



Marubeni



Planning and Need Statement

Array EIA Report

2024

Ossian Offshore Wind Farm:

Planning & Need Statement

June 2024



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Executive Summary

Introduction

- 1.1.1 The application comprises the offshore elements of the Ossian Wind Farm (referred to as ‘the Array’). The Ossian Wind Farm will include both offshore and onshore infrastructure including an offshore generating station (wind turbines located in the Proposed Development array area), offshore export cables to landfall and onshore transmission cables leading to an onshore substation, with subsequent connection to the electricity transmission network.
- 1.1.2 The application adopts a Project Design Envelope (PDE) approach to allow for flexibility in the final Array design. The PDE approach enables selection of the most appropriate technology for the site and conditions, while ensuring all likely significant effects are assessed and reported.
- 1.1.3 An Environmental Impact Assessment (EIA) has been completed for the Array in accordance with The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (as amended) and the Marine Works (Environmental Impact Assessment) Regulations 2007 (as amended) (referred to as ‘the EIA Regulations’). A Habitats Regulation Appraisal (HRA) has also been completed as required under the Conservation of Offshore Marine Habitats and Species Regulations 2017 (referred to as the “Habitats Regulations”).

Why Consent Ossian?

- 1.1.4 The Application for the Array presents an opportunity to deliver up to 3.6 GW of offshore wind energy. Extensive work has been undertaken by the Applicant to identify opportunities for maximising generating capacity that can be delivered by the Array whilst reducing and mitigating adverse likely significant effects on the environment through design of the Array.
- 1.1.5 This Planning & Need Statement demonstrates that the deployment of offshore wind, and specifically the Ossian Project is needed to make a significant contribution to the Scottish and UK Governments’ targets and energy policy aims as follows:
- > Net-zero and the importance of deploying zero-carbon generation assets at scale;
 - > Security of supply (geographically and technologically diverse supplies);
 - > Affordability of energy; and
 - > Development of supply chains and creation of socio-economic opportunities.
- 1.1.6 The Array will make an essential contribution to increasing Scottish low-carbon energy supply. Maximising the generating capacity of the Array will provide the greatest possible support to Scotland to achieve its legally binding Net Zero commitment by 2045, and to the UK to achieve the same by 2050.
- 1.1.7 Ossian also offers an important opportunity to improve the critically important national policy objective of ensuring UK energy security. If developed, the energy generated by the Array would reduce the UK’s dependency on foreign energy imports.
- 1.1.8 Given also that electricity generated by floating wind is not dependent on input fuels, the price of the electricity it generates, will provide a shield for electricity consumers against volatile international fuel markets and reduce the UK’s exposure to their effects. Ossian therefore offers substantial benefits to UK consumers.
- 1.1.9 Reducing the UK dependency on hydrocarbons is essential and delivering renewable electricity from the early 2030’s would make a substantive step forward in that objective.

- 1.1.10 Economies of scale in floating wind projects and more generally across offshore wind supply chains in the coming years, are anticipated to make a positive impact on the cost of electricity generated. Maximising the generating capacity of the Array will provide the greatest possible opportunity to secure economies of scale for the project and for the sector. This will also be to the benefit of consumers.

Policy Appraisal

- 1.1.11 The Array has been appraised against the relevant energy and planning policy framework. In addition to the energy policy considerations referenced above, the policy appraisal set outs that although some significant environmental impacts are identified, these need to be viewed in the context of the nature and scale of a floating offshore wind development project in the East 1 Plan Option area and in relation to proposed mitigation. It is considered that the adverse impacts that do arise, are outweighed by the benefits that would result.
- 1.1.12 Alternatives have been carefully considered and ruled out for robust reasoning.
- 1.1.13 The Applicant's Report to Inform Appropriate Assessment (RIAA) has concluded that there isn't a potential adverse effect on integrity (AEOI) in respect of seabirds from Array alone but that there is AEOI in combination with other projects.
- 1.1.14 Given this position, it is deemed necessary for the Applicant to provide the requisite information and justification (the Derogation Case) to satisfy the HRA Derogation Provisions under the Habitats Regulations in respect of the species for which an AEOI has been identified.
- 1.1.15 The assessment set out by the Applicant, in terms of the balance to be struck, is that there is an imperative overriding public interest in authorising the Array to further the fundamental policy objectives it will serve, which it is considered demonstrably outweighs the AEOI which is predicted in respect of the identified SPAs.

Conclusions & the Planning Balance

- 1.1.16 A planning appraisal involves the striking of a balance between likely significant adverse effects of the Array, the extent to which they can be adequately mitigated and consideration of project benefits. Alongside the effects of the Project identified through the EIA process and reported in the EIA Report, key benefits will include:
- > With the potential capacity to generate up to **3.6 GW**, the Ossian project is one of the largest offshore wind farms currently in development. The Array will be a substantial infrastructure asset, capable of making a significant near-term contribution to decarbonisation objectives in the 2030s by delivering substantial amounts of low-carbon electricity – enough to power up to **6 million homes** each year.
 - > Ossian will contribute significantly to meeting climate change emission reduction targets from the early 2030s. The 2030 global emissions reduction ambition 'gap' will be closed only by bringing forward such projects which connect as much capacity as possible as early as possible. Over its lifecycle the electricity generated by the Project will save up to **143,082,086 tCO₂e** from being emitted into the atmosphere that would otherwise have been emitted from conventional, higher carbon emitting forms of energy generation (i.e. fossil fuels).
 - > The British Energy Security Strategy (April 2022) aims for 50GW of offshore wind deployment by 2030. However, it is clear that the need for a secure electricity system will continue beyond 2030, both to meet future electricity needs and potentially to make up for generation capacity which has not been delivered by that time.

