

Preliminary Information Memorandum

Ormonde Offshore Transmission Assets

July 2009



RBC Capital Markets®

SUMMARY

In April 2009 Ofgem distributed a teaser document, “UK Offshore Transmission – Investment Opportunity”, to investors outlining the opportunity to acquire offshore electricity transmission assets in Great Britain (“**GB**”) under a new regulatory regime governing the ownership and operation of offshore electricity transmission. This regime has been developed jointly by the UK Government, through the Department of Energy and Climate Change (“**DECC**”) and the GB energy regulator, the Office of Gas and Electricity Markets (“**Ofgem**”).

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 Offshore Transmission Owner (“**OFTO**”) of the Ormonde offshore wind project (the “**Ormonde Wind Farm**”). The Ormonde Wind Farm will consist of 30 5MW REpower wind turbine generators.

The transmission assets for the Ormonde Wind Farm (referred to in this document as the “**Ormonde Transmission Assets**”) are currently owned and will be constructed by Vattenfall AB (“**Vattenfall**”). Vattenfall will contract construction of the Ormonde Transmission Assets to various third party contractors, as set out later in this document.

It is currently expected that construction of the Ormonde Transmission Assets will be completed in July 2011. Once completed, the Ormonde Transmission Assets will be transferred to the OFTO identified as the successful bidder through the tender process via a sale and purchase agreement.

The preliminary transfer value estimated by Ofgem on the basis of information provided to date (the “**Estimated Transfer Value**”) of the Ormonde Transmission Assets is £87 million. This Estimated Transfer Value includes the offshore substation platform (“**OSP**”). The Estimated Transfer Value is subject to adjustment, as described in the document entitled “Generic Preliminary Information Memorandum” and as further described below.

