

Preliminary Information Memorandum

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April 2016



**Burbo Bank Extension**

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## 1. Investment Highlights

### 1.1 Attractive Wind Farm Development

The Burbo Bank Extension ("**BBW02**") Offshore Wind Farm will be situated in the Bay of Liverpool approximately 20 kilometres ("**km**") off the coast of Liverpool, and will be located entirely within UK territorial waters. National Grid Electricity Transmission PLC ("**NGET**") is the onshore transmission licensee, and the BBW02 "Transmission Assets" will connect to the Bodelwyddan, 400 kilo volt ("**kV**") substation, North Wales.

The BBW02 "Offshore Wind Farm" will be the first commercial UK wind farm to utilise 8 MW wind turbine generators ("**WTGs**") and will consist of 32 8MW WTGs with a Transmission Entry Capacity ("**TEC**")<sup>1</sup> of 254.2 MW, which will be connected to an offshore substation platform ("**OSS**") located within the boundaries of the BBW02 Offshore Wind Farm<sup>2</sup>.

The BBW02 Transmission Assets are currently under construction and due to be fully operational and commissioned by the end of Q3 2016. They will include an onshore substation, an OSS one subsea cable and one land cable, and an OFTO ("**Offshore Transmission Owner**") dedicated Supervisory Control and Data Acquisition ("**SCADA**") system.

The BBW02 Transmission Assets are expected to deliver an availability of 98%, taking into account both planned and unplanned maintenance.

### 1.2 Highly Experienced Project Developer

The participating company in the BBW02 Offshore Wind Farm is Burbo Extension Ltd (the "**Developer**"), which is indirectly owned 50% by DONG Energy A/S, 25% by KIRKBI A/S and 25% by PKA<sup>3</sup> A/S.

DONG Energy is a global market leader in the development, construction and operation of offshore wind farms. DONG Energy's construction experience currently extends to over 6 GW of capacity that is either operational (3,009 MW) or under construction (3,291 MW) more than 3x the level of its closest competitor. In the UK DONG Energy has a constructed capacity of 1.7 GW in operation and 2.7 GW under construction.

DONG Energy has established itself as a market leader in the UK and European offshore wind power sector, where the company has been engaged in developing, planning and constructing six of the largest offshore wind farms in operation worldwide, including major developments such as the Barrow, Gunfleet Sands, Walney I, Walney II, London Array, West of Duddon Sands, and most recently Westermost Rough offshore wind farms. DONG Energy has successfully divested 8 offshore transmission systems.

PKA is an administrative company that manages and develops labour market pensions on behalf of three independent pension funds with a total of around 275,000 members within the social welfare and health care sectors in Denmark. The members' pension schemes have been agreed on as part of a collective bargaining agreement between the organisations of employees and employers, thus ensuring a high degree of transparency for future payments to the PKA Funds. The total capital of the PKA Funds amounts to approximately DKK 235 billion (GBP 24 billion) which is primarily invested in bonds, shares, real assets and absolute return assets.

The PKA Funds have made several significant investments within the offshore wind industry due to the stable return profile offered by this asset class and a wish to contribute through climate-improving investments. In recent years, the "PKA Funds" have increased their activities in the field of direct infrastructure investments with commitments to Anholt

<sup>1</sup> Transmission Entry Capacity (TEC) is a CUSC term that defines a generator's maximum allowed export capacity onto the transmission system.

<sup>2</sup> The difference between installed and connected capacity is attributed to WTG transformer and array cable losses. NGET has agreed a figure of 250MW which can be exported at the onshore boundary point (Transmission interface point – TIP).

<sup>3</sup> Being the three funds: The State Registered Nurses' and Medical Secretaries' Fund, The Healthcare Professionals' Pension Fund and The Social Workers' Social Pedagogues' and Office Staff Pension Fund.

offshore wind farm in 2011, Butendiek offshore wind farm in 2012, the Gemini offshore wind farm in the Netherlands and most recently the Gode Wind 2 offshore wind farm in Germany.

KIRKBI A/S is the holding and investment company of the Kirk Kristiansen family. KIRKBI A/S owns the LEGO brand and the majority of the Kirk Kristiansen family's joint activities including the majority shareholding in the LEGO Group as well as other LEGO related shareholdings.

KIRKBI has a long-term investment profile and wants to act as a responsible investor with a high ethical standard. This is reflected in the way business is conducted and in the way the companies invested in are operated. On this basis, KIRKBI will act as a good member of society and support the LEGO brand and the long term value of the assets.

Renewables is a strategic investment area for KIRKBI as it supports the LEGO Group's environmental goals. This was also one of the primary reasons as to why KIRKBI in 2012 invested in the Borkum Riffgrund 1 offshore wind farm and entered into a long-term partnership with DONG Energy.

### 1.3 Mature and Attractive Regulatory Environment

The independent ownership and operation of offshore transmission in the UK enjoys strong political, regulatory and stakeholder support in the UK. The Department of Energy and Climate Change ("DECC") and Ofgem have been developing the regime for several years. Both have consulted widely and regularly on each stage of the development of the regime and have taken account of respondents' views at all stages of the process.

### 1.4 Financial Highlights

The BBW02 "Transmission Licence" that will be granted to the successful bidder for the BBW02 Transmission Assets will include the right to a 20-year revenue stream in return for purchasing the BBW02 Transmission Assets and operating them in accordance with the obligations of the BBW02 Transmission Licence.

The 20-year revenue stream bid of the successful bidder for the BBW02 Transmission Assets that will be incorporated into the BBW02 Transmission Licence will be fixed, subject to agreed adjustment mechanisms.

The revenue stream will be availability-based, with the opportunity to earn additional revenues for better than expected operational performance. The revenue stream will not be subject to periodic review, provided operational performance remains above the relevant minimum standard.