- > Ossian will contribute significantly to security of supply for the UK through the provision of large quantities of low-carbon, UK-generated electricity over its projected life. The development of large-scale offshore wind in Scotland also provides an opportunity to provide electrical energy to support plans for a Scottish hydrogen electrolysis industry. Hydrogen brings forward the possibilities for inter-seasonal energy storage, clean flexible generation and the decarbonisation of homes and industry as a substitute for natural gas.
- > Ossian will also contribute materially to the economic and social landscape in Scotland and the UK and will provide substantial employment opportunities and skills development, particularly in coastal communities, whilst also playing a major role in supporting Scotland and the UK's supply chains for offshore wind.
- > Economic benefits through the creation of jobs, work-force upskilling and investment in supply chain are also expected from the construction, operation, and maintenance of Ossian Wind Farm. Such benefits live on beyond the immediate construction of the project and can provide a long-lasting legacy (e.g. skilled workers who go on to work on successive offshore wind projects in the years and decades to come). Key economic benefits include:
 - The Array is expected to result in [REDACTED] worth of construction-related contracts in Scotland and [REDACTED] worth of contracts in the UK (including Scotland) out of a total of [REDACTED] in expenditure.
 - The Array is expected to generate substantial economic activity and employment, particularly associated with the manufacture of floating foundations in Scotland. It was estimated that in the peak year this could support 6,340 jobs in Scotland and 11,210 jobs in the UK, (including Scotland).
 - There would also be port-specific impacts at the main construction and operation and maintenance ports. This includes an economic impact, supporting a peak direct employment of around 240 jobs at the main construction port and an annual direct employment impact of 70 jobs at the main operation and maintenance port.
 - In addition to the impact of the Array there is also expected to be a wider impact of the Ossian project as a whole, which is expected to represent expenditure of [REDACTED] (including the Array).
- > Ossian is compatible with Scottish and UK planning and energy policies and would substantially help attain policy objectives, serving the public interest.
- > Maximising the capacity of generation in the resource-rich, accessible, and technically deliverable Ossian location, is to the benefit of all GB consumers, and the wind industry generally.

1.1.17 It is considered that the overall policy appraisal presented in this Planning & Need Statement demonstrates a compelling case that the Array would deliver significant benefits in the wider public interest. The Array has been designed and assessed in full accordance with relevant legislative requirements and the underlying aims and objectives of the policy framework.

1.1.18 Overall, the Array can substantially contribute to both the Scotland and the UK's legally binding climate change targets by helping to decarbonise energy supply, whilst also contributing to the essential tasks of ensuring security of supply and providing low-cost energy for consumers in line with the Scotland and UK Government's national policies.

1.1.19 The Array will also contribute materially to the economic and social landscape in Scotland and the UK as it can provide substantial employment opportunities and skills development, particularly in coastal communities, whilst also playing a major role in supporting Scotland and the UK's supply chains. Ossian has developed a Supply Chain Development Statement which aims to achieve a minimum of 62% UK content in the supply chain, with the vast majority located in Scotland.

- 1.1.20 It must follow from the above that the benefits that would arise from the Array should be afforded substantial weight in the planning balance. The delivery of this renewable generating infrastructure will substantially assist in the delivery of the Net Zero policy imperative.
- 1.1.21 Consideration of the application will involve striking a balance between the need for the Array, its benefits, and the mitigation of (and compensation above and beyond) predicted adverse environmental effects. This Planning and Need Statement provides evidence which supports the Applicant's conclusion that the substantial, clear and compelling benefits of the Array outweigh any potential individual or cumulative adverse effects.
- 1.1.22 For all the above reasons the Section 36 consent and Marine Licence applications should be granted.