THE INVESTMENT OPPORTUNITY

1. Transmission Assets Overview

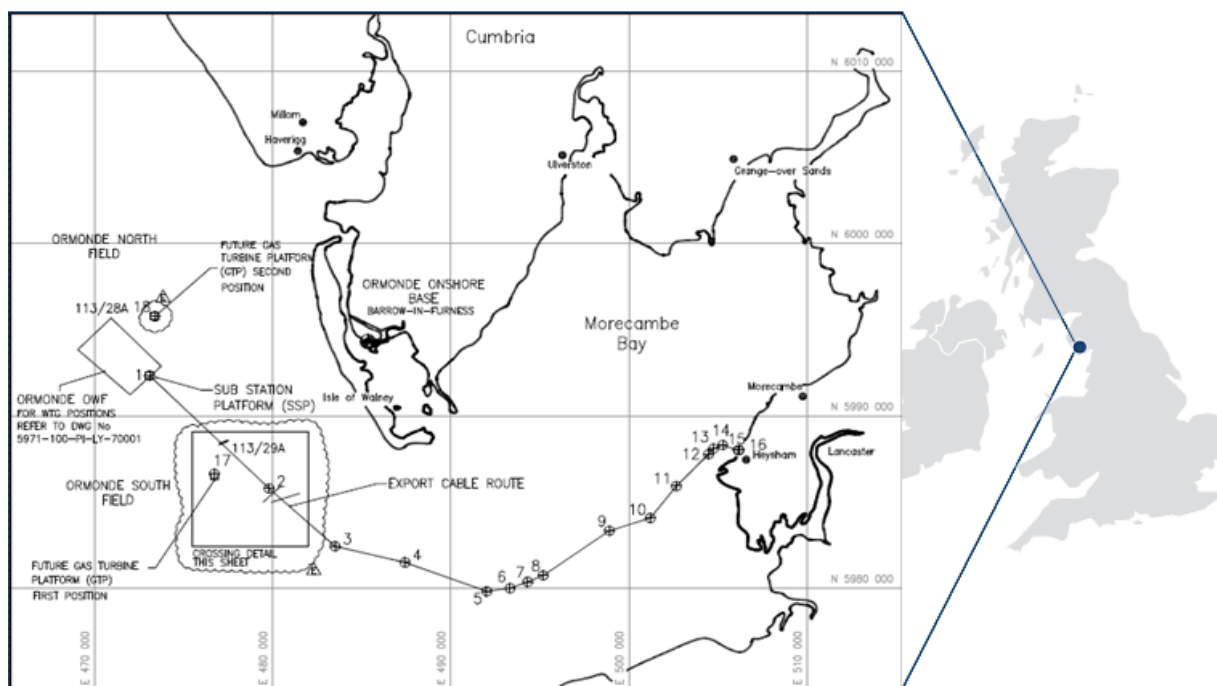
Location

The Ormonde Wind Farm is to be located 10 km off Walney Island in the East Irish Sea. The offshore connection point will be on the OSP located within the boundaries of the Ormonde Wind Farm as illustrated in Figure 1 below.

A single subsea cable will connect the OSP to the mainland, with the onshore connection point being at the Trimpell 2 circuit of the Heysham substation (the “**Onshore Substation**”). The onshore distribution licensee is Energy North West (“**ENW**”).

The Ormonde Transmission Assets and Wind Farm will all be located within UK territorial waters with Barrow-in-Furness being the nearest port.

Figure 1: Location of the Ormonde Wind Farm and Transmission Assets



Source: Vattenfall

Timeline

Construction of the Ormonde Transmission Assets is due to commence in September 2009, with work on the Ormonde Wind Farm currently expected to begin in April 2010. The Ormonde Transmission Assets are expected to be fully completed by the end of July 2011 and the Ormonde Wind Farm is scheduled to be operational by September 2011.

Transmission Network Design

Table 1 summarises the key transmission network design features of the Ormonde Transmission Assets:

Table 1 – Ormonde Network Design Features

Key Features	
Expected minimum designated service life	25 years
Capacity ratings	157MVA

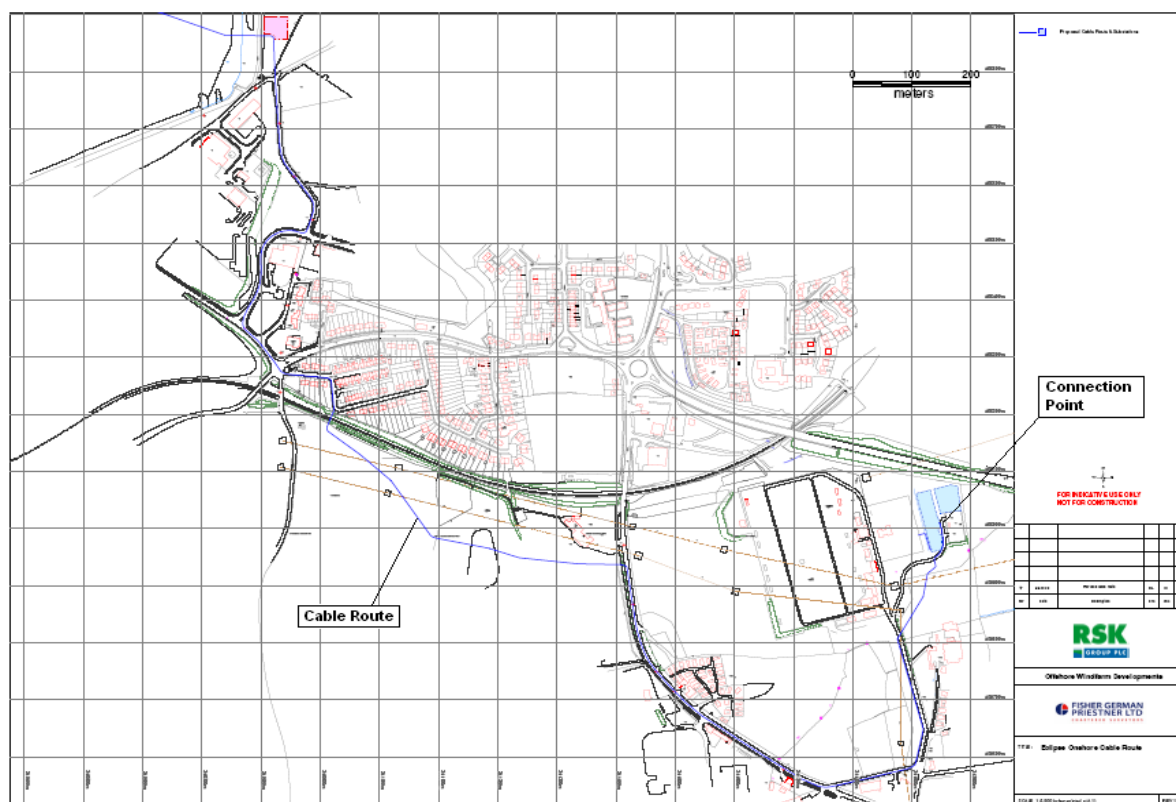
Vattenfall accepted an offer of connection to the distribution network from ENW on 9 September 2008 which will be entered into closer to the point of energisation. The maximum export rights under this agreement will be 150MW.