The revenue stream will also not be exposed to any revenue or performance shortfalls from the BBW02 Offshore Wind Farm itself. If the BBW02 Offshore Wind Farm ceases to operate, the NETSO's obligation to pay the revenue stream will continue.

## 2. Initial Transfer Value

This document is a summary of information provided by the Developer and outlines specifically the opportunity for investors to acquire the Transmission Assets and to become the licensed OFTO of the BBW02 wind farm.

It is currently estimated that a "Preferred Bidder" for BBW02 will be appointed in Q2 2017. This is following first generation from the BBW02 Offshore Wind Farm, scheduled for October 2016. Construction of the BBW02 Transmission Assets is due to be completed by the end of Q3 2016. Once completed, the BBW02 Transmission Assets will be commissioned and transferred to the OFTO identified as the successful Bidder through the tender process via a transfer agreement. Asset transfer is currently anticipated to be approximately six months after appointment of the Preferred Bidder.

The costs of developing and constructing the Transmission Assets, estimated on the basis of information provided to Ofgem to date by the Developer, are £230.2<sup>4</sup> million (the "Initial Transfer

<sup>4</sup> Confirmed Initial Transfer Value by Ofgem February 2016

**Value**"). For the purpose of the Enhanced Pre-Qualification (EPQ) stage of the tender process, bidders should assume this value.

Ofgem is in the process of reviewing this information and expects to provide an estimate of the economic and efficient costs incurred in connection with developing and constructing the Transmission Assets at the Invitation to Tender ("ITT") stage (the "**Indicative Transfer Value**").

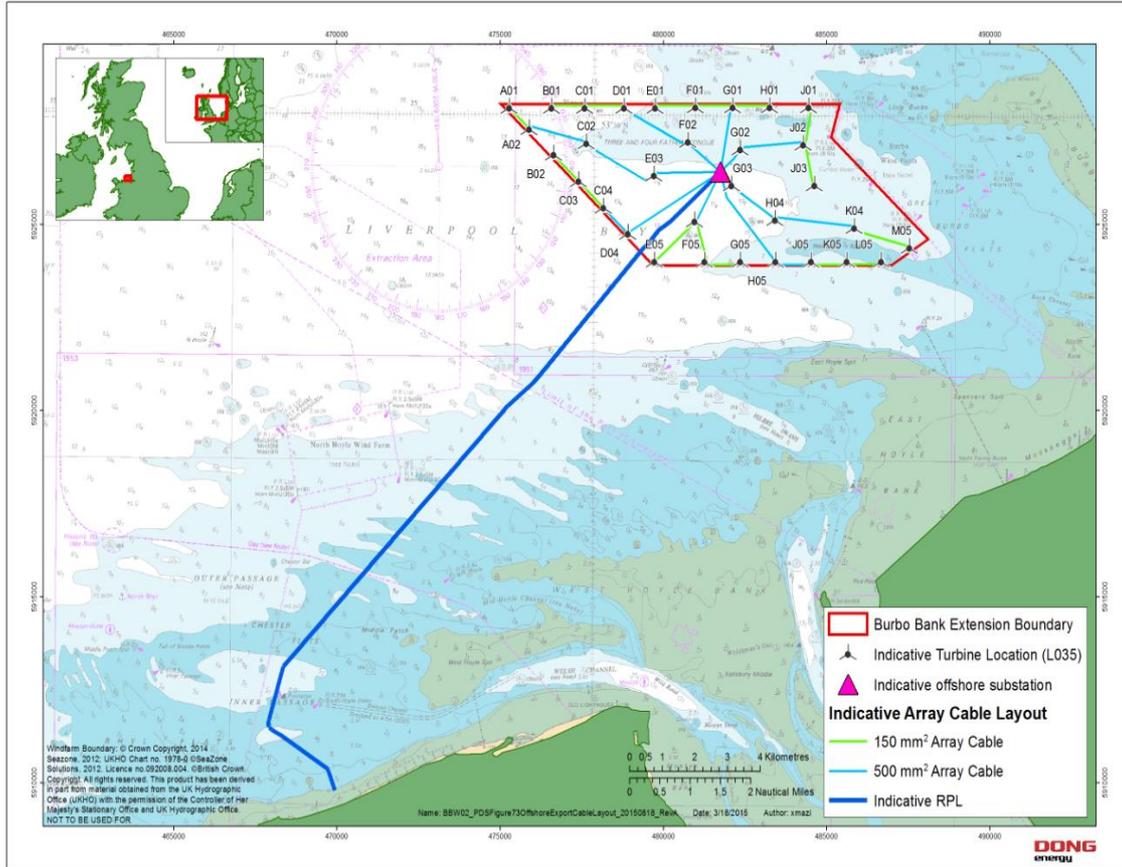
Ofgem will calculate the economic and efficient costs which have been, or ought to have been, incurred in connection with developing and constructing the Transmission Assets once the assets have been completed. This assessment will be used to determine the **Final Transfer Value** ("FTV").

3. The Investment Opportunity

3.1 Location of the Wind Farm Assets

The BBW02 Offshore Wind Farm will be situated in the Bay of Liverpool, approximately 20.0km from Liverpool, and will be located entirely within UK territorial waters. BBW02 is about 8km east of 576MW Gwynt Y Mor and 8km north east of North Hoyle wind farms.

Figure 1 - Location of BBW02 offshore wind farm and transmission assets



Source: DONG Energy 30<sup>th</sup> September 2015

Figure 2 BBW02 location in Liverpool Bay



Source: DONG Energy 30<sup>th</sup> September 2015

The onshore substation will be located 11km from shore at Burbo Bank Onshore Substation, Land South East of St Asaph Business Park, Glascoed Road, St Asaph and,

North Wales LL17 OLH adjacent to the existing NGET Bodelwyddan 400kV substation, which feeds directly into the existing 400kV GB national electricity transmission system.

