



White Cross Offshore Windfarm Environmental Statement

Chapter 2: Need for the Project



Document Code:		FLO-WHI-REP—0002-02	
Contractor Number:	Document	PC2978-RHD-ZZ-XX-RP-Z-0137	
Version Number:		0	
Date:	<i>Issue</i>	<i>Date</i>	
		08/03/2023	
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Version Number	Reason for Issue / Major Changes	Date of Change
0	For Issue	08/03/2023

Table of Contents

2. Need for the Project	1
2.1 Introduction	1
2.2 The Need to Address Climate Change	1
2.3 The Need for Energy Security	2
2.4 The Need to Maximise Economic Opportunities from Energy Infrastructure Investment for the UK.....	3
2.5 The Need to Produce Affordable Energy.....	4
2.6 References	5

Glossary of Acronyms

Acronym	Definition
AfL	Agreement for Lease
BEIS	Department for Business, Energy and Industrial Strategy
CCC	Committee on Climate Change
CfD	Contracts for Difference
HM	His Majesty
IPCC	Intergovernmental Panel on Climate Change
UK	United Kingdom

Glossary of Terminology

Defined Term	Description
Applicant	Offshore Wind Limited
Department for Business, Energy and Industrial Strategy (BEIS)	Government department that is responsible for business, industrial strategy, science and innovation and energy and climate change policy and consent under Section 36 of the Electricity Act.
Environmental Impact Assessment (EIA)	Assessment of the potential impact of the proposed Project on the physical, biological and human environment during construction, operation, maintenance, and decommissioning.
Mitigation	<p>Mitigation measures have been proposed where the assessment identifies that an aspect of the development is likely to give rise to significant environmental impacts and discussed with the relevant authorities and stakeholders in order to avoid, prevent or reduce impacts to acceptable levels.</p> <p>For the purposes of the EIA, two types of mitigation are defined:</p> <ul style="list-style-type: none"> • Embedded mitigation: consisting of mitigation measures that are identified and adopted as part of the evolution of the project design, and form part of the project design that is assessed in the EIA. <p>Additional mitigation: consisting of mitigation measures that are identified during the EIA process specifically to reduce or eliminate any predicted significant impacts. Additional mitigation is therefore subsequently adopted by OWL as the EIA process progresses.</p>
Offshore Wind Limited	Offshore Wind Ltd (OWL) is a joint venture between Cobra Instalaciones Servicios, S.A., and Flotation Energy Ltd
the Project	the Project is a proposed floating offshore windfarm called White Cross located in the Celtic Sea with a capacity of up to 100MW. It encompasses the offshore project as a whole i.e., all onshore and offshore infrastructure and activities associated with the Project
White Cross Offshore Windfarm	100MW capacity offshore windfarm including associated onshore and offshore infrastructure
Windfarm Site	The area within which the wind turbines, Offshore Substation Platform and inter-array cables will be present
Works completion date	Date at which construction works are deemed to be complete and the windfarm is handed to the operations team. In reality, this may take place over a period of time.

2. Need for the Project

2.1 Introduction

1. This chapter presents the importance of offshore wind energy, including the need for the White Cross Offshore Wind Farm (herein 'the Offshore Project'), in meeting United Kingdom (UK) policy commitments for renewable energy and wider policy objectives. Further detail on the relevant UK commitments and the policy and legislation designed to implement them is discussed in **Chapter 3: Policy and Legislative Context**.
2. The key drivers for the development of offshore wind energy are:
 - The need to address climate change
 - The need for energy security
 - The need to maximise economic opportunities from energy infrastructure investment for the UK
 - The need to produce affordable energy.

2.2 The Need to Address Climate Change

3. Climate change and global temperature rise as a result of greenhouse gas emissions is associated with potential impacts on weather, ecosystems, and human health and welfare. The Intergovernmental Panel on Climate Change (IPCC) Working Group II contribution to the Sixth Assessment Report provides new estimates of the chances of crossing the global warming level of 1.5°C in the next decades. It concludes that unless there are immediate, rapid, and large-scale reductions in greenhouse gas emissions, the 1.5°C or even 2°C increase level will be crossed.
4. The UK has made international commitments to limit global temperature increases, most recently through the 21st Conference of Parties in Paris in 2015. This commitment has been ratified and has been implemented in 2020 through the sixth UK Carbon Budget which recommends the UK commits to a 78% reduction in carbon emissions by 2035, compared to emission levels in 1990 (Climate Change Committee, 2020). The UK Government has committed to net zero (reduction in greenhouse gas emissions by 100% relative to 1990 levels) by 2050¹.

