

From: [REDACTED]
To: [East Anglia ONE North](#)
Subject: National Grid Electricity Transmission Plc - Submission at Deadline 3 [BCLP-LEGAL.2026502.000310]
Date: 15 December 2020 19:25:39
Attachments: [201214 NGET Note on Substation Component Parts.docx](#)
[NGET submission 15.12.20 \(208835791v1 Legal\).PDF](#)

Dear Sirs,

Please see attached NGET's submission in response to the questions raised by ExA in their Action points to the CA and ISH hearings and an appendix note.

Kind regards

Abigail



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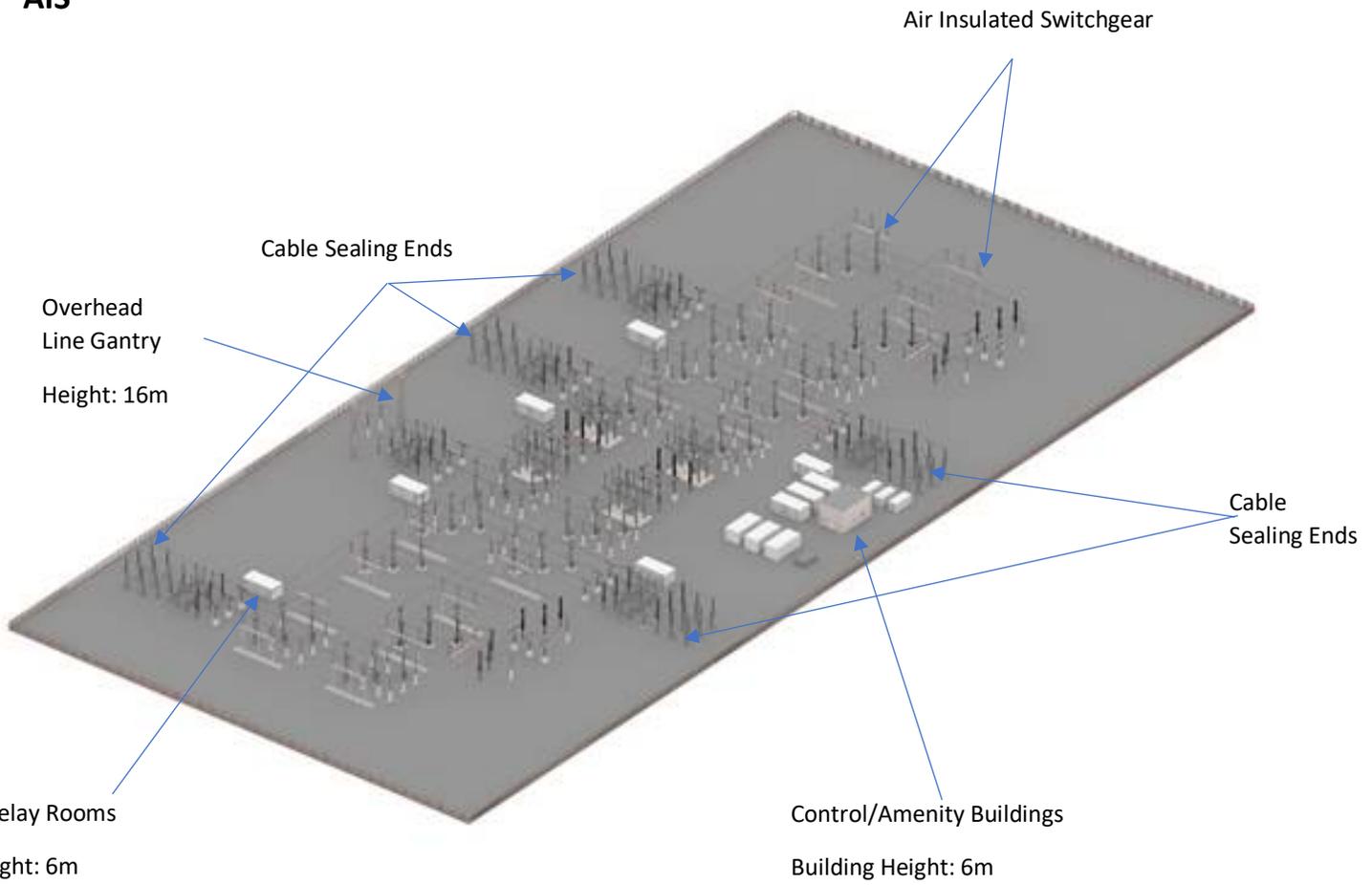
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The National Grid substation will either be an 'air insulated substation' (AIS) or a 'gas insulated substation' (GIS) depending on the switchgear technology employed.