The offshore export cable will be routed from the OSS to landfall near Rhyl beach on the North Wales coast. The offshore export Cable will be brought onshore within a pre-installed Horizontal Directional Drill ("HDD") pipe beneath a sea defense wall, golf course, public road and railway line to a pre formed transition joint bay south of the railway line east of Rhyl. The Onshore export cable will be installed between the transition joint bay and the new substation in St Asaph in ducts mostly by conventional excavation/trenching means along the route. Horizontal direct drilling will be utilized to install the cable ducts beneath physical obstacles including rivers, roads, utilities and woodlands.

A 400kV "Cable Grid Connection" will also be installed between the BBW02 substation at St Asaph and the existing National Grid Bodelwyddan 400kV substation.

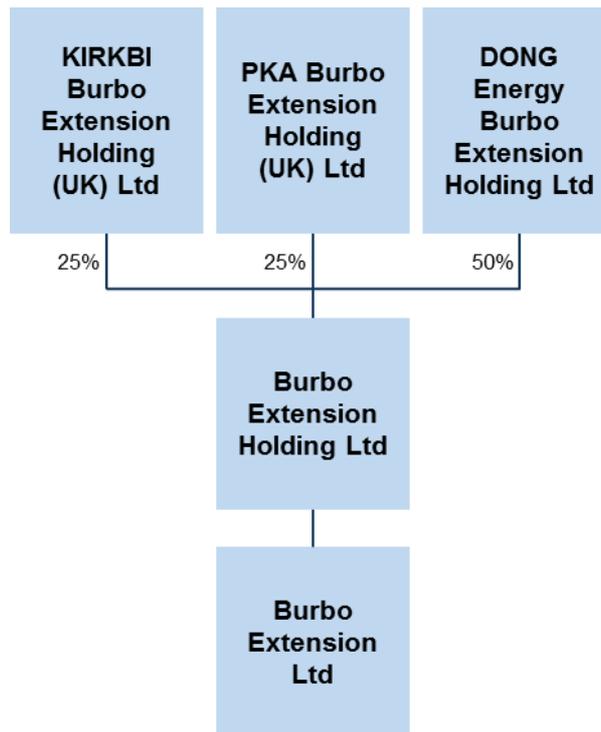
Location, onshore cable route and onshore substation maps can be found in Appendix 2, 3 & 4.

### 3.2 Ownership and Sponsors

The Burbo Bank Extension (“**BBW02**”) Offshore Wind Farm is indirectly owned by DONG Energy A/S, PKA and KIRKBI A/S. Burbo Extension UK Ltd holds a Development Consent Order and deemed marine licence made pursuant to an application under the Planning Act 2008. A Welsh Marine Licence is obtained under the Marine and Coastal Access Act 2009. The compulsory purchase order CPO 2013 is made pursuant to the Electricity Act 1989 and the Acquisition of Land Act 1981.

An overview of the current ownership structure is illustrated in Figure 3 below.

Figure 3 - Company legal structure



Source: Burbo Bank Extension Limited ownerships structure February 2016

### 3.3 Contractual arrangements between the Developer and the OFTO

#### *Sale and Purchase Agreement (“SPA”) between the OFTO and the Developer*

The SPA relating to the BBW02 Transmission Assets will be prepared in accordance with the guidelines issued by Ofgem and will set out the contractual provisions pursuant to which the developer will transfer the BBW02 Transmission Assets to the OFTO.

The provisions of the SPA for the BBW02 Transmission Assets will include the following:

- Details of all assets that are to be transferred to the OFTO;
- Consideration payable by the OFTO for the assets and the mechanism by which it is paid;
- Completion obligations of and deliverables for both the Developer and the OFTO, if any, including any post-completion obligations that are specific to the BBW02 Transmission Assets;

- The mechanism for the novation or assignment of all construction contracts relating to the BBW02 Transmission Assets which are capable of such transfer to the OFTO. It will also set out the assumed and excluded liabilities relating to the splitting of any contracts where full novation is not possible;
- Details of all property rights, titles and interests that are to be transferred to the OFTO. The Developer expects to procure a Certificate of Title in relation to certain onshore property interests (see further section 3.6 below) which will be provided to the OFTO;
- Details of any permitting conditions, the responsibility for compliance with which will need to be assumed by the OFTO;
- The assumption that the transfer will be treated as a transfer of a going concern for tax purposes;
- Warranties given by the Developer to the OFTO which will be subject to limitation periods and monetary caps and will be qualified by reference to the Certificate of Title (see further section 3.6 below); and
- Standard boilerplate provisions, such as governing law (which will be English), confidentiality and restrictions on announcements, prohibition on assignment without consent, third-party rights, variation and notices.

#### *Warranties under contracts to be transferred*

Table 1 below contains a summary of the key warranty/defect notification provisions for the BBW02 Transmission Assets, the benefits of which the Developer will seek to transfer to the OFTO. The dates are based upon the project's master project time schedule at the date of this PIM and are subject to change.

*Table 1 - Warranties*

	<b>Warranty / Defect notification period</b>	<b>Approximate expiry date</b>
OSP Construction - Joint Venture Fabricom \ Iemans, JVFI Belgium	5 years and 104 days from the date of TOC	Q4 2021
OSP installation - Seaway Heavy Lifting Contracting Limited	24 months from the date of TOC	Q3 2018
OSP 220/34kV transformers supply – ABB A/S	60 months from the date of TOC	Q3 2021
OSP 220kV GIS supply – Siemens A/S	60 months from the date of TOC	Q3 2021
OSP earthing and aux. transformers supply – Kolektor Etra	60 months from the date of TOC	Q3 2021
OSP neutral earthing resistors supply – Hilkar Elektrik Elektrotechnik	12 months from the date of TOC	Q3 2017
Offshore 220kV export cable manufacture – ABB AB High Voltage Cables	5 years from the date of TOC	Q3 2021
Offshore 220kV export cable installation – Jan de Nul	24 months from the date of TOC	Q3 2018
Onshore 220kV export cable manufacture – ABB AB High Voltage Cables	5 years from the date of TOC	Q3 2021
Onshore export cable installation - Volker Infra Limited	5 years from the date TOC	Q4 2020