¹ [UK's path to net zero set out in landmark strategy - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/strategies/uk-climate-change-strategy-2019)

5. The Climate Change Committee (CCC) (2020) recommended that “*Offshore wind becomes the backbone of the whole UK energy system, growing from the Prime Minister’s promised 40GW in 2030 to 100GW or more by 2050*”. The British energy security strategy (BEIS, 2022) aims to increase the pace of deployment by 25% to achieve 50GW of offshore wind generation by 2030, including up to 5GW of floating wind.
6. In February 2019, Devon County Council agreed to declare a ‘Climate Emergency’. North Devon District Council signed up to the Devon Climate Declaration in July 2019 (North Devon District Council, 2019). The Devon Climate Declaration commits to collaborating to engage Devon’s residents, businesses, and visitors to develop and implement a plan to achieve a 45% reduction in carbon emissions by 2030 and by 100% by 2050 or at the earliest credible date supported by emerging research. The Offshore Project will support the ambition to deploy more renewables energy systems as stated in the Declaration (Devon Climate Emergency, 2019). On 22 January 2019 Cornwall Council declared a climate emergency and has subsequently targeted becoming carbon neutral by 2030 (Cornwall County Council, 2019).

2.3 The Need for Energy Security

7. With existing fossil fuels and nuclear-powered electricity generation coming to the end of their operational lives, there is a need for replacement generation as old infrastructure is decommissioned. In 2020, 28% of energy used in the UK was imported, down sharply from the 2019 level due to reduced demand as a result of the impact of the Covid-19 pandemic (BEIS, 2021a).
8. Electricity generation in the UK fell by 2.4% between 2018 and 2019 and by 15% between 2010 and 2019. This highlights the need for new infrastructure to deliver a secure national energy supply as part of a long-term sustainable energy policy and to support the UK Government’s policy to “*Build Back Better*” (HM Government, 2021).
9. Renewable electricity accounted for a record 43.1% of electricity generated in the UK during 2020, more than 6 percentage points higher than in 2019 (BEIS, 2021a). Renewable energy use grew by 6.7% between 2019 and 2020 and has increased almost tenfold on the 2000 total. Electricity generated from renewable sources increased by 13% between 2019 and 2020 and energy supply from wind increased by 18% in 2020, with capacity up by 2.5% (BEIS, 2021a).
10. The British Energy Security Strategy (HM Government, 2022) (HM Government, 2022) was published in response to the current energy crisis. Reliance on global markets for imported energy leaves the UK vulnerable to fluctuations the in global

energy market prices, potentially physical supply disruptions and the knock-on effects of global supply challenges. Additionally, the British Energy Security Strategy (HM Government 2022) outlines the need for an “*approach to reduce global reliance on Russian fossil fuels whilst pivoting towards clean, affordable energy*” in response to the invasion of Ukraine and concerns around reliance in Europe on Russian fuel imports.

2.4 The Need to Maximise Economic Opportunities from Energy Infrastructure Investment for the UK

11. In 2019 the Offshore Wind Sector Deal was adopted by the Government and the offshore wind industry. The aim of the Sector Deal is to build on the United Kingdom’s global leadership in offshore wind, maximising the advantages for UK industry from the global shift to clean growth. The Sector Deal provided a target of delivering 30GW of energy from offshore wind by 2030. Subsequently, the Energy White Paper (HM Government, 2020b) commits to increase this target to 40GW. Building up to 40GW of offshore wind by 2030 could account for over £50 billion of infrastructure spending in the next decade.
12. A key commitment within the UK’s Low Carbon Transition Plan (HM Government, 2009) was to assist in making the UK a green industry centre by supporting the development and use of clean energy technologies, a commitment updated by the Ten Point Plan for a Green Industrial Revolution (HM Government, 2021). This plan sets out how the UK can make the most of the opportunities presented by the shift to net zero.
13. The Ten Point Plan explains the Government’s vision for the energy industry whereby Industry and Government work together to build a competitive and innovative UK supply chain. The supply chain should deliver and sustain jobs, generate economic benefits for the UK and support offshore wind as a core and cost-effective part of the UK’s long-term electricity mix. The Offshore Wind Sector Deal (BEIS, 2020) estimates that by 2030, offshore wind could support 60,000 jobs.
14. Furthermore, the UK Government’s Offshore Wind Manufacturing Investment Support Scheme has been put in place to help deliver these ambitions and it designed to support the delivery of manufacturing investment in the offshore wind supply chain. It provides grant funding for major investments in the manufacture of strategically important offshore wind components (BEIS, 2021b). This scheme will be integral to delivery of this employment, which will be essential to building back better through a green revolution in the post-Covid recovery. The UK Government

has also pledged to invest up to £160 million in ports and supply chains and £31 million in Research & Development (R&D) funding (BEIS, 2022).

15. Offshore wind support from the government offers a potential opportunity in the local area given the previous lack of existing projects in the south west. Offshore wind will play an important part in providing training, jobs, supply chain opportunities, and knowledge, to help revitalise coastal communities.

2.5 The Need to Produce Affordable Energy

16. As offshore wind technology has matured and developers have innovated there has been a significant reduction in the cost of energy produced by offshore wind in recent years, with a 32% reduction between 2012 and 2016 (ORE Catapult, 2017). The latest allocation round of the UK Government's Contracts for Difference (CfD) scheme was notable for the greatly reduced cost of offshore wind projects to as low as £40/MWh, compared with the first CfD round in 2015 of which resulted in costs of £150/MWh (HM Government, 2020b). This demonstrates the progress being made, with, a reduction in costs of up to 73% in five years.

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