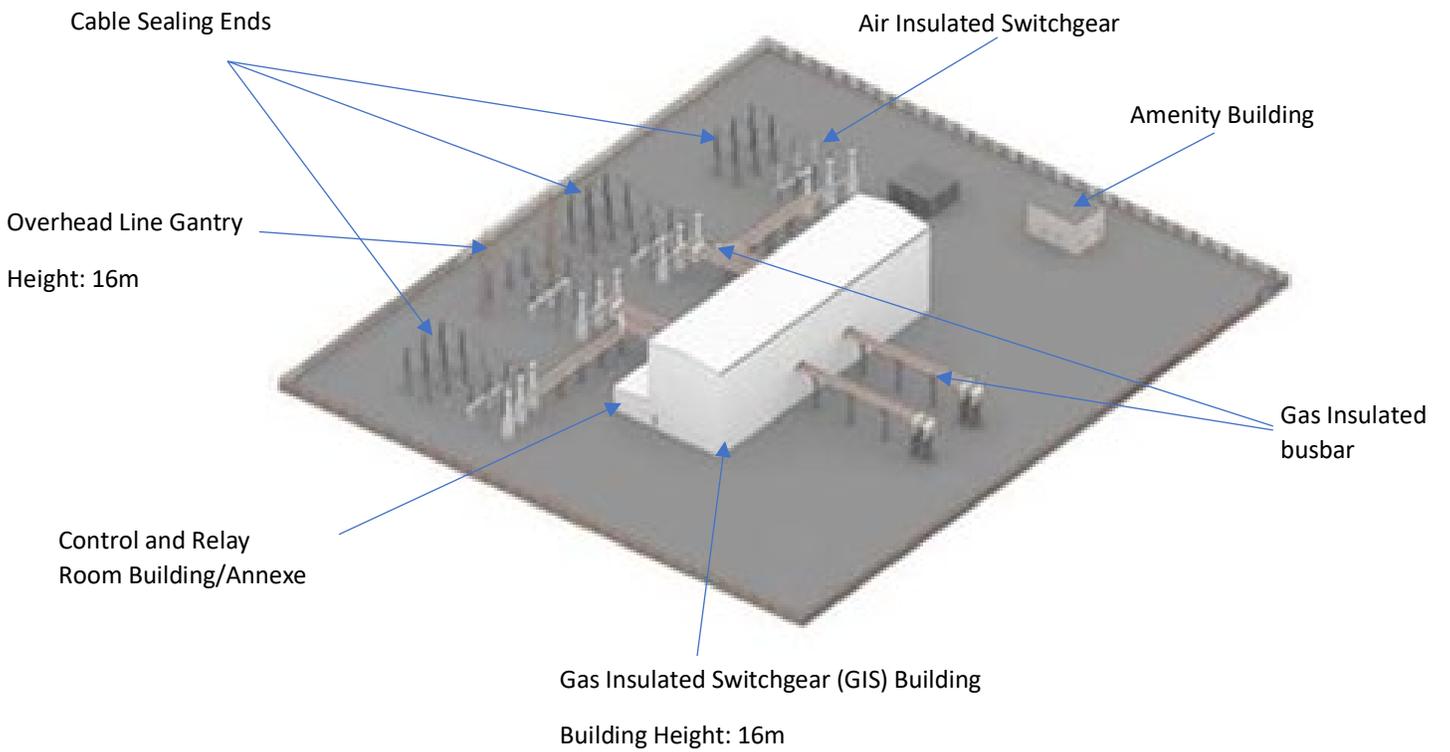
Irrespective of whether AIS or GIS technology is adopted, the National Grid substation, subject to final design, would be expected include the following key equipment (please also see the annotated plans overleaf). The final equipment to be utilised will be determined during the detailed design of the substation:

- Switchgear (air insulated or gas insulated): which includes switches, fuses, circuit breakers, relays, current transformer, and other equipment (some of which is described below). The switchgear switches, controls and protects the electrical circuits and equipment within the National Grid substation;
- Circuit breakers: which allow high speed isolation of the National Grid substation from the EA1N and EA2 substations and from the National Grid overhead lines;
- Disconnectors: which allow a physical break in the electrical circuits to be introduced which isolates the substation during periods of maintenance;
- Busbars: which carry electricity within the National Grid substation to various equipment;
- Current and voltage transformers: which convert electrical current and voltage to levels which can be safely measured by the National Grid substation's control and protection equipment;
- Surge arresters: which protect key equipment by providing a path to earth when triggered by an abnormal voltage condition such as a lightning strike;
- Earth switches: which allow safe maintenance of the National Grid substation equipment;
- Emergency generator: which provides standby low voltage electricity supply to the National Grid substation in the event of a failure of the local electricity supply;
- Earthing system: which provides a grounding mat below the earth surface at the National Grid substation to which equipment is connected to, protecting it from surges and lightning strikes by safely transferring current to ground;
- Ancillary buildings: which may include a small workshop/store, welfare, control building and incoming power and metering room.
- Up to four gantries: a gantry is a structure which supports electrical conductors as they transition from an overhead line pylon to the substation allowing them to connect to the busbars and other equipment within the substation.
- Cable terminations/sealing ends: used where underground cable joins onto busbars allowing connection to equipment within a substation or overhead line.
- Fence: electrified palisade fencing would be installed along the boundary to maintain security of the substation.

AIS



GIS



East Anglia ONE North Offshore Windfarm Development Consent Order and

East Anglia TWO Offshore Windfarm Development Consent Order

National Grid Electricity Transmission PLC (NGET) response to ExA's Actions from the Compulsory Acquisition and Issue Specific Hearing 2

15th December 2020



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Compulsory Acquisition Hearing – ExA’s Agenda Questions

Qu. No.	Agenda Item	Question	Response
1.	-	<p>NGET to review the online recording and to respond in writing to questions <u>raised of or relating to them</u> in light of discussions that occurred. NGET feel that the key issue following review of the online recording was the “Extent to which the development consent for NGET elements (and consequentially the land take) are required only to facilitate the connection of EA1N and EA2 or whether consent is also sought for works to facilitate future connections”.</p>	<p>The short answer to this question is that the development consent order application only seeks consent for those works necessary to provide a connection for EA1N and EA2 to the National Electricity Transmission System (NETS). The land take that NGET will require from the Promoter will only facilitate the connection of EA1N and EA2. NGET will not require the Promoter to provide to NGET any land or rights for any future connections. In order to seek to provide some more detail around this issue NGET have also responded in a longer response in the next three rows below, responding to the Agenda items for the CA Hearing.</p>
1.		<p>Agenda item 4. Bullet 4 - The National Grid connection substation, including the need for land and rights in respect of both this and the other East Anglia application together.</p>	<p>The maximum footprint of the National Grid substation utilising AIS technology when operational is 44,950m² and would be up to 145m (wide) x 310m (long). The maximum footprint of the National Grid substation utilising GIS technology is 16,800m² and would be up to 140m (wide) x 120m (long). The size of the National Grid substation is dictated by electrical safety clearances and the switchgear technology used.</p> <p>The maximum height of permanent outdoor equipment within the National Grid</p>

Qu. No.	Agenda Item	Question	Response
			<p>substation is up to 16m above finished ground level for both AIS and GIS technologies. The maximum height of buildings within the National Grid substation is 6m (for AIS technology) or 16m (for GIS technology).</p> <p>Detailed design work has not been carried out at this stage to inform the specific layout within the National Grid substation and as such the dimensions provided are based on maximum (reasonable worst case) anticipated requirements. Detailed design would be carried out by NGET's contractors, following the award of a contract and prior to work on site commencing. Details will be submitted to the Local Planning Authority in accordance with the relevant requirements of the DCO. In any event, based on the conceptual design undertaken and NGET's experience of previous projects, NGET consider it unlikely that the detailed design will significantly change the required sub-station footprint and therefore the land take required.</p> <p>Cable sealing end compounds are required to facilitate connection of the National Grid substation to the existing overhead line circuits and may be constructed prior to and/or subsequent to, the overhead line diversion works. Cable sealing end compounds typically comprise equipment including gantries, busbars, connectors post insulators, surge arresters and earth switches.</p> <p>Up to three cable sealing end compounds are required to connect the National Grid substation to each of the overhead line circuits, one of which one will include</p>

Qu. No.	Agenda Item	Question	Response
			<p>a circuit breaker, disconnectors and current/voltage transformers for protection purposes, and two sets of connections (downleads) from the overhead line pylon.</p> <p>The final micro-siting of the cable sealing end compounds will be identified during detailed design and will be influenced by the overhead line realignment final design and any constraints, including field boundaries.</p> <p>NGET will require the freehold transfer of the land required for the sub-station and cable sealing end compounds, the access rights (for construction and permanent operation) and the necessary land and/or rights for the overhead line works and access thereto alongside temporary construction rights. Any land and rights for any future substation extension would be sought in conjunction with any future consent application at the relevant time and are not sought by NGET from the Promoter.</p>
1.		<p>Agenda item 4. Bullet 4 - The National Grid connection substation, including the need for the land and rights in circumstances where only one project is consented.</p>	<p>Irrespective of whether AIS or GIS technology is adopted, only the customer connection bay (which is approximately 1,100 sqm for AIS) for EA2 will not be required if only EA1N goes ahead. For GIS, the connection bays are included within the building footprint, however, in both cases the size of the substation envelope will remain the same as will the NGET infrastructure because both the existing overhead lines (comprising four circuits in total) will still need to be teed into the new proposed sub-station which, due to its component parts, will remain</p>