Onshore substation construction – Balfour Beatty Civil Engineering Ltd.	5 years from the date of TOC	Q3 2021
Onshore 400/220kV transformers S&I – BEST Transformer A.S.	60 months from the date of TOC	Q2 2021
Onshore 400kV GIS S&I – ABB A/S	60 months from the date of TOC	Q2 2021
Onshore 220kV GIS S&I – Siemens A/S	60 months from the date of TOC	Q2 2021
220kV harmonic filters onshore S&I - Alstom Grid UK Limited	60 months from the date of TOC	Q3 2021
Onshore STATCOM Plant S&I – Rongxin Power Electronic Co. Ltd.	5 years from the date of TOC	Q2 2021
Onshore reactor S&I – BEST Transformer A.S.	60 months from the date of TOC	Q2 2021
SCADA system S&I – Alstom Grid UK Ltd.	60 months from the date of TOC	Q2 2021

### 3.4 Transmission Assets Transferring to the OFTO

The BBW02 Transmission Assets will include an OSS, a single offshore export cable with a route length of approximately 24.3km, an onshore transition joint and onshore export cable with a route length of approximately 10.4km, connecting to an onshore substation and connected via three single 400kV cables connecting to a double bus bar via one 400kV Gas Insulated Switchgear (“GIS”) bay within the existing NGET Bodelwyddan substation.

An overview of the assets that the Developer currently proposes to transfer to the OFTO under the project specific SPA and which were used to derive the initial transfer value of the BBW02 Transmission Assets, is set out in Table 2 below.

A simplified single line diagram for the BBW02 Transmission Assets including the boundary points is given in Appendix 1.

Table 2 - Asset Summary

Asset	Description
OSS	<ul style="list-style-type: none"> <li>Structural steel topsides with five main decks mounted on a jacket foundation. The overall dimensions of the substation topside will be approximately (H x W x L) 20 x 30 x 40m with an overall height of 38m above the Lowest Astronomical Tide level ("LAT") excl. crane and antenna.</li> <li>The topside cable deck (20.5m above LAT) will be provided for array and export cable management and muster areas.</li> <li>The main deck (26m above LAT) will be provided for the two 220/34kV transformers, together with the associated 220kV GIS and the 34kV switchgear. Also, two diesel generators will be situated on the main deck.</li> <li>The mezzanine deck (30m above LAT) will contain the main transformer radiators, auxiliary transformers and earthing resistors and the UPS 1 room, the Battery room 1, together with Low Voltage ("LV") room 1 and 2.</li> <li>The OFTO control rooms, public rooms and workshops will be situated on the utility deck (34m above LAT) together with the UPS 2 room and Battery room 2.</li> <li>A helicopter hoist area, an antenna mast and a telescopic boom crane will be provided on the roof deck (38m above LAT).</li> </ul>
Offshore export cable	<ul style="list-style-type: none"> <li>One offshore export cable consisting of the subsea section, which will be a three-core 1200mm<sup>2</sup> Aluminium conductor Cross-linked polyethylene ("XLPE") single-wire armoured cable.</li> <li>The total route length of the offshore export cable is approximately 24.3km.</li> <li>220kV rated, XLPE-insulated, complete with integral optical fibres.</li> </ul>
220kV Onshore export cable	<ul style="list-style-type: none"> <li>220 kV onshore export cable consisting of three single-core 1000mm<sup>2</sup> aluminium conductor XLPE-insulated cables installed in trefoil formation in ducts. The cable system is installed as a balanced cross bonded system with manhole access to the link boxes for measuring purposes</li> <li>The onshore export cable will connect to the offshore cable at the onshore transition joint at landfall and will be installed underground in local arable land and beneath roads, utilising 11 sections and 11 onshore joints.</li> <li>The total route length to the BBW02 substation is approximately 10.4km.</li> <li>A 48 fibre optic cable (single mode) will be routed adjacent to the 220kV onshore export cable. Two of the fibres will be used for Dynamic Temperature System ("DTS") purposes (temperature sensing of the conductors) for the generator and the OFTO.</li> </ul>
400kV Onshore to NGET cable	<ul style="list-style-type: none"> <li>400 kV Onshore export cable to NG Bodelwyddan substation consisting of three single core 1200 mm<sup>2</sup> aluminium conductor XLPE insulated cables installed in trefoil formation (solid bonded)</li> <li>External earthing connections 2x500mm<sup>2</sup> Cu isolated to connect the earth mats at Burbo and NG Bodelwyddan substations.</li> <li>The 400 kV export cable length is approximately 700m from Burbo substation to NG Bodelwyddan substation – installed in one length.</li> <li>A 48 fibre optic cable (single mode) is routed adjacent to the High Voltage ("HV") cable. No DTS installed.</li> </ul>
Onshore substation	<ul style="list-style-type: none"> <li>The onshore substation will house the HV equipment with associated reactive compensation equipment. The HV equipment is necessary for transforming the voltage level and connecting the onshore export cable to the GB national electricity transmission system (NG Bodelwyddan substation) The GIS will be housed in a purpose built building (GIS Hall with ancillary rooms).</li> <li>The main equipment proposed for transfer includes two 400/220/15.5kV transformers complete with 400 and 220kV GIS, 400kV shunt reactor, 220kV variable shunt reactor, one dynamic reactive compensation system, 400kV and 220kV harmonic filtration equipment, UPS DC battery system.</li> </ul>
NGET Bodelwyddan substation GIS	<ul style="list-style-type: none"> <li>The Bodelwyddan substation, which is NGET's property, is the location of the Onshore Boundary Point.</li> <li>One 400kV GIS Breaker positioned within the NGET Bodelwyddan substation will be included in the equipment transfer.</li> <li>The GIS equipment included in the transfer will consist of Circuit breaker, line disconnecter, line earth switch and maintenance earth switch, PRR, Cable sealing ends and associated civil works.</li> </ul>
SCADA	<ul style="list-style-type: none"> <li>The BBW02 Transmission Assets will be operated from a standalone segregated SCADA system that will be operated and maintained independent of the Generator SCADA System.</li> <li>The OFTO and Generator SCADA Systems will exchange signals as required by the Grid Code.</li> <li>The OFTO SCADA System will be connected to the National Grid Control Centres via the telecoms and data interface at the NGET Bodelwyddan 400kV Substation and will deliver the signals required from the HV systems of the BBW02 Transmission Assets and the BBW02 Offshore Wind Farm.</li> <li>The OSS and the onshore substation (ONS) will have separate OFTO and Generator SCADA System equipment rooms.</li> </ul>
Spares	<ul style="list-style-type: none"> <li>Later in the process, the Developer will discuss the possibilities for cooperation regarding spare parts with the preferred bidder for the BBW02 Transmission Assets.</li> </ul>

