the marine environment, it would be hoped that the proposals to bring any strategic transmission cables ashore in major estuary locations already used for or alongside port-related or industrial land uses will minimise the environmental impact of such developments relative to the current position of multiple landfall and cable corridors crossing predominantly rural landscapes and environments.

Q4. Do you have any further evidence on the potential social and community impacts of these proposals? We would particularly welcome responses from local authorities on this question.

Under the current arrangements of multiple offshore wind energy schemes each being offered their own grid connection, there is the very real prospect of some communities having repeated or cumulatively long-term disruption from the onshore civil engineering works associated with landfall and cable corridor development – examples include the communities of Weybourne and Kelling in the Norfolk Coast AONB and further south in the Reepham area of two cable corridor routes effectively “crossing” each other within two or three years of each other. Certainly in the context of the Weybourne and Kelling location on the North Norfolk Coast these communities have already seen the impact of the construction of the Sheringham Shoal (2009 – 2011) and Dudgeon schemes (2015 – 2017) and might see a further eight years of construction impacts from the Hornsea Project Three and Sheringham Shoal and Dudgeon extensions. The cumulative impact of these developments in an AONB of high landscape value, in a narrow coastal plain backed by a wooded escarpment in a community which is dependent on tourism and agriculture is concentrated (in terms of area) and significant (in terms of impact on the community and tourism related businesses – including a wide variety of accommodation and visitor attractions).

Similarly, the proposed landfall and cable corridor at Cart Gap, Happisburgh for the Vattenfall Norfolk Vanguard and Norfolk Boreas schemes will have a significant local impact during the construction phase in an “open” landscape where again the local community is heavily reliant on the tourism economy, access to the beach for leisure related activities and agriculture.

At the present time, there is little by way of community benefit or payback realised by the “host” communities of this infrastructure despite the inconvenience suffered by local communities and businesses during the construction phases of these developments beyond some form of “community grant” schemes. Unlike communities where sub-stations are required to connect into the National Grid, which once constructed are understood to benefit from ongoing Business Rate income, the communities at landfall sites currently receive little or no long-term benefits from accommodating this infrastructure and no long-term jobs associated with the development and maintenance of the offshore turbine fields meaning that community acceptance of these schemes is increasingly hard to gain, notwithstanding the strategic benefits of offshore wind generation at a national and global level in terms of reduced carbon emissions etc.

Q5. Where do you see value for further work to build on and test these findings? Either from the proposed list or beyond?

**No comment.**

## Offshore Connections Review Report

Q1. Do you think that if the areas we are highlighting were improved, that the ability to coordinate projects would be significantly increased?

**North Norfolk District Council strongly hopes that the options outlined through this consultation process will see the development and delivery of a more strategic and integrated approach to offshore generation and transmission feeding into the UK National Grid. The opportunity for more strategic co-ordination of these projects has to be welcomed at many levels.**

Q2. Do you think we have missed anything in our offshore connections review that would add value and increase coordination?

**Not at this stage.**

Do you have any other feedback, if so please add below. Many thanks for taking the time to provide written feedback. When we publish our final documentation, we will let you know what we have done with the feedback and how it has shaped our work.

**North Norfolk District Council has been grateful for the opportunity to comment through this consultation process. This issue is of significant interest to communities across North Norfolk and we would hope to have the opportunity of commenting, engaging and contributing further as future proposals develop and emerge. Thank you.**