Offshore Wind Farms

EAST ANGLIA ONE NORTH

PINS Ref: EN010077

and

EAST ANGLIA TWO

PINS Ref: EN010078

As requested by ExA
Further evidence of
'Cumulative Impact'
Deadline 5 – 3 February 2021

by

SEAS (Suffolk Energy Action Solutions)

Unique Ref. No. EA1(N): 2002 4494

Unique Ref. No. EA2: 2002 4496

info@suffolkenergyactionsolutions.co.uk

https://www.suffolkenergyactionsolutions.co.uk/

As requested by ExA
Further evidence of
'Cumulative Impact'
Deadline 5 – 3 February 2021

SEAS would like to respond at Deadline 5, to the Examining Authorities repeated requests for additional evidence regarding the multiple connections to the proposed National Grid substation at Friston. The following paragraphs taken from the 'National Infrastructure Planning' website confirm that this information is in the public domain and is further proof that this substation will be used as a Mega Hub for connecting future projects, therefore, should be taken in to account when assessing the cumulative impact.

1. <u>NAUTILUS INTERCONNECTOR meeting on 21 October 2020</u>

https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN020023/EN020023-Advice-00001-1-EN020023-Advice-00001-Project%20Update-meeting%20note.pdf

"The Applicant advised it has a 1.5-Gigawatt connection agreement to connect to an as yet unconsented and unbuilt substation in proximity to the Sizewell 400Kv network. A new NGET substation in this area is currently being promoted through Scottish Power Renewables (SPR) East Anglia 1 North (EA1N) and East Anglia 2 (EA2) DCOs. The Applicant stated that in the absence of a determination on the SPR applications, it is exploring options and locations to connect to the network in line with their connection agreement. Nautilus has received Project of Common Interest (PCI) status and is being promoted with Belgian partners Elia. Given the PCI status, the TEN-E Regulation applies, and the Applicant is looking to ensure they are mapped and programmed accordingly, with due regard to the schedule of permits and consultation requirements in affected Member States and the Applicant advised that Brexit doesn't affect this)."

2, FIVE ESTUARIES OFFSHORE WINDFARM (Ex Galloper extension) - Nov 2019

https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010115/EN010115-Advice-00001-1-191128_Galloper%20Extension.%20Meeting%20note.pdf

Project site selection

The Applicant advised that they are currently in the process of working with National Grid to determine where the project will connect to the National Grid, and are aware of many of the constraints within the wider area to try and refine the approach, and to avoid particularly sensitive areas. The Applicant will also consider collaboration with the Greater Gabbard Extension Project on the connection approach while also ensuring they meet the requirements of The Crown Estate Cable Route Protocol. As there are several proposed developments in the area the Applicant is looking into alternatives to find a realistic proposed onshore cable route.

The Inspectorate advised the Applicant to consider future resource planning and the proposed timelines for other onshore projects, as in Q1 2020 further SoS' decisions on offshore wind farm applications are expected.

3.NORTH FALLS (ex Greater Gabbard extension) Nov 2020 meeting with PINS

https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010119/EN010119-Advice-00002-1-201106%20North%20Falls%20Inception%20Meeting%20Note_FINAL.pdf

NFOWF aim to sign a connection agreement with National Grid in 2021. The final stages of the feasibility consenting activity is anticipated to commence in January 2021.

Future key milestones include:

- Mid Q1 2021 - A Scoping request to PINS and consultation with the relevant local authorities on the Statement of Community Consultation (SoCC).
- Consultations in Summer 2021, Summer 2022 and Autumn/Winter 2022.
- Spring 2023 – EIA/HRA completed and the start of discussions with stakeholders on Statements of Common Ground (SoCG).

• Summer 2023 – application for a Development Consent Order submitted to the Inspectorate.

REP1-328 – SEAS Response to:

Question 1.14.5 – POTENTIAL USE OF NG SUBSTATION

Relevant projects and effects for cumulative impact assessment purposes: grid connections at Friston (OFHs 1 – 3, 7 – 9 October 2020) Parties at OFHs 1 – 3 raised a range of grid connection proposals potentially making use of the National Grid substation proposed to be constructed at Friston…. please set out a full list and identify the public information source(s) from which you have made your assessment. 1.14.6. All Interested Parties 1 Relevant projects and effects for cumulative impact

Summary

Future planned energy projects connecting to the National Grid in the Sizewell/Friston area of Suffolk

Eight Offshore Wind Energy Projects are widely believed to be planned to connect to the National Grid at Friston. (This does not include future windfarm projects as a result of the seabed leases awarded by the Crown Estate in relation to the Round 4 process). Cumulative impact means eight substations and interconnectors constructed sequentially or consecutively. Plus, the addition of a nuclear power station, one of the largest in the world. This will be the largest complex of energy infrastructure in the U.K. situated in one of the most fragile ecosystems in the U.K. These are judged to be ill-conceived plans where the process of choosing the site for the mega infrastructure hub is shown to be flawed. There are a number of better alternative brownfield sites for this designated vast complex.