### 3.5 Ownership Boundaries

Detail of the current offshore and onshore boundary points proposed by the Developer which have been used for the purposes of calculating the initial transfer value are as described in Table 3, and the section below.

*Table 3 - Proposed boundary points offshore and onshore*

Location	Boundary Point
Offshore	Located at the 220/34kV transformer - 34kV LV terminals.
Onshore	Located in the gas barrier zones of both main and reserve 400kV bus bar contained within the existing NGET Bodelwyddan 400kV substation.

### 3.6 Land Rights and Consents

#### Leases and Easements

An overview of the property rights that the Developer currently holds in relation to the BBW02 Transmission Assets is set out in Table 4 below.

*Table 4 - Leases and Easements*

Lease	Transfer to OFTO
Offshore - Crown Estate Windfarm Lease	N
Offshore - Crown Estate Substation Lease	Y
Onshore - Crown Estate Lease of Rights (River Clwyd)	Y
Onshore – Substation Lease	Y
Onshore – Export Cable Easement	Y
Onshore – Cable Easement Option Agreements	N – the completed easements will be transferred but not the option agreements

The Cable Easement Option Agreements will be exercised when installation of the onshore export cable has been completed.

The Developer will provide that the OFTO has reliance on a certificate of title (in the form of the City of London Law Society Land Law Committee Certificate of Title (7th Edition), the “Certificate of Title”) given in respect of the onshore substation lease referred to above and the rights and easements in relation to the onshore export cable which benefit the onshore substation. The Certificate of Title will not relate to the offshore substation lease.

#### Consents

The Developer is in the process of securing the necessary consents to construct the BBW02 Offshore Wind Farm and BBW02 Transmission Assets. The Developer is also in the process of entering into the required crossing and proximity agreements for the export cable route.

Provisions relating to the assumption by the OFTO of responsibility for the performance of, and compliance with, certain consent conditions, and these will be detailed in the SPA relating to the BBW02 Transmission Assets.

### 3.7 Project Timeline

Development of the BBW02 Offshore Wind Farm commenced in 2013, and construction work on the BBW02 Transmission Assets started in Q4 2014. Commissioning of the

BBW02 Transmission Assets is expected to be completed by Q3 2016 and the current expected date of delivery of the onshore connection by NGET is Q2 2016. Export of power from the BBW02 Offshore Wind Farm is expected to be permitted by NGET from 01 June 2016. The commissioning of the BBW02 Offshore Wind Farm is expected to be completed by Q1 2017. Reference to figure 4.



Table 6 - Contractors for the construction of the BBW02 transmission assets

	Services and main equipment list	Contract and contractor
OSS - construction	<ul style="list-style-type: none"> <li>Structural steel topsides with five main decks mounted on a jacket foundation.</li> </ul>	<ul style="list-style-type: none"> <li>Supply: Joint Venture Fabricom \ Iemans, JVFI Belgium</li> <li>Installation: Seaway Heavy Lifting Contracting Limited</li> </ul>
OSS – mechanical and electrical equipment	<ul style="list-style-type: none"> <li>1 x 220kV GIS Switchgear</li> <li>2 x 220/34kV 200MVA Power transformers</li> <li>2 x 34/0.4kV Auxiliary and earthing transformers</li> <li>2 x Neutral resistors</li> <li>2 x Diesel generators 247MVA</li> <li>2 x Low Voltage switchgear</li> <li>2 x UPS DC battery system</li> </ul>	<ul style="list-style-type: none"> <li>Supply and installation: Siemens A/S</li> <li>Supply and installation: ABB A/S</li> <li>Supply and installation: Kolektor Etra - JVFI</li> <li>Supply and Installation: Hilkar Elektrik Elektrotechnik –JVFI</li> <li>Supply and Installation: JVFI</li> <li>Supply and Installation: JVFI</li> <li>Supply and Installation: JVFI</li> </ul>
Offshore export cables	<ul style="list-style-type: none"> <li>24.3 km 220kV 3C 1200mm<sup>2</sup> Aluminium XLPE galvanized SWA C/W 48 single fibres</li> </ul>	<ul style="list-style-type: none"> <li>Supply: ABB SE</li> <li>Installation: Jan de Nul</li> </ul>
Onshore export cables	<ul style="list-style-type: none"> <li>10.4 km 220kV 3 x 1C 1000 mm<sup>2</sup> Aluminium XLPE SWA</li> <li>0.7 km 400kV 3 x1C 1200 mm<sup>2</sup> Aluminium XLPE SWA</li> <li>Fibre optic cable: – 48 single fibres</li> </ul>	<ul style="list-style-type: none"> <li>Supply &amp; termination: ABB A.B. HV Cables</li> <li>Supply &amp; termination: NKT cables A/S</li> <li>Supply &amp; termination: ABB A.B. HV Cables</li> <li>Installation (HV and FO): Volker Infra Limited</li> </ul>
Onshore substation	<ul style="list-style-type: none"> <li>Civils construction</li> <li>400kV GIS</li> <li>220kV GIS</li> <li>400/220/34kV 200 MVA auto transformers</li> <li>220kV shunt reactor 50 – 125 Mvar</li> <li>400kV shunt reactor 60 Mvar</li> <li>220kV harmonic filter (25Mvar)</li> <li>400kV harmonic filter (60Mvar)</li> <li>50MVAr SVC and auxiliary transformers</li> </ul>	<ul style="list-style-type: none"> <li>Supply and installation: Balfour Beatty Civil Engineering</li> <li>Supply and installation: ABB A/S</li> <li>Supply and installation: Siemens A/S</li> <li>Supply and installation: BEST Transformer A.S.</li> <li>Supply and installation: BEST Transformer A.S.</li> <li>Supply and installation: BEST Transformer A.S.</li> <li>Supply and installation: Alstom Grid UK Ltd.</li> <li>Supply and installation: Alstom Grid UK Ltd.</li> <li>Supply and installation: Rongxin Power Electronic Co. Ltd</li> </ul>
Bodelwyddan NGET substation	<ul style="list-style-type: none"> <li>400kV GIS switchgear</li> </ul>	<ul style="list-style-type: none"> <li>Supply and installation: ABB UK Ltd.</li> </ul>
SCADA	<ul style="list-style-type: none"> <li>OFTO station control and protection system</li> </ul>	<ul style="list-style-type: none"> <li>Supply, install, commission: Alstom UK Ltd.</li> </ul>