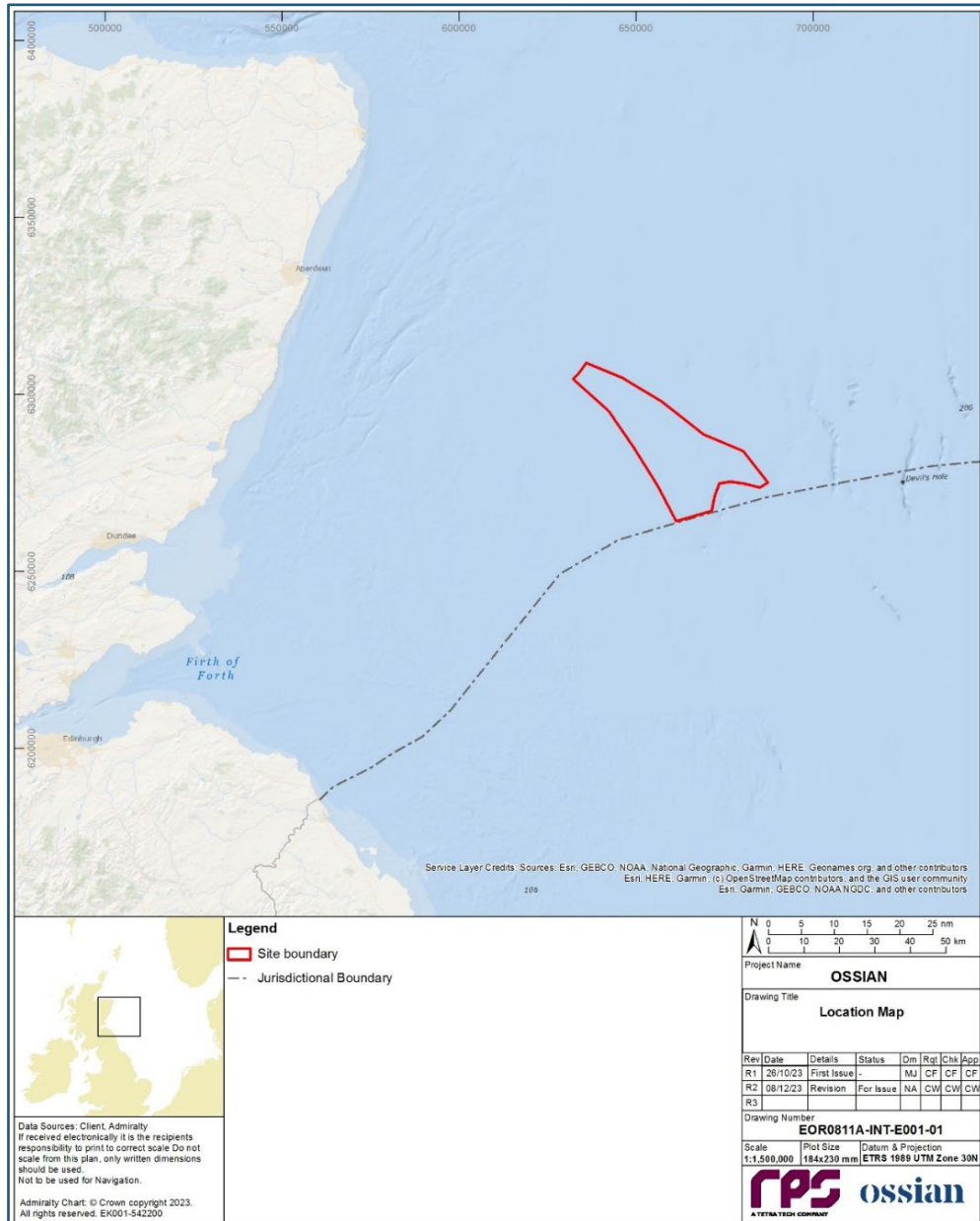
1. Introduction

1.1 Background

- 1.1.1 This Planning & Need Statement has been prepared on behalf of Ossian Offshore Wind Farm Limited (Ossian OWFL). Ossian OWFL (hereinafter referred to as the 'Applicant') is a joint venture between SSE Renewables (SSER), Copenhagen Infrastructure Partners (CIP) and Marubeni Corporation.
- 1.1.2 In January 2022, Ossian OWFL was awarded an Option to Lease Agreement to develop Ossian, an offshore wind farm within the E1 East Plan Option (PO) Area as part of the ScotWind Leasing Round. This development (hereafter referred to as 'Ossian' and 'The Project').
- 1.1.3 Crown Estate Scotland (CES) launched the first ScotWind Leasing Round in June 2020. This leasing round gave developers the opportunity to apply for the rights to build offshore wind farms in designated PO areas in Scottish waters. The ScotWind application window for all registered applicants opened in January 2021, with the window closing in July 2021. Option to Lease Agreements were offered in January 2022, with the Applicant being awarded the opportunity to develop within the E1 East PO Area in this Leasing Round. With all Option to Lease Agreements finalised, the total generation capacity of the 20 ScotWind projects stood at just under 27.6 GW (Crown Estate Scotland, 2022), although full delivery of that capacity cannot be guaranteed until all projects achieve consent and funding commitments.
- 1.1.4 The offshore generation elements of the Project, herein referred to as the 'Array' comprises an offshore wind farm located off the east coast of Scotland, approximately 80 km south-east from the nearest point of Aberdeen. The Array is located within the Site Boundary, as shown on Figure 1.1 and includes the offshore infrastructure required to generate electricity including the wind turbines (including their floating substructures, as well as the mooring and anchoring systems), the fixed bottom Offshore Substation Platforms (OSPs)/Offshore Transformer Modules (OTMs), and inter-array and interconnector cables.
- 1.1.5 This Planning & Need Statement is submitted in support of the applications for consent for the Array submitted under Section 36 of the Electricity Act 1989 (as amended) and the applications for Marine Licences under the Marine and Coastal Access Act 2009 for the Array (as described in the EIA report and accompanying application documents).
- 1.1.6 An Environmental Impact Assessment (EIA) has been undertaken and an EIA Report has been submitted in support of the Array in accordance with the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (as amended) and The Marine Works (Environmental Impact Assessment) Regulations 2017 (as amended).
- 1.1.7 A Habitats Regulations Appraisal (HRA) has also been completed as required under the Conservation of Offshore Marine Habitats and Species Regulations 2017 (referred to as the 'Habitats Regulations').
- 1.1.8 For the Array, the Applicant will seek the following consents, licences, and permissions:
- > A Section 36 consent under the Electricity Act 1989 for an offshore generating station in the Scottish offshore region (12 to 200 nm) where generating capacity exceeds 50 MW; and
 - > Two Marine Licences under the Marine and Coastal Access Act 2009 (MCAA) (Scottish waters beyond 12 nm) for the following:
 - generating station (wind turbines, including their floating substructures and mooring and anchoring systems and inter-array cables); and
 - transmission infrastructure (OSPs/OTMs and interconnector cables within the site boundary).

