

Dear Ms Barnett & Ms Camey

Yes to Offshore Wind Energy, Let's Do It Right

Suffolk Energy Action Solutions (SEAS), a local campaign and advocacy group, is a strong supporter of offshore wind energy and the UK Government's net zero targets. However, like almost all offshore wind stakeholders, we can see that the current development led 'point to point' approach to onshore grid connections, where each individual developer connects independently to the National Grid, "***is no longer fit for purpose and causes unnecessary damage to coastal habitats***". ([Chairman of the Environmental Audit Committee in a letter to the Minister of State, Rt Hon Kwasi Kwarteng](#)). Whilst we all know the current model is discredited and outdated it is important to understand the barriers to change so that integrated offshore infrastructure transmission can be developed.

Our paper is concerned with the opportunity for the UK as a whole, but our reference points relate to coastal Suffolk because that is where we live.

The BEIS Review is a chance to see the "bigger picture".

Having campaigned for a BEIS Review since July 2019, we welcome this Review. The Terms of Reference have been discussed in correspondence between Minister Kwasi Kwarteng and SEAS campaigner Fiona Gilmore. This Review is an opportunity to make a step change and think more holistically about the interconnectedness of well-being, communities, environment, wildlife and the economy for those local areas where Grid connections are being made.

Barriers to Change

1. National Grid has failed for over ten years in fulfilling its strategic obligation: National Grid has been a barrier.

Historically, the UK has lacked a master plan for offshore transmission infrastructure. Professor Tim Green, Professor of Electrical Power Engineering at Imperial College, London, confirmed this fact in September 2019, in an interview with SEAS founder Fiona Gilmore.

Other North Sea countries have retained State ownership of their national grid operator. The UK opted for a different approach, by privatising National Grid in 1995. We have opted in this country for a more commercially oriented and faster moving structure. However, this approach has not motivated National Grid to recognise that a step change in thinking is required. Reports proposing an integrated offshore transmission infrastructure have gathered dust for a period of ten years and more. Since 2005, the UK has exponentially augmented its offshore wind energy output and despite this significant achievement very little progress has been made in terms of holistic planning for the connections to the Grid. Individual developers have made

landfall across the country and damage to the environment has been a secondary or tertiary consideration. The developer is king.

We believe that there must be good reason for other North Sea countries to adopt a different structure. In recent years and months, Sweden, Poland, Lithuania and Spain have all followed the structure established in Germany, France, Holland, Belgium and Denmark. They may be slower to make things happen, but they have created a sustainable master plan for offshore transmission infrastructure, whereby the synergies and cost efficiencies, as well as the environmental benefits, vastly outweigh the benefits of speed and short-term results. The UK's narrow view has been driven mainly by profit and so-called value to the consumer, from a privatised National Grid operator.

To quote Navigant's report "Offshore delivery grid models for Ireland" (March 2020), "the disadvantages of the developer-led model include: minimal onshore-offshore transmission asset co-ordination, greater risk of additional infrastructure with associated environmental impact and more complexity involved in future-proofing of offshore transmission assets. "

2. Lack of will on the part of private developers

Some private developers understand the need for an integrated approach to grid connections. For example, SSE Renewables argue in their paper, [Delivering 40 GW of Offshore Wind in the UK by 2030](#), "***The 'point to point' approach to the development of grid infrastructure under the current offshore transmission owner arrangements will not be fit for purpose for delivering 40GW of offshore wind by 2030. It is not an efficient approach to grid planning; will add unnecessary cost and could present local acceptance problems for onshore connections in areas that already have higher density of network infrastructure***".

In stark contrast ScottishPower Renewables (SPR) when speaking at the Examining Authorities Preliminary Meeting for EA1N and EA2 on 16 September 2020 quote National Grid's report of 2015 [Integrated Offshore Transmission Project East](#) stating, "*as a result the project team does not believe it would be economic and efficient to progress with the development of an integrated design philosophy or delivery of anticipatory assets at this time.*" What the Applicant fails to quote is that this exact report also says, "***the technology required to deliver integrated offshore networks is in development and can reasonably be expected to be available, at the ratings required, by around 2020.***"

It is imperative that the UK offshore industry does not continue to be vulnerable to the short term wishes of private developers. It is surely time for the Government to take back control and develop our offshore wind industry to be the best in the world.