#### 4.1 Risk Mitigation

The BBW02 Transmission Assets have been designed according to the planning criteria as defined in the NETS SQSS.

The BBW02 Transmission Assets have been designed with the intention of ensuring that the capacity of the BBW02 Offshore Wind Farm that can be transferred during a planned or unplanned outage is compliant with Chapter 7 of the NGET SQSS. Both onshore and offshore transformers have been designed and rated to approximately 75% of the wind farm installed capacity (258MW). Should a fault occur in one of these devices, the BBW02 Offshore Wind Farm should not have to be shut down by default. However, the export

capacity may, under certain outage conditions, be constrained. The extent of the power reduction will depend on the prevailing wind speeds and generator availability.

#### 4.2 Insurance

Construction all risks insurance is in place and will continue in full force until the construction of the BBW02 Offshore Wind Farm and BBW02 Transmission Assets is completed. This is provided as follows:

##### *1. Construction all risks: Broker: Aon, Lead insurer: AXA*

- Cover is based on a WindCar wording.
- There is a 24-month extended maintenance cover plus an additional 36 months of visit maintenance cover.

##### *2. Terrorism: Insurer: OIL Insurance Ltd.*

- Coverage is provided for property damage arising out of acts of terrorism and sabotage.

##### *3. Third-party liability: Insurer: AIG*

- Legal and contractual liability for third-party property damage and bodily injury is included.
- A cross-liability clause is included.
- Sudden and accidental pollution liability cover is in place.

The insurance for offshore transmission assets is well established, and insurance during the operational period is available for these types of assets. The OFTO will be expected to procure its own insurance following the Asset Transfer Date.

##### *Insurance obligations for the OFTO under the lease with The Crown Estate:*

- All offshore assets required to be insured under operational all risks insurance for the worst case loss scenario.
- Terrorism cover must also be in place.
- Third-party liability insurance for a minimum of GBP 25 million for each and every loss must also be in place.

##### *Insurance for onshore assets:*

- Property insurance should be in place for the standard replacement value of the assets, as per the market standard.
- Terrorism cover must be in place.
- Third-party liability insurance for a minimum of GBP25 million for each and every loss must also be in place.

#### 5. Contact Details

The information in this document is provided for information purposes only. It is designed to provide prospective OFTOs, lenders and advisers with certain high-level information related to the BBW02 Transmission Assets, to support the launch of the initial, pre-qualification phase of the tender process.

For more information on the tender process please refer to the Generic Preliminary Information Memorandum (Generic PIM) published alongside this document.

All enquiries or communications, including requests for additional information, should be sent to [tendercoordinator@ofgem.gov.uk](mailto:tendercoordinator@ofgem.gov.uk).

## 6 Disclaimer and Notices

### 6.1 Non Reliance, Accuracy of Information and Exclusion of Liability

It is the responsibility of each bidder to ensure that it has all of the information it needs to prepare its submission.

While information provided by Ofgem and/or its advisers in this Preliminary Information Memorandum ("**PIM**") or otherwise in relation to the Tender Round has been prepared in good faith, neither Ofgem nor any of its advisers make any representation or warranty (express or implied) in relation to the Tender Round or any information provided by developers through data rooms or otherwise. Ofgem and its advisers expressly disclaim any and all liability (other than in respect of fraudulent misrepresentation) based on or relating to any such information or representations or warranties (express or implied) contained in, or errors or omissions from, the PIM or based on or relating to its use by a bidder, a developer and/or any other interested party.

### 6.2 Use of Information

This PIM is not intended to provide the basis of any investment decision, nor is it intended to be considered as an investment recommendation by Ofgem or by any of its advisers. Each bidder, developer and any other interested party must make its own independent assessment of the qualifying project after making such investigation and taking such professional advice as it deems necessary.