1.1.9 This Planning & Need Statement provides an assessment of the Array against the relevant marine planning and renewable energy policy framework and relevant provisions of the national planning policy, insofar as the latter is relevant to offshore developments. This Statement is supplementary to, and separate from the EIA Report, and both documents should be read in conjunction.

Figure 1.1: Location of the Array



1.2 The Applicant

1.2.1 The Applicant holds vast experience in the renewables sector and an ever-growing portfolio in the offshore wind sector, as described in chapter 1, Section 1.3.1 of the EIA Report and summarised briefly below.

- 1.2.2 SSER is a leading developer, owner, and operator of renewable energy headquartered in the UK and Ireland, with a growing international presence. SSER's portfolio consists of around 4 GW of onshore wind, offshore wind, and hydro. SSER is part of the FTSE-listed SSE plc, with a strategy to lead the transition towards net zero through world class development, construction, and operation of clean power assets across a diverse mix of renewable technologies.
- 1.2.3 Founded in 2012, Copenhagen Infrastructure Partners (CIP) is the world's largest dedicated fund manager within greenfield renewable energy investments and a global leader in offshore wind. The funds managed by CIP focus on investments in offshore and onshore wind, solar PV, biomass and energy-from-waste, transmission and distribution, reserve capacity, storage, advanced bioenergy, and Power-to-X. CIP manages 12 funds and has to date raised approximately EUR 26 billion for investments in energy and associated infrastructure from more than 150 international institutional investors.
- 1.2.4 Marubeni played a key role, in conjunction with Akita Offshore Wind Corporation, in delivering the first large scale fixed bottom offshore wind farm in Japan with their projects at Akiko Port and Noshiro Port in the Akita Prefecture. Marubeni brings a wealth of sector experience of delivering floating offshore wind to the consortium, including leading floating offshore wind demonstration projects in Japan with five different floating foundations.

1.3 Project Description

Overview

- 1.3.1 Volume 1, chapter 3 of the EIA Report provides a detailed description of the proposed development, which comprises the Array of Ossian Offshore Wind Farm.
- 1.3.2 The description is based on design work undertaken to date and current understanding of the associated environment from site-specific survey work. Individual components of the n Array, and associated activities with construction, operation and maintenance and decommissioning are described.
- 1.3.3 The Application, and EIA Report has been prepared for the Array only: The Proposed offshore export cable corridor(s) and the Proposed onshore transmission infrastructure (comprising the Proposed onshore export cable corridor(s), Proposed onshore converter station and the Proposed landfall location(s)) associated with Ossian will be subject to separate EIA Scoping Report(s), EIA Report(s) and consent applications in the future.
- 1.3.4 Volume 1, chapter 4 of the EIA Report provides information on the site selection and consideration of alternatives for the Array, based on analysis and consideration of various constraints.
- 1.3.5 Key components of the Array include, in summary:
- > up to 265 floating wind turbines (each comprising a tower section, nacelle, hub and three rotor blades) and associated floating foundations;
 - > mooring and anchoring systems for each floating foundation;
 - > connectors and ancillaries for mooring and anchoring systems, including buoyancy elements and clump weights;
 - > up to six large OSPs, or up to three large OSPs and up to 12 small OSPs with fixed jacket foundations;
 - > scour protection for wind turbine anchoring systems;
 - > scour protection for small and large OSP fixed foundations as required;

- > a network of dynamic/static inter-array cabling linking the individual floating wind turbines to OSPs, and interconnector cables between OSPs (approximately 1,261 km of inter-array cabling and 236 km of interconnector cabling); and
- > discrete condition monitoring equipment (such as sensors, cameras, dataloggers etc.), as required for safe and efficient operation of the Array infrastructure.

1.3.6 Mooring and anchoring systems will be used to fix up to the floating wind turbines. There will be up to 15 OSPs/OTMs using piled jackets or suction caisson jackets foundations installed in the Array. Subsea inter-array cables will connect the wind turbines to each other and to the OSPs/OTMs, while interconnector cables will connect the OSPs/OTMs to each other.