Vattenfall estimate that its required ongoing offshore export rights at the offshore substation once the Ormonde Transmission Assets have been transferred to the OFTO will be 150MW.

Description of Transmission Assets

Figure 2 below shows the proposed route for the onshore cable.

Figure 2: Route of Ormonde Transmission Cable (Onshore)



Source: Vattenfall

An overview of the assets that Vattenfall currently propose to transfer to the OFTO and which were used by Ofgem to derive the Estimated Transfer Value of the Ormonde Transmission Assets, is set out in Table 2 below. Table 4 provides a more detailed list of equipment currently proposed for transfer.

Table 2 – Asset summary

Asset	Description
OSP	The OSP's purpose is to house the necessary equipment for connection and switching of the wind turbine arrays. Main apparatus proposed to be transferred to the OFTO includes two 132/33 kV transformers together with associated 132kV and 33kV switchgear, one standby diesel generator, tariff metering equipment and a 33kV/0.435kV auxiliary transformer.
Subsea cable	The subsea cable connects the OSP to the shore where it is joined to the onshore cable in a jointing chamber. The subsea cable connection will consist of one 3 core 132 kV cable, 43 km in length, buried to a depth of 2m. The cable will have a rating of 158MVA.
Onshore cables	The onshore cables link the subsea cable connection to the onshore substation. The onshore export cable connection will consist of three underground single core 132 kV cables, each 2.8km in length buried to a depth of 0.9m. The cables will have an overall rating of 157MVA.
Onshore substation	The onshore substation houses the necessary high voltage switchgear equipment for connecting the onshore cable to the distribution network and associated reactive compensation equipment. Main apparatus proposed to be transferred to the OFTO includes 132kV switchgear, reactive compensation and associated harmonic filtering equipment.
Spares	A provisional list of spares for transfer includes miscellaneous 132kV switchgear apparatus, 100m of fibre optic cable plus joints, 500m of subsea cable and 300m of onshore cable. For the cable spares, 6 onshore and 2 subsea cable joints are available for transfer.

Table 3 below sets out the current offshore and onshore boundary points proposed by the developer. These have been used for the purposes of calculating the Estimated Transfer Value.

Table 3 – Proposed boundary points offshore and onshore

Boundary Point	Location
Offshore	Located where the 33kV inter-array cables connect with the 33kV switch board on the OSP.
Onshore	Located at the overhead disconnector of the ENW 132kV metering circuit breaker.

Redundancy

Electrical redundancy will be provided by two offshore transformers on the OSP. There is a single subsea cable connecting the offshore platform to the land.

Contractual arrangements

Vattenfall has adopted a multi contract strategy for the delivery of the Ormonde Transmission Assets which is consistent with its approach to previous wind energy developments. Vattenfall has a proven track record in the

development of offshore wind assets having already constructed some of the largest operational offshore wind farms including the 110MW Lillgrund, 160MW Horns Rev and 90MW Kentish Flats offshore wind farms.