Qu. No.	Agenda Item	Question	Response
			<p>the same size whether either or both projects are consented. The separate connection bays which relate to either EA1N or EA2 only are very small elements of the overall substation layout and therefore do not reduce the extent of the footprint required.</p> <p>A separate note on the NGET substation component parts is appended to this response, however, design optimisation and the final equipment to be utilised will be determined during the detailed design of the substation.</p> <p>The above response is the same if only EA2 goes ahead.</p> <p>Accordingly, the land and rights sought remain the same.</p>
1.		<p>Agenda item 4. Bullet 4 - The National Grid Connection substation, including the need for land and rights in respect of other projects with agreements to connect at Friston.</p>	<p>The NGET Infrastructure is required to connect EA1N and EA2 only. Any additional connections to the substation in the future would require an extension that would need to be consented separately.</p> <p>NGET will require the freehold transfer of the land required for the sub-station and cable sealing end compounds, the access rights (for construction and permanent operation) and the necessary land and/or rights for the overhead line works and access thereto alongside temporary construction rights. Any land and rights for any future substation extension would be sought in conjunction with any future consent application at the relevant time and are not sought by NGET from the Promoter.</p>

Qu. No.	Agenda Item	Question	Response
2	Item 3	<p>(i) Please respond in writing to points raised under item 3 in relation to linked NSIP's and the justification for the applicants to be applying for the overhead line NSIP's.</p>	<p>(i) Paragraph 4.9.2 of NPS EN-1 confirms that the Planning Act 2008 aims to create a holistic planning regime so that the cumulative effect of different elements of the same project can be considered together and, accordingly, the Government envisages that wherever possible, applications for new generating stations and related infrastructure should be contained in a single application or in separate applications submitted in tandem which have been prepared in an integrated way. In this case the Promoter was keen to take the approach of a single application in accordance with national policy.</p> <p>The applications therefore adopt an approach advocated by national policy and, indeed, such an approach is not unusual in NGET's experience, with many projects both pre and post the 2008 Act seeking to consent NGET infrastructure, be that new or extended substations or overhead line (OHL) modifications associated with grid connections.</p> <p>Post-2008 Act the following projects are examples of this approach:</p> <ul style="list-style-type: none"> • Sizewell C DCO Application – includes a new NGET substation and realignment of the existing OHL into the site incorporating a new Pylon. • Aquind Interconnector DCO Application – includes an extension to NGET Lovedean Substation. • Neuconnect Interconnector Planning Application – includes a new NGET

Qu. No.	Agenda Item	Question	Response
			<p>substation and sealing end compound (SEC).</p> <ul style="list-style-type: none"> • Millbrook Power DCO Application – includes a new NGET substation and modifications to the existing OHL. • Vanguard DCO Application – includes an extension to NGET’s Necton Substation and modifications to the existing OHL. • Boreas DCO Application – includes an extension to NGET’s Necton Substation and modifications to the existing OHL. • Lower Thames Crossing DCO Application – includes the realignment of five separate sections of OHL, one of which is an NSIP due to being over 2km in length, and the realignment of two underground gas feeder mains, both of which are considered to be NSIPs due to the potential significance of environmental effects.
2	Item 3	(ii) Please address possible circumstances in which additional connection proposals (over and above the currently proposed developments) may become additional and/or dominant users of the transmission system connection;	(ii) Any future third parties connecting at Friston would require extensions to the NGET substation (outside of Work No. 41) to provide additional connection bays. The extensions would also likely require the following equipment: cable terminations/sealing ends, current and voltage transformers, surge arrestors, busbars and disconnectors which would be the subject of future applications for consent. In relation to Work No. 41, EA1N and EA2 require two bays to provide a connection and that is all that is included in the promoter’s DCO applications.

