Submission from Alison Shaw to the examination of SEP/DEP at Deadline 3 on May 2nd 2023.

Please find below a statement that I submitted in June 2022 to National Grid in response to their non-statutory consultation on the East Anglia Green proposal. While the specific focus of the document is on the necessity for the rapid design and implementation of an offshore transmission network for offshore wind, there are nonetheless many points of overlap between the argument contained in this statement and the issues raised by the SEP/DEP Application.

In addition, it provides a context, and a narrative of the crucial role played by National Grid plc in the current scenario regarding offshore wind off the coast of East Anglia, stretching back as far as 2008.

I hope that the ExA might find the information in the submission below useful and that they will bear in mind, while reading it, the requirement at 4.9.1 on p. 59 of EN-1 that it is the responsibility of the Applicant to ensure that there is sufficient capacity onshore for the onward transmission of the electricity generated.

It will be essential for the ExA to satisfy itself that this requirement has been met by the Applicant for this SEP/DEP proposal.

Response to National Grid's non-statutory consultation on the East Anglia Green (EAG) proposal - June 2022

I submit the statement below in my capacity as an individual resident of Norfolk but I am also a longstanding member of Oulton Parish Council and founder member of the Norfolk Parish Movement for an OTN.

The Norfolk Parish Movement was initiated in February 2019 as a single-issue grouping of Norfolk's local councils, dedicated to the promotion of the rapid evolution of an Offshore Transmission Network (OTN) for offshore wind, by any means possible. There are now 95 Parish and Town Councils committed to this cause. Their commitment is well-informed.

Members of the group have actively participated in the hearings and responded to all written deadlines for the three NSIP public examinations of Hornsea Three, Norfolk Vanguard and Norfolk Boreas.

The publication of the EAG documentation for the upgrading of the overhead pylon route from Norwich Main to Tilbury - whilst deeply disappointing - is in no way a surprise. It is clear that the electricity transmission system in Norfolk does not have the capacity to export the 6GW of power generated by the Round 3 offshore wind farms down to London and the Southeast, where it is needed.

The EAG project is the disastrous but inevitable result of the successive granting of consents by the Secretary of State to the Hornsea Three, Vanguard and Boreas projects. EAG should

therefore always have been included in the NSIP examinations of all three of these projects, since it is a cumulative impact of them.

The fact that National Grid (NG) failed to present EAG for public scrutiny in this way, and at that time, constitutes a distortion of the planning process.

The consequence of this omission is a democratic deficit and a culpable failure to provide the Secretary of State with a core element of the situation, for his proper consideration, during the consenting process for each DCO.

Strangely, there is no reference to the need to accommodate the energy generated by Vattenfall's Norfolk Vanguard and Boreas wind farms off the coast of Norfolk in the EAG documentation, which prefers to mention only the need to export the output from Hornsea Three (consented) and the much smaller SEP/DEP project (which has not yet submitted for DCO). Even though Vanguard and Boreas are to be connected at Necton rather than Norwich Main, it seems likely that there will be times - e.g. when the Walpole section of the central grid is overloaded - when the power may well need to flow back to Norwich Main and southwards from there. This aspect of the situation needs special attention, rather than omission, since Vattenfall recently applied for a non-material amendment to its DCO for Boreas, removing the upper limit of 1.8GW from the DCO, and has this week applied for a similar amendment to its DCO for Vanguard. These amendments have the potential to allow Vattenfall to increase the effective output of their projects in a number of ways, thus exacerbating the problem of lack of capacity in the eastern region grid.

This lack of transparency in the EAG consultation documents is unhelpful to the public in their efforts to gain a thorough understanding of the situation, and it negates the true meaning and spirit of 'consultation'.

In addition, discussion of the relative merits of overhead pylons versus trenching of the cables is in many ways a distraction and a smokescreen, masking the real problem of the shameful lack of strategic planning, thus far, of this vital and massive national transition to renewable energy.

Pylons on this scale are clearly an enormous and permanent visual blot on the landscape, but in Norfolk we have had to learn through many gruelling hours in hearings and in working groups with engineers, that cable trenching also comes at a huge price. Norfolk will be blighted for 8 - 10 years by successive waves of HGV construction traffic (with a 12-hour permitted working day) and countless road closures and diversions as the 45 - 60m wide trenches are cut through the countryside. Not only traffic but also small tourism businesses all along the 180 kms of proposed cable routes (3 x 60 km) will be disrupted. There will be permanent damage to inland rural communities that will have to coexist with enormous converter halls and other infrastructure - including, even, large battery storage systems - that will be built alongside them. There will also be the destruction of the microbiology of topsoils, forced to stand in heaps for extended periods of time, and the risk (sadly, already proven) that some field-drain systems will never recover, doing lasting damage to agricultural land.