Table 4 sets out the main contracts, current contract status and assets proposed for transfer.

Table 4 – Key Contracts and Assets

Services & Main Equipment List	Contract	Contractor
OSP – construction:	Design	ODE
	Supply	Bifab (Letter of Intent)
	Installation	To Be Awarded
OSP – mechanical and electrical equipment:	Supply and installation	AREVA (Letter of Intent)
2 x 132/33kV transformers		
4 x 132kV GIS switchgear bays		
1 x 33/0.435kV transformer		
400V diesel generator		
Subsea cable:	Supply and installation	Prysmian
1 x 43km 3 core 132kV cable		
Onshore cables:	Supply and installation	Carillion (Letter of Intent)
3 x 2.8km single core 132kV cables		
Onshore substation:	Supply and installation	AREVA (Letter of Intent)
3 x 132kV disconnector/earth switches		
3 x 132kV voltage and current transformers		
1 x 132/33kV transformer (for reactive compensation)		
1 x 33kV circuit breaker (for reactive compensation)		
Reactors and capacitors (being scoped)		
Harmonic filter equipment (if required)		
Inverter (based on reactive compensation system)		
2 x 33kV circuit breakers (to be confirmed by AREVA)		
132kV point-on-wave circuit breaker		

All seabed surveys required to date have been completed.

Consents and property rights

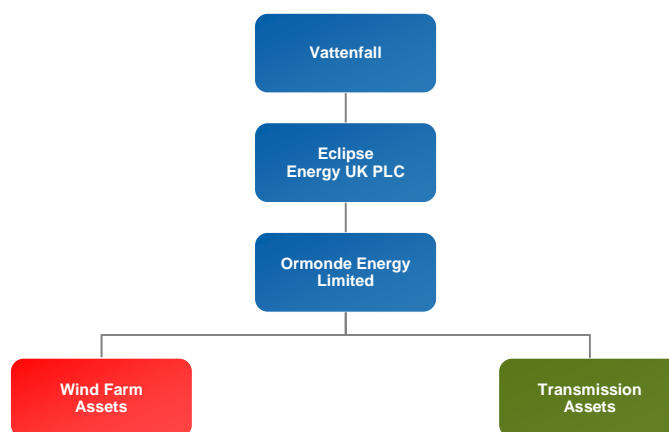
All necessary offshore consents and licences are in place for the construction of the Ormonde Transmission Assets. These include an option on a Crown Estate lease, Electricity Act (1989) Section 36 and Coastal Protection Act (1949) consents and a Food and Environment Protection Act (1985) licence. In addition to this, the majority of property rights for the onshore cable route have been agreed with the remainder having been agreed in principle.

Ownership structure

The Ormonde Transmission Assets and Wind Farm will be owned by Ormonde Energy Limited which is a wholly owned subsidiary of Eclipse Energy UK PLC. Eclipse Energy UK PLC is in turn a wholly owned subsidiary of Vattenfall.

An overview of the ownership structure of the Ormonde Wind Farm and Transmission Assets is set out in Figure 3 below:

Figure 3: Ownership Structure



2. Preliminary view of Estimated Transfer Value

Ofgem, with input from its external advisers, has undertaken an exercise to determine the Estimated Transfer Value for the Ormonde Transmission Assets summarised in Table 2 and 4 above, assuming the boundary points summarised in Table 3. The Estimated Transfer Value is intended to allow Vattenfall to recover its economic and efficient costs of developing the Ormonde Transmission Assets and, as such, may be subject to adjustment based on new or more detailed information becoming available to Ofgem, and upon final completion of the Ormonde Transmission Assets.

For the purpose of commencing the tender process, Ofgem has established an Estimated Transfer Value of £87 million for the Ormonde Transmission Assets.

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 Ormonde Transmission Assets, to support the launch of the initial, pre-qualification ("PQ") phase of the first tender process.

All enquiries or communications, including requests for additional information, should be sent to tendercoordinator@ofgem.gov.uk.

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