1. East Anglia One North Offshore Windfarm - ScottishPower Renewables - Projected to be completed in 2028

An offshore wind farm which could consist of up to 67 turbines, generators and associated infrastructure, with an installed capacity of up to 800MW, located 36km from Lowestoft and 42km from Southwold. From landfall the cables will be routed underground to an onshore substation at **Friston**, which will in turn connect into the national electricity grid via a National Grid substation and cable sealing end compounds, the latter to be owned and operated by National Grid. [1] [2]

[1] https://infrastructure.planninginspectorate.gov.uk/projects/eastern/east-anglia-one-north-offshore-windfarm/

[2] https://www.scottishpowerrenewables.com/pages/east_anglia_one_north.aspx 3

2. East Anglia Two Offshore Windfarm - ScottishPower Renewables - Projected to be completed in 2028

An offshore wind farm which could consist of up to 75 turbines, generators and associated infrastructure, with an installed capacity of up to 900MW, located 37km from Lowestoft and 32km from Southwold. From landfall, the cables will be routed underground to an onshore substation at **Friston** which will in turn connect into the national electricity grid via a National Grid substation and cable sealing end compounds, the latter to be owned and operated by National Grid [3] [4]

3. Nautilus - National Grid Ventures - Construction 2025-2028

The Nautilus Interconnector is a proposed second Interconnector between East Suffolk and Belgium. It would create a new 1.4 gigawatts (GW) high voltage direct current (HVDC) electricity link. The project would involve the construction of a converter station in each country and the installation of offshore and onshore underground direct current cables (HVDC) between each converter station and underground alternating current cables (HVAC) between the converter station and substation in each country. In the UK, the offer from National Grid Electricity Transmission (NGET) allows for a connection at a new 400kV substation located close to the Sizewell 400kV network, provisionally referred to as 'Leiston 400kV'. The current NGET substation location being promoted is less than ten kilometres from the coast, i.e. Friston. [5] [6]

4. Eurolink - National Grid Ventures - Construction by 2030

EuroLink is a proposal to build a High Voltage Direct Current (HVDC) transmission cable between Suffolk and the Netherlands. The capacity of the link will be 1400MW. The proposals are to follow the same path as Nautilus (see above), i.e. **Friston** [7] [8] [9]

[3] https://infrastructure.planninginspectorate.gov.uk/projects/eastern/east-anglia-two-offshore-windfarm/

[4] https://www.scottishpowerrenewables.com/pages/east_anglia_two.aspx

[5] https://www.nationalgrid.com/group/about-us/what-we-do/national-grid-ventures/interconnectors-connecting-cleaner-future/nautilus

[6] http://sases.org.uk/wp-content/uploads/2018/08/National-Grid-Briefing-Note-Interconenctors-Sizewell.pdf

[7] https://www.nationalgrid.com/our-businesses/national-grid-ventures/interconnectors-connecting-cleaner-future

[8] https://www.peacockandsmith.co.uk/project/nautilus-eurolink-interconnector-projects/

[9] http://sases.org.uk/wp-content/uploads/2018/08/National-Grid-Briefing-Note-Interconenctors-Sizewell.pdf

5. Greater Gabbard Windfarm Extension (North Falls Offshore Wind Farm) - SSE Renewables and RWE Renewables - Construction 2025 - 2030

The North Falls Offshore Wind Farm will comprise a number of wind turbines on fixed foundations, plus dedicated offshore and onshore electrical infrastructure. The newly-signed lease agreement is for an additional capacity of 504MW, the same as the existing Greater Gabbard Offshore Wind Farm. "it will comprise wind turbines and their associated foundations, array cables which will connect the turbines to an offshore substation, export cables which will transmit the power from the offshore substation to shore, onshore cables and an onshore substation. National Grid has not completed its technical and environmental studies so no conclusion has been made about the location of the onshore grid connection at this stage. National Grid has not completed its technical and environmental studies so no conclusion has been made about the location of the onshore grid connection at this stage". It is widely believed that National Grid will seek to use the **Friston site**. [10]

6. Galloper Windfarm Extension (Five Estuaries Offshore Wind Farm) - RWE Renewables - Construction by 2030

Five Estuaries is an offshore wind farm to generate in excess of 300MW. The project consists of (but is not limited to): an offshore wind farm, including wind turbine generators and associated foundations and array cables; transmission infrastructure, including offshore substations and associated foundations, offshore and onshore export cables (underground), including associated transition bays and jointing bays, an onshore substation, and connection infrastructure into the National Grid. It is widely believed that National Grid will seek to use the **Friston site.** [11]

7. SCD1 - National Grid ESO - Construction by 2028

SCD1 consists of constructing a 2GW offshore HVDC link and associated substation works between Suffolk and Kent. This project appears to have been sanctioned without it going through the DCO process. "Preliminary work to identify the optimal connection substations at both ends is ongoing". It is widely believed that National Grid ESO will seek to use the Friston site. [12] [13] [14]

[10] https://www.northfallsoffshore.com

[11] https://fiveestuaries.co.uk/about/

[12] https://www.nationalgrid.com/uk/electricity-transmission/document/134036/download

[13] https://www.nationalgrideso.com/document/162356/download

[14] https://www.eadt.co.uk/news/national-grid-proposed-1bn-suffolk-to-kent-transmission-route-1-6526632

8. SCD2 - National Grid ESO - Construction by 2029

SCD2 consists of a second 2GW offshore HVDC link with associated substation works connecting Suffolk and Kent. This project is currently on 'hold' which means that it is considered optimal but delivery of this option should be delayed by at least one year. Again, it is widely believed that once sanctioned, National Grid ESO will seek to use the **Friston site**. [15] [16] [17]

In addition, there is Sizewell C Nuclear Power Station - EDF - Construction 2022 - 2034

A New Nuclear Power Station on a 33 ha. site near Sizewell. Two EPR reactors will generate 3.34 GW of electricity with 4 on-site pylons connecting cables to a National Grid Substation. [18] [19]

[15] https://www.nationalgrid.com/uk/electricity-transmission/document/134036/download

[16] https://www.nationalgrideso.com/document/162356/download

[17] https://www.eadt.co.uk/news/national-grid-proposed-1bn-suffolk-to-kent-transmission -route-1-6526632

[18] https://infrastructure.planninginspectorate.gov.uk/projects/eastern/the-sizewell-c-project/

[19] https://www.edfenergy.com/energy/nuclear-new-build-projects/sizewell-c

END