Qu. No.	Agenda Item	Question	Response
		(iii) and that further land may be required for this to occur.	<p>(iii) As above, any additional connections to the substation would require an extension and would need to be consented separately. The location of extension areas would be considered by the relevant Promoter at the appropriate time in liaison with NGET and would be considered in their site selection process before being consented through a Development Consent Order or equivalent process.</p> <p>NGET would not seek the transfer from the Promoter of any areas that could be required for future extensions on a permanent basis.</p>

Issue Specific Hearing 2

No.	Agenda Item	Question	Response
3	Overarching	<p>Information about the possible transmission systems connection at Friston and the absence of NGET/NG ESO from the hearing. ExA want a full understanding of the Site Selection process for Friston and the extent to which National Grid group requirements had been considered by the Applicants.</p> <p>Also respond in writing to questions raised of or in relation to them in light of the discussions that occurred.</p>	<p>As set out in NGET’s response to Item 3(i) above, the approach of promoters including NGET infrastructure in their applications is not unusual. In this case it was the Promotor’s preference to seek to consent all the NGET infrastructure required to connect its projects in accordance with NPS EN-1. NGET supported this process by initially providing design parameters for the infrastructure required to connect the projects to inform the site selection process. Further conceptual design work was then undertaken to inform the Promoter’s environmental assessment work.</p> <p>NGET’s response to the issues raised in discussions at the hearings are set out in the next three rows in respect of agenda items 2(d), 3(a) and 3(b).</p>
	2(d)	<p>Under Agenda Item 2(d) the examining authority asked for:</p> <p>(i) the clearest position of public knowledge (not commercially confidential information) around projects proposed to connect in the Leiston Area.</p>	<p>(i) This is a question more appropriately answered by NGESO and is also asked under question 9(ii) below.</p>

No.	Agenda Item	Question	Response
		<p>(ii) There was also discussion around whether a connection in the Leiston Area means Friston.</p> <p>(iii) Also, why Friston was chosen (including why a brownfield site was not selected).</p>	<p>(ii) This is addressed in response to question 8(ii) below.</p> <p>(iii) In relation to this point, the location of the connection offer is addressed via the CION process and site selection within the Leiston area was carried out by the Promoter.</p>
	3(a)	The choice to make a new onshore connection, as opposed to utilising/expanding existing connections at Bawdsey/Bramford [or Sizewell] or creating new connections elsewhere.	The CION process is the responsibility of NGESO. A similar question is asked under 8(i).
	3 (b)	The specific need for, and justification of, locations of landfall at Thorpeness and substations/transmission systems connections, including the proposed National Grid substation and connections to the grid at land north of Friston. To include details of the strategic decision-making process for the proposed locations and their generation	In relation to issues discussed in connection with this agenda item, we are not aware of any specific unanswered questions for NGET, although NGET are happy to answer any further questions that the ExA may have. NGESO can more appropriately address questions relating to connections offered in the Leiston area. The site selection process was carried out by the Promoter, within the parameters of the connection offer and the exact connection location, substation location and landfall location are decisions made by the Promoter as a result of their site selection processes. The Promoter is therefore in the best position to explain their site selection process.

No.	Agenda Item	Question	Response
		capacities – why were the sites chosen, and in what order?	
8		<p>(i) Explain why the proposed connection to transmission system at Friston was chosen and analysis of adverse effects that took place to inform the decision from the CION and related RAG (Red, Amber, Green) processes.</p> <p>(ii) Explain why, if there is a need for a strategic connection hub in the Leiston area accommodating multiple connections in addition to the connections for the proposed developments, entities in the National Grid Group of companies have not taken the lead in identifying its location and seeking a planning approval/development</p>	<p>(i) The CION process identified the Leiston area and the Promoter's site selection process identified the site at Friston, with NGET providing technical input as referred to in the response to question 3 (first row Issue Specific Hearing response above).</p> <p>(ii) NGET is not promoting a strategic connection hub in the Leiston Area. NGET is constrained by the statutory obligations and the regulatory framework that it works within, as created by existing legislation. NGESO in conjunction with NGET must respond to connection requests in accordance with the CION process, which is more appropriately explained by NGESO. The Leiston area was identified for the connection of the EA1N and EA2 offshore wind farms through the connection application and CION process that NGESO leads. In this instance the Promoter expressly wished to consent the National Grid substation as part of its DCO applications and embarked on that process before the NGV interconnector proposals came along. The EA1N and EA2</p>