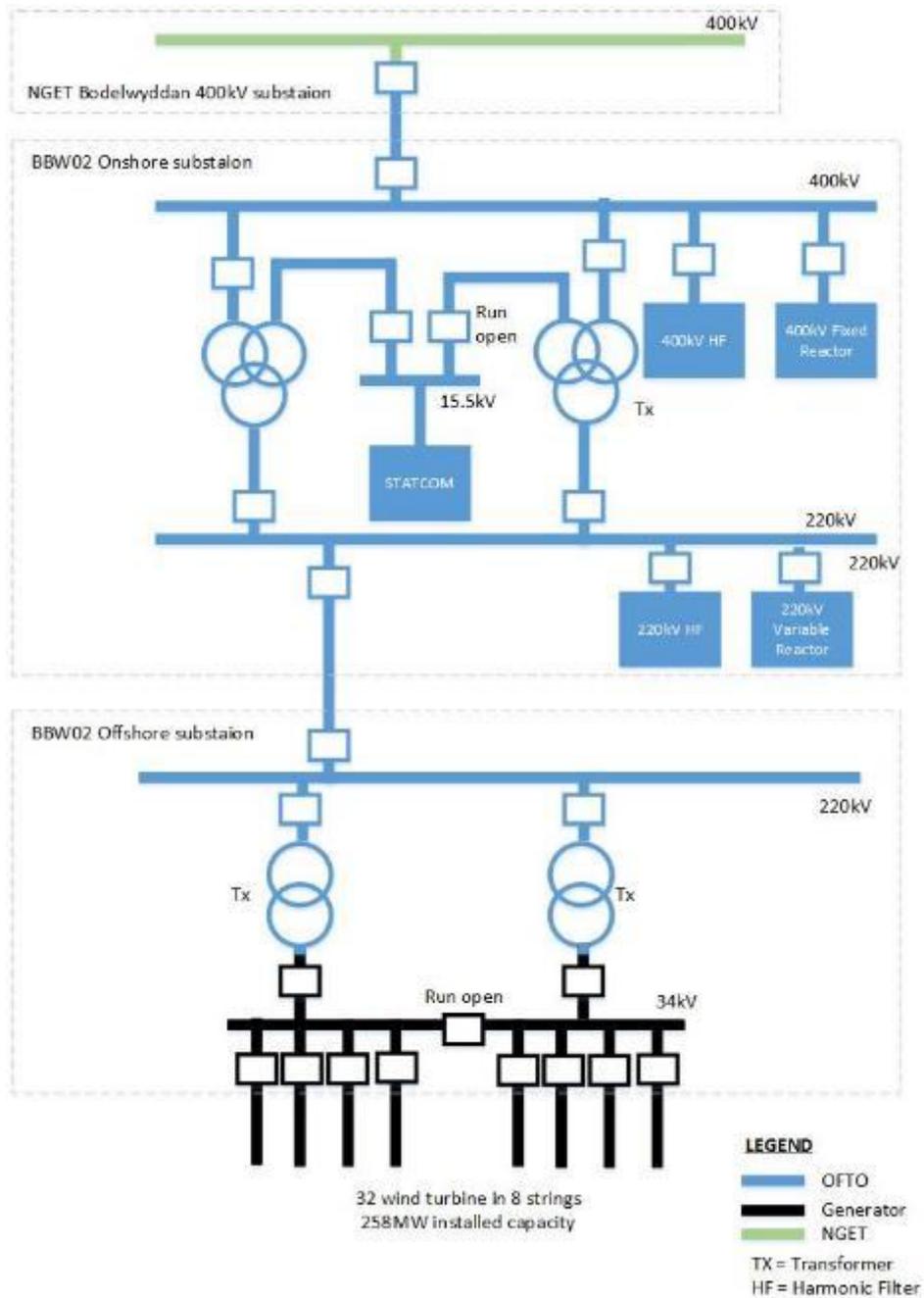
The material in the PIM is not and should not be regarded as legal or professional advice. Bidders, developers and other interested parties should seek their own legal or other professional advice where appropriate.

Nothing in the PIM is intended to, or shall be deemed to establish any partnership or joint venture between Ofgem and any bidder or any developer.

Advisers acting for Ofgem in relation to the Tender Round will not regard any developer or bidder or other interested party as their client or be responsible to anyone other than Ofgem for providing the protections afforded to their clients or for advising any other person on the Tender Round or any matter related to it.