1.3.7 At this stage the overall capacity for the Ossian Array is not defined. However, based on current estimates the exported capacity for the Array is expected to be up to 3.6 GW, subject to the number and capacity of the wind turbines installed within the parameters of the Project Design Envelope (PDE). The most suitable locations for wind turbines will be determined through detailed site investigation works, which will also further improve understanding of the extent of the area for development. This will allow for the refinement and confirmation of the Array generating capacity prior to construction.

1.3.8 The construction activities associated with the Array are expected to last for up to 96 months and are anticipated to commence in 2031. The decommissioning process is likely to follow a similar programme to construction, in a reverse manner. The operational life of the Array is expected to be 35 years.

Grid Context

1.3.9 The Net Zero Strategy (October 2021) set out the UK Government's key policy to power the UK entirely by clean electricity, subject to security of supply, by 2035, on route to achieving a net zero society by 2050, means increasing the generation of low-carbon electricity above today's levels, and enabling it to be transmitted to where it is needed. In 2024 National Grid Electricity System Operator (ESO) published *Beyond 2030*, which builds on their 2022 Holistic Network Design (HND) and facilitates the connection of 21GW of offshore wind directly as a result of the ScotWind leasing round, in addition to the 23GW of offshore wind connections facilitated in the HND.

1.3.10 The actions required to deliver a zero-carbon electricity system should not be underestimated, partly because of the large number of concurrent developments, uncertainties around their delivery timings, and the potential to optimise the connection of these developments through shared transmission infrastructure. Reducing uncertainties in relation to which projects require connection, and when, is likely to simplify network planning activities and may allow for focussed and prioritised infrastructure delivery to support achieving the Scottish and UK Governments' net zero ambitions in a cost effective and timely manner.

1.3.11 The Applicant is bringing this project forwards in its proposed form with the ambition of achieving a fully consented development that provides a firm input to National Grid's transmission development plans at the earliest available opportunity.

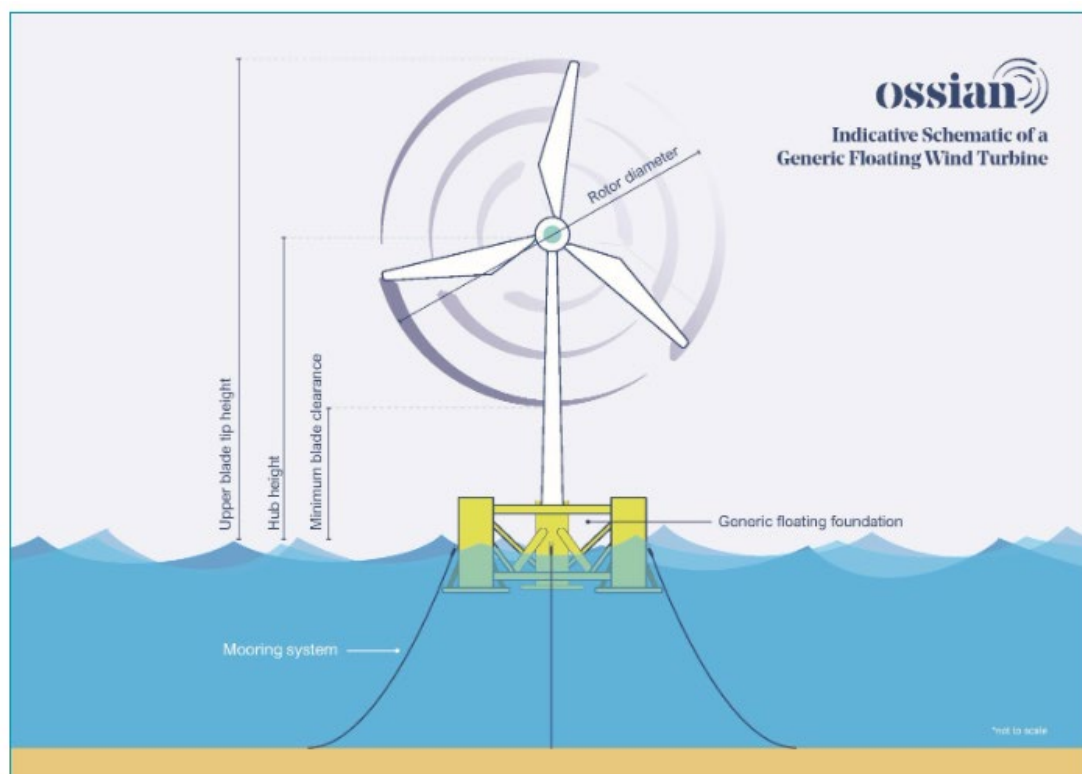
1.3.12 For the avoidance of doubt, this means that the Array includes those elements described in this Section of this Statement. However, consent is not sought under this application for the transmission infrastructure which connects the OSPs to the National Grid (see paragraph 1.3.3).

The Array – Key Elements

Floating Wind Turbines

- 1.3.13 A range of wind turbine parameters are provided which account for varying generating capacities of wind turbines considered within the PDE. The wind turbine parameters for which consent is being sought, represent the maximum parameters – e.g. maximum rotor blade diameter and maximum blade tip height.
- 1.3.14 Floating wind turbines will comprise a tower section, nacelle hub and three rotor blades, and will be attached to a floating foundation.