No.	Agenda Item	Question	Response
		<p>consent in their own right.</p> <p>(iii) In the event that the decision to connect at Friston was made solely or principally by the Applicants,</p>	<p>projects only seek consent for the necessary apparatus to facilitate a connection at Friston. NGET is under statutory obligations to provide an efficient, co-ordinated and economic transmission system, as such, future connections at locations with existing infrastructure cannot be ruled out, although they would be subject to obtaining all necessary consents at the appropriate time.</p> <p>All connection offers made by NGESO are subject to consents being granted and therefore do not pre-judge the acceptability of the connection locations. Promoters must carry out their own site selection process and secondly they must obtain all necessary consents from a planning and environmental perspective, which provides the necessary safeguards to ensure this is considered in full in relation to any future proposal. There is no certainty of consent within the NGESO processes.</p> <p>Government and the Regulator expect the planning process to determine if a proposal is acceptable or not in planning and environmental terms. In this instance the Promoter has elected to lead the activity associated with that process.</p> <p>(iii) As stated above, the site selection process identifying Friston, was carried out by the Promoter with input from NGET. The Development Consent Order (DCO) is personal to the Promoter. The consent under it can only be utilised</p>

No.	Agenda Item	Question	Response
		<p>explain your view of the proposal. Does leadership site selection and initial development by the applicants raise any relevant implication or risks for your strategy and purpose in seeking to develop a transmission connection location for multiple uses at or around Leiston.</p>	<p>by NGET in accordance with the transfer of benefit from the Promoter to deliver the connection needed by the Promoter, in the Promoter's timescales and in accordance with the discharge of the Promoter's requirements. It is not a standalone planning consent that NGET can implement without the Promoter's consent or absent the Promoter's scheme. In agreeing that the Promoter's DCO included the NGET substation and connection works to the OHL, NGET accepted this position. The substation can therefore only be provided in conjunction with EA1N and EA2, if consented. The position in future in relation to subsequent connections depends on future promoters obtaining relevant consents that may be similarly constrained. This DCO does not therefore consent a strategic connection hub for NGET, it consents a connection to the NETS for EA1N and EA2, which is constrained by the transfer of benefit provisions and the Requirements in the DCO.</p>
9	2(a) to 2(e)	<p>(i) Explain the planning assumptions in relation to (a) a connection at Leiston; and (b) the development of a strategic connection hub in the Leiston area in the next 10 years.</p> <p>(ii) Outline potential projects requiring connection and their planning and</p>	<p>(i) (a) the question in relation to the planning assumptions included in the CION process are more appropriately answered by NGESO.</p> <p>(b) please refer to the answer above to 8(ii).</p> <p>(ii) this question is more appropriately answered by NGESO.</p>

No.	Agenda Item	Question	Response
		<p>legal status (including Nautilus, Eurolink, Five Estuaries, North falls and SCD1 and 2),</p> <p>(iii) Explain the information held on the NGV website appearing to commit to connecting several projects to a connection at Friston.</p> <p>(iv) Confirmation of location of the proposed Leiston Connection point. Is it one and the same as the Applicants proposed connection point at Friston? If more than one point of physical connection is envisaged then please make this clear.</p> <p>(v) Please identify where there is sufficient information to allow a cumulative impact assessment to be undertaken of adverse effects of projects likely to be planned to be</p>	<p>(iii) questions relating to the content of the NGV website are more appropriately answered by NGV.</p> <p>(iv) this question is more appropriately answered by NGESO.</p> <p>(v) The development of a connectee's proposals post CION/connection process isn't a matter for NGET or NGESO to comment on unless individual promoters have themselves put material into the public domain.</p>

No.	Agenda Item	Question	Response									
		<p>connected at Friston. When will this assessment be carried out?</p> <p>Reference to oral contributions by NGV on Agenda Item 2 will assist.</p>										
12		<p>Specification and capacity of the Existing Transmission system OHL's out of Sizewell. Please explain:</p> <p>(a) The current specification and capacities of existing overhead transmission lines (OHL's) at Sizewell,</p> <p>(b) How this compares with other typical OHL transmission system alignments,</p> <p>(c) Extent to which new generating capacity can be added to this OHL,</p>	<p>(a) The current existing OHLs are of L6 tower construction supporting 4 x 400m² ACSR conductor systems operating at 400kV. The current circuit ratings are tabulated below:</p> <table border="1" data-bbox="1236 751 2047 935"> <thead> <tr> <th></th> <th>Winter</th> <th>Summer</th> </tr> </thead> <tbody> <tr> <td>Pre fault (MVA)</td> <td>2335</td> <td>1863</td> </tr> <tr> <td>Post fault (MVA)</td> <td>2779</td> <td>2217</td> </tr> </tbody> </table> <p>(b) The existing OHLs consist of a typical tower type and conductor system used for operating at 400kV. However, it should be noted that whilst towers and conductors are typical, required circuit thermal ratings differ on OHL's depending on the required circuit ratings.</p> <p>(c) No reconductoring works of the existing OHL's would be required just to connect</p>		Winter	Summer	Pre fault (MVA)	2335	1863	Post fault (MVA)	2779	2217
	Winter	Summer										
Pre fault (MVA)	2335	1863										
Post fault (MVA)	2779	2217										