3. Lack of Voice for those outside the industry

SPR and other private developers could be described as the 'last bastion' of point to point grid connections yet their outdated opinions are often ably represented by

expensive legal counsel, whilst those outside the industry are left struggling for a voice. For the Review to be objective and informed it is essential that the Review group is independent and both neutral specialists and community groups from outside the private sector are properly represented. Without representation from those who are concerned about the development of large-scale onshore infrastructure, the risk is that the implementation will potentially destroy more than it creates. Green energy is no longer green, if we destroy part of our planet in the process of capturing this energy.

4. Need for Legislative Change

As you are aware, East Suffolk is overburdened with energy projects with eight offshore projects planned for our area together with the proposed development of Sizewell C, all of which will involve development on the Suffolk Coasts and Heaths AONB. There is a cumulative impact from numerous, consecutively occurring, energy projects on and around the Suffolk coast. Whilst all Nationally Significant Infrastructure Projects (NSIPs) are considered in isolation (as is the current legislative requirement), communities and environments are left vulnerable to their cumulative effects. The current legislation under which NSIPs are examined is outdated and no longer fit for purpose. Legislative change is desperately needed in this area. An NSIP DCO process was originally conceived for a power station generator. The substations and interconnectors were not so numerous and they were not anticipated in terms of scale and multiplicity. EA1N and EA2 are a case in point. They are the Trojan horse for a vast complex of substations and interconnectors, the largest complex in the UK. National Grid expects that Eurolink and Nautilus will follow once the Trojan horse has entered. The DCO process is unfair and it is really a sham. The substations have been slipped into the DCO as an “associated” project. National Grid is judged to be secretive, disingenuous and failing in its true national role. It seems to behave just like any old developer, except it has more access and rights than the others because of its name. SPR is just doing NG’s bidding.

At the Examining Authorities Preliminary Meeting for EA1N and EA2 on 16 September 2020, SPR, the Applicant, talked of the difficult regulatory change necessary if a more integrated offshore approach is to be taken. BEIS has stated in its Review Terms of Reference that it will seek to explore opportunities for "**regulatory flexibility**" even within its medium-term work stream.

In order to avoid further barriers to change, most notably for EA1N and EA2, this Review must, within its mid-term objectives, guarantee the promised regulatory flexibility required for SPR and others to present a responsible, integrated offshore solution.

5. Lack of balance between environmental, economic and social costs

As the BEIS Review Terms of Reference state, integrated offshore connections are not just about the economic cost, they are about finding "*the appropriate balance between environmental, social and economic costs*".

From much of the literature available it seems that the assumed economic 'trade-off' in developing integrated grid connections is marketing speak. As National Grid states

in their latest 2020 report, [Unlocking Offshore Wind, Why a New Generation of Interconnector Holds the Key](#). "**Combined assets make economic and environmental sense. They have the power to connect offshore wind more quickly and cheaply, and they place a lower burden on communities**". The report goes on to say, "**to meet the Government's Net Zero target by 2050, we need to maximise connections.**" Therefore, the arguments used by SPR and others that integrated projects are not economically viable should be viewed with caution.

What value do we place on our countryside? How do we value a tree? How do we value a turtle dove?

What is certain is the very real environmental and social costs associated with massive onshore substations and their cable corridors. The SPR onshore connections and cable trenching will threaten environmentally sensitive areas including; the Suffolk Coastal Path, the Suffolk Sandlings, officially designated Areas of Outstanding National Beauty, the destruction of mature woodland and swathes of Grade 2 and Grade 3 agricultural land. This is not even a brownfield site but rather will lead to the loss of some of the UK's most precious low heathland and medieval landscapes and pathways.

Whilst we have to accept that cable landfall and a substation complex in some form are inevitable, a single run of cables coming ashore in a brown field site would ultimately be a positive change. A win socially, economically and environmentally. In the case of EA1N and EA2, there is no reason not to find a better alternative offshore solution instead of the current plans for landfall at Thorpeness and a 9Km trench to Friston. In Appendix One (*see separate PDF*), we have detailed the full background as a submission to the Environmental Audit Committee.

6. Lack of Action on the part of National Grid, Ofgem and BEIS

There has been for over ten years no sense of urgency.

We welcome the BEIS Review but let it not just produce yet another report expounding the benefits of integrated offshore connections with no action for years to come.