Figure 1.2: Indicative Schematic of a Generic Floating Wind Turbine



- 1.3.15 **Table 1.1** provides a summary of the Maximum Design Envelope for the Floating Wind Turbines.

Table 1.1: Maximum Design Envelope: Floating Wind Turbines

Parameter	Maximum Design Envelope
Maximum number of floating wind turbines	Up to 265
Maximum blade clearance above LAT (m)	36
Maximum blade tip height above LAT (m)	399
Maximum hub height above LAT (m)	224
Maximum rotor diameter from smallest wind turbine option in PDE (m)	236
Maximum rotor diameter for largest wind turbine option in PDE (m)	350
Maximum number of blades	3
Maximum wind turbine spacing (m)	1,000 in all directions
Maximum wind turbine spacing (m)	4,200 in all directions

1.3.16 A scheme of lighting and navigation marking will be developed and agreed with relevant consultees post-consent decision.

1.3.17 The Wind Turbine layout will be developed to effectively make use of the available wind resource and suitability of seabed conditions, whilst adopting mitigation measures to reduce adverse environmental likely significant effects on other marine receptors. Indicative wind turbine layouts are presented in figures 3.3 and 3.4 of the EIA Report, volume 1, chapter 3.

Foundations and Support Structures

1.3.18 The Array will utilise floating foundations which require mooring and anchoring systems to maintain station. Full details of the options for these structures are provided in volume 1, chapter 3 of the EIA Report. Two key types of floating foundation solution are being considered for the Array:

- > Semi-submersible; and
- > Tension Leg Platform.

1.3.19 The Maximum Design Envelope for the floating foundations are noted in **Table 1.2** below:

Table 1.2: Maximum Design Envelope: Floating Foundations

Parameter	Max Design Envelope
Foundation type considered	Steel or concrete floating semi-submersible substructure Steel or concrete floating TLP
Max number of floating foundations	265
Max floating foundation surface dimensions (m)	140 x 140
Max dept of structure (draft) in the water column (m)	40
Maximum excursion limit of foundations horizontally across sea surface (m)	140
Shape of foundation	Polygonal

- 1.3.20 The floating foundations are connected to the seabed via mooring and anchoring systems. Mooring lines run from the floating foundations, through the water column, to an anchoring system which maintains station of the foundation. The mooring line will connect to the floating foundation at a point below the splash zone, nominally set at 5 m below the sea surface. The point at which the mooring line reaches the seabed is referred to as the touchdown point. There are various approaches to the utilisation of mooring lines, and this is described in detail in the EIA Report volume 1, chapter 3.
- 1.3.21 Mooring lines must be anchored, and again various solutions are available as described in detail within the EIA Report Volume 1 chapter 3. The Applicant is considering the installation a maximum of between six and nine anchors per floating foundation, dependant on the size of the turbines within the PDE. It is noted that the final mooring line solution selected may vary across the site and will be dependent upon the anchoring solution chosen.
- Various anchor solutions are being considered and scour protection may be required, this is described in more detailed within the Project Description, EIA Report volume 1, chapter 3. Offshore Substation Platforms (OSPs)
- 1.3.22 The OSFs serve to transform the electricity generated by the wind turbines to a higher voltage and / or to direct current allowing the power to be efficiently transmitted directly to shore or to a wider offshore grid network. Two options have been defined for OSF arrangements within the Array. The exact number and size of OSFs will be subject to National Grid (NG) Electricity System Operation Limited (ESO) final design recommendations and detailed design. The overall size, footprint and piling parameters and key design features are all set out within EIA Report volume 1, chapter 3.
- > OSF Option 1 comprises up to six large High Voltage Alternating Current (HVAC)/High Voltage Direct Current (HVDC) OSFs; and
 - > OSF Option 2 is a combined option comprising:
 - Up to three large HVAC/HVDC OSFs; and
 - Up to 12 small HVAC OSFs.
- 1.3.23 A full description of the maximum design envelopes for these structures, including their foundations and scour protection is provided within EIA Report volume 1, chapter 3.

Subsea Cables

- 1.3.24 Inter-array cables carry the electrical current produced to an OSP. It is proposed that dynamic inter-array cables will be used so as not to hinder the movement of the floating foundations. The most likely type of cable to be used is a 'lazy-S' configuration which allows extension of the cables in response to the floating foundation movements. Buoyancy modules are attached to the dynamic inter-array cable to support the weight of the cable and provide the configuration in the water column. Full details and figures are provided in the EIA Report volume 1, chapter 3.
- 1.3.25 Different approaches and techniques are available for burial of the inter-array cables laid on the seabed. The final choice will be subject to a review of the seabed conditions and a Cable Burial Risk Assessment (CBRA).
- 1.3.26 In addition, subsea junction boxes may be installed on the seabed which would serve as a single connection point for inter-array cables from several wind turbines. Again, there are several configurations which may be used, and these are set out in detail within the EIA Report and Maximum Design Envelopes are provided.
- 1.3.27 Further details as to additional infrastructure to support subsea cables is also described in detail within the EIA Report including interconnector cables to connect OSPs to one another and to provide redundancy should there be any failures in the transmission system and External Cable Protection methods to restrict movement and protect exposure over the lifetime of the Array.