No.	Agenda Item	Question	Response
		<p>including from the Sizewell C generating station without requiring upgrade/replacement and/or additional conductors to be added to the OHL's and</p> <p>(d) The anticipated lifetime of these OHL's</p>	<p>EA1N and EA2. Any future connections required by other projects would need to be assessed and considered separately.</p> <p>(d) Towers are designed, fabricated and treated for a minimum design life of 80 years. The minimum design life for conductor systems is 60 years.</p>
16		<p>Reference was made in the hearings (by Counsel for SASES) to the duties on licensed bodies under s9 and sch 9 of the Electricity Act 1989 (as amended) please set out your response to these duties in terms of their applicability and (where applicable) your siting and design response to them when making siting and design decisions relating to onshore infrastructure. Specifically provide your response in relation to Schedule 1(1) and equivalent policies in NPS EN-5.</p>	<p>As a holder of a transmission licence NGET is required to comply with the general statutory duties in s9 of the Electricity Act 1989 to "<i>develop and maintain an efficient, co-ordinated and economical system of electricity transmission and to facilitate competition in the supply and generation of electricity</i>". The Promoter has addressed the regulation of the industry and the statutory duties in respect of transmission in their Regulatory Context Note (REP2-003). In light of the Promoter's grid connection application and subsequent CION process, NGET provided support and input to the CION process. When an offshore wind farm is proposed, the statutory duties to develop efficient, co-ordinated and economical proposals whilst also having regard to the environment apply and all three parties – NGESO, NGET and the Promoter, feed into the assessment that is led by NGESO. As outlined in answer to questions 2 Item</p>

No.	Agenda Item	Question	Response
			<p>3(i) and 8 (ii), the Promoter has elected to consent the NGET connection works along with their own connection infrastructure and this is not uncommon. NGET and the Promoter, however, have had continued ongoing engagement regarding the specification of the NGET works necessary to connect the Projects. In addition, the Promoter has reported back to NGET and explained their approach to matters such as strategic landscaping. Again, this type of arrangement is typical where a promoting party is taking overall responsibility for the consenting of such works.</p> <p>The obligations in Schedule 9 of the Electricity Act 1989 place environmental duties on licence holders when formulating relevant proposals (this includes proposals for the installation of an electric line and execution of other works in connection with the transmission of electricity). The environmental duties are to:</p> <p><i>(a) have regard to the desirability of preserving natural beauty, of conserving flora, fauna and geological or physiographical features of special interest and of protecting sites, buildings and objects of architectural, historic or archaeological interest; and</i></p> <p><i>(b) shall do what he reasonably can to mitigate any effect which the proposals would have on the natural beauty of the countryside or on any such flora, fauna, features, sites, buildings or objects.</i></p> <p>The duties in Schedule 9, Paragraph 1(1) of the Electricity Act 1989 therefore apply to a</p>

No.	Agenda Item	Question	Response
			<p>licence holder (NGET) in the transmission of electricity who is formulating relevant proposals.</p> <p>As the DCO works include the installation of an electric line and works in connection with transmission, NGET understand that the Promoter has on behalf of and in conjunction with input provided from NGET applied the principles of Schedule 9 throughout the formulation of the proposals. This is reflected in the application of the Horlock Rules and the testing of the National Grid substation through both RAG and further assessments. This work was supported by significant public consultation.</p> <p>The project has also been subject to full consideration in the Environmental Impact Assessment. This has had full regard to all of the matters set out in Schedule 9.</p>
22		<p>National Grid Sub-Station Installation Technology</p> <p>NGET are asked to explain:</p> <p>(a) The considerations that will be taken into account in determining the insulation technology to be adopted (AIS or GIS);</p> <p>(b) The implications of each technology for the provision of landscape and</p>	<p>(a) Justifications for the preference will take into account the following parameters:</p> <ul style="list-style-type: none"> i. Sustainability ii. Cost iii. Environmental/Consents iv. Engineering and Construction <p>NGET will also consider the requirements of the relevant NGET Policy Statements.</p> <p>Although both AIS and GIS are included in the application, NGET's preference is for AIS switchgear technology. As part of NGET's environmental ambitions, with particular</p>