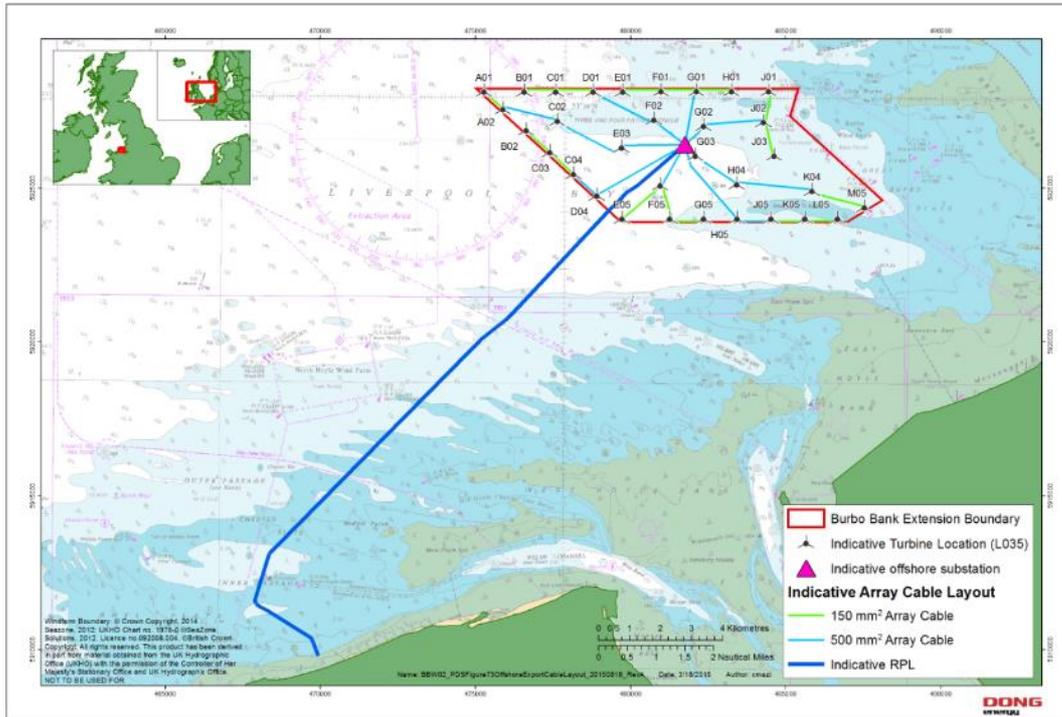
Appendices

Appendix 1 - Simplified Single Line Diagram



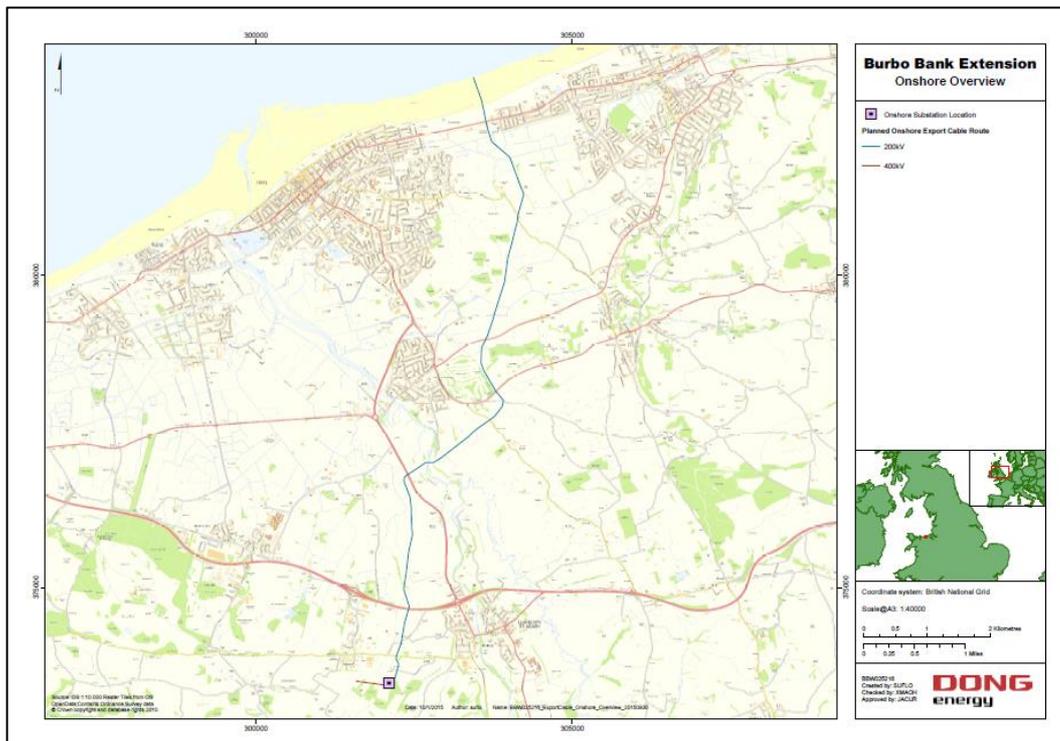
Source: Dong Energy 30<sup>th</sup> September 2015

Appendix 2 - Location Map



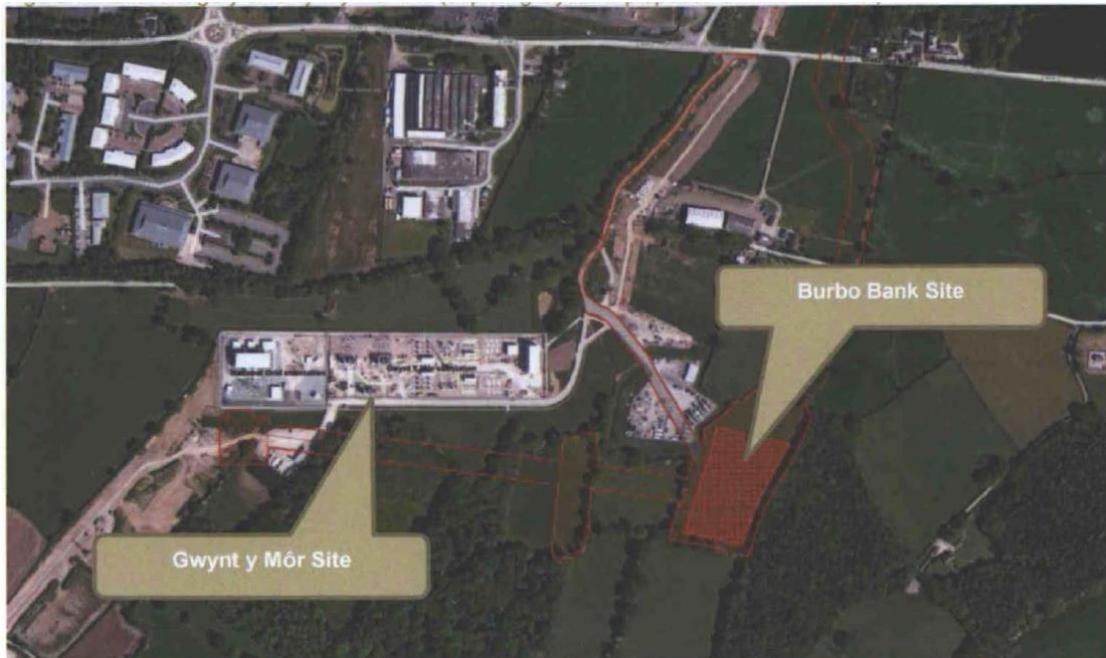
Source: Dong Energy 30<sup>th</sup> September 2015

Appendix 3 - Onshore Cable Route



Source: Dong Energy 30<sup>th</sup> September 2015

Appendix 4 - Onshore Substation



Source DONG Energy 11<sup>th</sup> February 2013