Site Preparation

- 1.3.28 Prior to construction of the Array, a number of site preparation activities will be required. It is assumed that site preparation works will continue throughout the construction phase as required. A summary of the key activities is provided at Section 3.3 of EIA Report volume 1, chapter 3. The key activities include:
- > Pre-Construction Surveys;
 - > Clearance of Unexploded Ordnance;
 - > Sand Wave Clearance;
 - > Boulder Clearance; and
 - > Vessels for Site Preparation Activities.

Construction Ports

- 1.3.29 Fabrication of components for the Array infrastructure is likely to occur in a number of manufacturing sites including those located within Scotland, the United Kingdom and Europe. It is likely components will be transported to final assembly yards on the east coast of Scotland for final fabrication or integration before being towed to the Array.
- 1.3.30 It is anticipated that all components will be transported to the Array for installation via sea transport using vessels and associated equipment. It is not anticipated that large components will be transported via road.
- 1.3.31 At the time of writing the EIA Report, the Applicant is yet to determine which construction port(s) will be used for the storage, fabrication, pre-assembly, and delivery of the infrastructure. Port selection will consider logistics to reduce towing distance of foundations and integrated turbines as far as practicable. It is anticipated that port(s) on the East coast of Scotland will be utilised, where possible.

1.3.32 In order to assess a maximum design, the EIA Report considers a maximum number of vessels and vessel movements to/from site, where relevant from the east coast of Scotland or England.

Construction Phase

1.3.33 The construction of the Array is expected to occur over a period of eight years cumulatively aligning with the following indicative construction series:

- > Anchoring and Mooring installation;
- > OSP topsides and fixed jacket foundations installation / commissioning;
- > Inter-Array and interconnector cables installation, including burial and/or protection, where required; and
- > Floating wind turbine and floating foundation installation / commissioning.

1.3.34 A detailed description of these activities is provided at Section 3.4, volume 1, chapter 3 of the EIA Report.

1.4 Structure of this Planning & Need Statement

1.4.1 This Planning & Need Statement has been structured as follows:

- > **Chapter 2** provides a description of the relevant statutory and legislative provisions that apply to the consenting process for the Array.
- > **Chapter 3** sets out the climate change and renewable energy policy framework and need case for the Array.
- > **Chapter 4** provides a summary appraisal of predicted significant environmental effects reported in the EIA Report and provides overall conclusions regarding policy matters.
- > **Chapter 5** provides a description and assessment of the key benefits of the Array; and
- > **Chapter 6** provides overall conclusions.

2. Statutory Considerations

2.1 Introduction

2.1.1 This Chapter provides a description of the relevant legislative provisions that apply to the determination of the application for Section 36 Consent and the associated Marine Licences. These provisions define the matters that the decision maker must have due regard to when reaching their decision on the applications. As noted, this Planning & Need Statement applies only to the offshore generation aspects of the Project and associated transmission infrastructure seaward of the mean high water spring (MHWS) which are the subject of the current applications, namely the wind turbines, their foundations and substructures, inter-array cables, cabling up to and onto the offshore substation platforms.

2.1.2 The following legislation is applicable for the consents and licences required for offshore electricity generation projects that are located in offshore waters:

- > The Electricity Act 1989 (as amended);
- > The Marine and Coastal Access Act 2009;
- > The Energy Act 2004; and
- > The Conservation of Offshore Marine Habitats and Species Regulations 2017 (as amended).

2.2 The Electricity Act 1989 (as amended)

2.2.1 The Electricity Act 1989 provides the primary consent required to allow the construction and operation of a proposed offshore wind farm (the generating station). An application for consent under Section 36 of the Act has been submitted and requires to be assessed in accordance with Schedules 8 and 9 of the 1989 Act.

2.3 The Marine and Coastal Access Act 2009

2.3.1 The Marine and Coastal Access Act 2009 (MCAA) sets a requirement for a Marine Licence.

2.3.2 Scottish Ministers have responsibility for licensing activities taking place within the Scottish Offshore Region (12-200nm) (which includes the Ossian Array area).

2.3.3 Section 58 of the MCAA requires that *“(1) A public authority must take any authorisation or enforcement decision in accordance with the appropriate marine policy documents unless relevant considerations indicate otherwise. (2) If a public authority takes an authorisation or enforcement decision otherwise than in accordance with the appropriate marine policy documents, the public authority must state its reasons”*.

2.3.4 Section 69 of the MCAA confirms the matters to be considered in determining licence applications and these include:

- > The need to protect the environment;
- > The need to protect human health;
- > The need to prevent interference with legitimate users of the sea, and such other matters as the authority thinks relevant and
- > To have regard to any representations received from any person having an interest in the outcome of the application.

2.3.5 Consideration of these matters has informed the EIA and the mitigation proposed to reduce identified likely significant effects. This is presented fully within the EIA Report submitted in support of the application. A summary assessment of these findings in the context of the legislative framework forms the focus of this Planning & Need Statement.

2.4 The Energy Act 2004

2.4.1 The Energy Act 2004 introduced provision for safety zones to be declared around offshore renewable energy installations, during construction and operation. It is a criminal offence for a vessel to enter a safety zone unless it is a permitted vessel or it is acting in an emergency situation.