No.	Agenda Item	Question	Response
		<p>landform mitigation and for visual amenity to all receptors;</p> <p>(c) When a decision will be made and, if outside the examination period why this is the case and how the uncertainty this creates can be managed; and</p> <p>(d) If the footprint of the NG substation is reduced because GIS is adopted, will this reduce the area of land required, if not, why not?</p> <p>(e) Confirm without qualification that the proposed NG Substation and all the land subject to CA proposals at Friston in the Applications before the ExA's will serve only EA1N and EA2.</p>	<p>focus on achieving net-zero carbon targets, NGET aspire to own an SF₆ free transmission network. This is driven by:</p> <ul style="list-style-type: none"> • NGET's commitment to Net Zero at 2050. • NGET's ambition to reduce SF6 emissions by 80% at 2030. • Existing and anticipated future legislation. <p>(b) Table 29.2 of Chapter 29 of the Environmental Statement sets out the Realistic Worst-Case Scenarios. In the section of the table considering impacts related to the National Grid Infrastructure, it was concluded that National Grid substation incorporating AIS represented the worst case. As explained in the notes section of the table, the National Grid GIS substation has a reduced footprint when compared to the AIS technology. The differences were further illustrated in the chapter in plates 29.2 and 29.3. In addition to the assessment visualisations (Figures 29.13 to 29.32), a further set of visualisations was also provided to illustrate the GIS National Grid substation (Figures 29.33 to 29.45).</p> <p>(c) A decision is likely to be made by the end 2021 following a design assessment by NGET's appointed ECI substation contractor.</p> <p>(d) The draft DCO for each project includes associated development including Work 41 is as follows:</p> <p style="text-align: right;"><i>Work No. 41 — a new national grid substation to the north west of</i></p>

No.	Agenda Item	Question	Response
			<p data-bbox="1294 360 2069 416"><i>Work No. 30 at Grove Wood, Friston and extension of permanent access comprised within Work No. 34.</i></p> <p data-bbox="1104 485 2145 900">With respect to the extent of the grid connection works sought within the draft DCO and the associated compulsory acquisition powers sought, the Works Plans show the limits of deviation for each work number (i.e. the area in which each work no. can be constructed) and Article 3(2) of the draft DCO states that "Each of the scheduled works must be constructed and maintained within the limits of deviation for that work". The size and scale of the works that can be built within the limits of deviation are then limited by the requirements of the draft DCO and by what has been assessed in the environmental statement. For example, Requirement 12 of the draft DCO limits the National Grid works as follows:</p> <p data-bbox="1151 932 2145 1050"><i>(6) No stage of the national grid substation comprised within Work No. 41 may commence until details of the layout, scale and external appearance of the national grid substation have been submitted to and approved by the relevant planning authority. Work No. 41 must be carried out in accordance with the approved details.</i></p> <p data-bbox="1173 1066 2092 1098"><i>(7) Buildings comprised within the national grid substation must not exceed—</i></p> <ul data-bbox="1196 1107 2145 1241" style="list-style-type: none"> <li data-bbox="1196 1107 2145 1171"><i>(a) where AIS substation arrangement is used, a height of 6 metres above finished ground level; and</i> <li data-bbox="1196 1181 2145 1241"><i>(b) where GIS substation arrangement is used, a height of 16 metres above finished ground level.</i> <p data-bbox="1151 1257 2145 1310"><i>(8) External electrical equipment comprised within the national grid substation must not exceed a height of 16 metres above finished ground level.</i></p>

No.	Agenda Item	Question	Response
			<p><i>(9) The fenced compound area (excluding its accesses) for the national grid substation must not exceed—</i></p> <p><i>(a) where AIS substation arrangement is used, 44,950 m2; and</i></p> <p><i>(b) where GIS substation arrangement is used, 16,800 m2.</i></p> <p><i>(13) The total footprint of the construction consolidation sites comprised within the following</i></p> <p>The footprint of the National Grid substation is therefore limited to 44,950 m2 (where AIS is used) and 16,800 m2 (where GIS is used) within the limits of deviation shown on the works plans for Work No. 41. Any freehold transferred to NGET would be restricted to the land actually required following confirmation of the technology to be used and detailed design. As such, if GIS technology is adopted the footprint and land take is reduced accordingly.</p> <p>(e) NGET requires the freehold compulsory acquisition of land of the footprint of the National Grid substation (the extent of which will be determined by the technology used/consented) and the sealing end compounds, access rights to the sub-station (which is shared with the promoter) and the sealing end compounds and overhead lines both on a temporary basis for construction and permanent operational access rights. NGET also require permanent rights relating to the overhead line works. As well as temporary access rights, temporary rights are required to facilitate the construction of</p>

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			the works including over the construction compound areas. NGET will not ask the Promoter to transfer to NGET any land or CA powers in relation to any future potential extension areas. The land and rights required by NGET from the Promoter will relate solely to the connection of the projects and will not include any additional land.