All this socio-economic and environmental damage could be completely avoided, or hugely minimised, by a strategically planned, integrated, offshore transmission network for offshore wind.

But this fact is already well known to National Grid and an extensive paper trail exists documenting that fact.

The lack of capacity to transfer power out of this region has been known and recognised for the last 15 years. Norfolk was never a significant industrial area and has no coal fields. Overall, the national transmission grid is designed to transfer power from north to south, and Norfolk, as an eastern outlier, is not part of the main backbone.

As long ago as 12th December 2008, a study was published, commissioned by The Crown Estate from National Grid, on how to connect the Round 3 offshore wind farms to the onshore grid. It recognised the challenge, considered the technical options, and concluded that integration and coordination would be required to achieve greater efficiency, reduce costs, and avoid delays.

In due course, this led to the Integrated Offshore Transmission Project (East) feasibility study of August 2015, which demonstrated the efficiency and cost savings of using offshore transmission for the Round 3 wind farms, whilst at the same time incorporating the Eastern HVDC link. The IOTP (East) feasibility study showed that a new onshore pylon route would not be efficient or cost-effective if the large Round 3 offshore wind farms, such as Hornsea Three, Vanguard and Boreas, were to go ahead. This study was led by National Grid, working with Vattenfall, Orsted and other developers, who were actively involved in all the work streams. The conclusions of the IOTP(E) study were not acted upon in 2015 because a (misguided and short-sighted) judgement was subsequently arrived at, that there was unlikely ever to be a need for more than 10GW of offshore wind power, and so the anticipatory investment in an OTN could not be justified. In the event, the government is now seeking to connect 40GW (or even 50GW) by 2030.

Only when the present government in May 2019, seeking no doubt the kudos of becoming international leaders in this sphere, had passed into legislation the UK's commitment to achieve Net Zero by 2050, were Ofgem and the Dept. for BEIS forced reluctantly into action.

In a report to Ofgem in November 2019, the Offshore Wind Industry Council (OWIC) demonstrated that, even after the Bramford to Twinstead upgrade is complete, the grid in East Anglia will still be overloaded, with 22GW of supply trying to leave East Anglia via only 15GW of capacity. This report was a full year before the Hornsea Three DCO was approved in December 2020.

Responding to increasing political pressure from a small group of Norfolk and Suffolk MPs (galvanised and supported by - amongst others - the Norfolk Parish Movement for an OTN) the Dept. for BEIS commissioned the Offshore Transmission Network Review (OTNR) in July 2020, which is due to publish its Holistic Network Design for an integrated offshore transmission system in July 2022 - in a very few weeks' time.

In the meantime, entirely inappropriately, National Grid has been continuing to pursue, largely in the shadows and beyond the prying gaze of the public, the entirely opposite course of encouraging radial connections of individual wind farms, by the allocation of inland grid connection points on a first-come first-served basis – and the Secretary of State has continued to grant those projects development consent.

Faced with this perverse scenario, and at risk of being severely adversely affected by it, the average lay person can be forgiven for being confused and significantly alarmed. Does the left hand know what the right hand is doing?

The pathway to an OTN is proving to be a long and bumpy one, involving inertia, complacency, short-term thinking and a complete lack of strategic planning of this unprecedented national transition, at the highest levels.

Much of the relevant information above was presented by residents and parish councils, with increasing persistence, to the developers and the Examining Authorities for all three consented projects in Norfolk, but was not taken up or acted upon.

Using the ad hoc radial model for connecting offshore wind farms to the onshore grid is a bad idea on all counts – and no amount of mitigation or 'community benefit' funding can turn it into a good one.

I call upon National Grid to change their approach as a matter of extreme urgency and to throw their full weight and expertise into the rapid evolution of an offshore transmission network. If carried out correctly, such a change will win the full support of the communities of Norfolk - and of communities throughout the Eastern region.

Even more importantly, the implementation of an integrated offshore grid for offshore wind will reduce costs to consumers, increase the flexibility, resilience and efficiency of the whole system and, by making better use of the wind resource, magnify the contribution made to a reduction in climate change.

Is this not the whole purpose of the energy transition?

Alison Shaw

Oulton, Norfolk
June 2022