Let's be clear, this is not a new idea. Elia and TenneT to name but two companies have been developing offshore transmission infrastructure solutions for some years.

The fate of this threatened area is dependent on the will of Government. It has the legislative power, the mandate for leadership and the majority to implement an overarching strategic vision for integrated offshore wind connections in the UK and put an end to all the barriers to change.

7. The Terms of the BEIS Review

The terms of the Review are themselves a barrier to change. They have been drafted to exclude projects where connection is to occur before 2026. This substantial exclusion seems to be explicitly designed to enable existing projects to be waived

through irrespective of the damage that they might cause to local onshore environments and communities.

In the case of East Anglia One North and East Anglia Two, despite reading the Terms of Reference and writing to The Rt Hon. Dr Kwasi Kwarteng, we are unclear as to the impact the Review will have on these DCO applications. The evident intention behind the applications is that, once consents are obtained, the site will also be used for a series of further substations and infrastructure, much of which is to be constructed by the National Grid group. A letter from The Rt Hon. Dr Kwasi Kwarteng suggests that projects that are “*nearing the end of the consenting process*” are excluded. Can we therefore take it that the present DCO applications for Friston, for which the examination process has yet to start, and which has been delayed by the Covid crisis, is not being treated as nearing the end of a consenting process? In other words, it falls within the scope of this Review.

The cost of changing the approach for these two projects is tiny in comparison with the cost of losing precious countryside, crushing tourism, mental health issues caused by this callous and careless decision and all the other ripple effects resulting from this ill-conceived plan.

Conclusion: The ‘bigger picture’ – the opportunity to lead the way

The UK is proud to be a world leader in wind energy. The Prime Minister has recently proclaimed this status and compared the wind energy industry for the UK as was the oil industry for Saudi Arabia. We may not choose the same comparison for reasons of ethics and human rights, but we cannot pretend to be a respected leader when leadership is only earned if there has been a demonstrable sense of care and responsibility for people and the ecosystem. The end does not justify these means.

Alternative offshore solutions are available, most recently, National Grid Ventures report, Unlocking Offshore Wind, (LINK) proposes a Multi-Purpose Interconnector (MPI) solution to the current requirements of energy developers seeking individual connection points to the National Grid network. In this way, a multiple connection point for offshore wind farms and European interconnectors, with a single run of cables to shore, would reduce the requirement for each and every new offshore development seeking an onshore connection. It is not beyond the bounds of feasibility that these MPI can be interconnected to form an East Coast Offshore Ring Main (ORM). The problem with this option is that it could take time to restructure to enable developers to pool energy. The investment costs would need to be covered by levies placed on developers and subsidies from Government. This is all possible, but given that it takes five years to build one tiny connection from Fraserburgh to Orkney for 200 MW, imagine how long this national restructuring process will take. Ten years, if we are lucky....

The good news is that other mid-term options exist.

In 2018 Belgium started building a Modular Offshore Grid (MOG), a switching station that will take four wind farms' power and transpose it via one cable source to a

substation in the industrial port of Zeebrugge. This MOG will go live at the end of this year. Elia is pioneering this offshore solution and the costs are reasonable.

The drivers for change for this MOG solution included:

- Minimum number of shore landings
- Long term view for smooth integration with future grid extensions (eg Extension to future DC network)
- Non- discriminatory solution for existing and future offshore developers
- Optimised positioning of platforms
- Maximum use of existing infrastructure, avoidance of stranded assets
- Optimisation of operation and maintenance costs
- Optimised reliability by avoidance of common mode failures
- Possible reallocation of existing infrastructure for further optimisation

We believe that EA1N and EA2 could be the pilot test for this new advanced system. Our understanding is that the Suffolk MOG would in fact need to be a series of MOGs because the route is circular and not a straight line. The Irish have already been using a spiral series of MOGs. The difficulty is as ever, the question of who picks up the cost for the connections? The legislation makes it complicated because the developer is obliged to sell their substation after 18 months. The Government is not allowed to pick up the cost. However, these barriers can be removed if the will of Government is to make this step change happen.

We believe that a series of MOGs could be implemented in less than five years with the help of Elia or another. According to Elia, the costs are reasonable. We can present further findings and a cost plan if invited to make a presentation to the Committee.