2.4.2 The safety zone scheme as set out in the Energy Act 2004 and the Electricity (Offshore Generating Stations) (Safety Zones) (Applications Procedures and Control of Access) Regulations 2007 applies to waters in the UK REZ. This scheme applies to all Offshore Renewable Energy Installations (OREIs) but not to export cables or inter-array cables. (The Scotland Act 2016 amends the Energy Act 2004, transferring functions to Scottish Ministers in relation to the declaration of safety zones in Scottish offshore waters). It is the intention that applications in this regard will be progressed post the submission of the main application.

2.4.3 The Energy Act 2004 also introduced a decommissioning regime for offshore wind and marine energy installations (as amended by the Energy Act 2008 and the Scotland Act 2016) ('the Energy Act'). Scottish Ministers may require a person who is responsible for these installations in Scottish Waters, or in a Scottish part of a REZ to prepare and carry out a costed decommissioning programme for submission to and approval by Scottish Ministers.

2.4.4 The decommissioning programme for the Array would be informed by the EIA Report and a final draft submitted to Scottish Ministers for approval.

2.4.5 Further details on the decommissioning programme content and scope of requirements are contained within the EIA Report. The approach is wholly consistent with the Energy Act 2004 requirements.

2.5 The Habitats and Birds Directive

2.5.1 Council Directive (92/43/EEC) (the Habitats Directive) and European Directive (2009/147/EC) on the conservation of wild bird (The Birds Directive) were transposed into UK law (as relevant to the Scottish area of the Renewable Energy Zone by the Conservation of Offshore Marine Habitats and Species Regulations 2017 (as amended). This is referred to as the Habitat Regulations.

2.5.2 The Habitats Regulations require a Habitats Regulations Appraisal (HRA) to be conducted by the competent authority before a plan or project that is likely to have a significant effect on a designated site can be given consent.

2.5.3 Despite the UK no longer being an EU State Member the Habitats Regulations continue to provide a legislative backdrop for HRA in the UK, and the UK is currently bound by HRA judgements handed down by the Court of Justice of the European Union (CJEU) prior to 31st December 2020.

2.5.4 In accordance with the Habitat's Regulations, where HRA screening has identified a likely significant effect (LSE) on a designated site, further information is required to enable the competent authority (in this case Scottish Ministers) to carry out an appropriate assessment to determine whether there is potential for the project to have an adverse effect on the integrity (AEOI) of a designated site. Where the appropriate assessment concludes that there is a risk of AEOI on a designated site, further steps are undertaken as part of the HRA process including assessment of potential alternative solutions, examination of imperative reasons of overriding public interest (IROPI) for the plan to proceed, and consideration of necessary compensatory measures. These steps are referred to as the derogation process.

- 2.5.5 The Applicant has prepared a Report to Inform Appropriate Assessment (RIAA) for submission as part of the application for the Array. The RIAA presents information on the assessment of the effects of the Array on all relevant designated sites.
- 2.5.6 This assessment concludes that the Array, in combination with other plans and project, will have an AEIOI in the qualifying features of seven SPAs on three species (none of which are priority species as defined by the Habitat Directive). However, in the backdrop of climate change and in the pursuit of energy security, the reasons for the Array are imperative and in the long-term public interest. These reasons are overriding when weighted against the conservation interests of the qualifying features of the affected designated sites. This position is emphasised when the contribution of the Array to decarbonisation is considered against the overriding threat of climate change on these species.
- 2.5.7 A derogation case has been provided with the Array application due to the identified risk of AEIOI on designated sites. As part of the derogation case, the Applicant has demonstrated that there are no alternative solutions to the Array, that there are imperative reasons of overriding public interest (IROPI) for the project to proceed, and that necessary compensatory measures can be secured.
- 2.5.8 The derogation case documents also demonstrate that the necessary compensation measures would more than adequately compensate for the predicted levels of impact identified for the seven sites and three species where AEIOI has been concluded under the Scoping Approach. This will ensure that the overall coherence of the national site network is maintained.

2.6 European Protected Species Licence

- 2.6.1 European Protected Species (EPS) are animals and plants (listed in the Habitats Directive and referred to in the Habitats Regulations) that are provided protected under the Habitats Regulations. All cetacean species (whales, dolphins and porpoise) are EPSs. A licence is required for any activity that is likely to cause disturbance or injury to an EPS. EPS licences are obtained from NatureScot or the Scottish Ministers depending on the reason for the licence application. The grant of these licences is separate to the main Section 36 and Marine Licence Application process. Activities which can be licenced under EPS licences includes those such as subsea noise disturbance due to piling construction activities.
- 2.6.2 EPS licences will be sought in due course, post-consent, if required.

2.7 Marine Protected Area Regulations

- 2.7.1 The MCAA introduced provisions for the identification, designation and management of Nature Conservation Marine Protected Areas (ncMPAs). Under section 126 of the MCAA, Marine Directorate – Licensing Operations Team (MD-LOT), as the public authority, is obliged to consider if an activity is capable of affecting (other than insignificantly) a protected feature or features in a ncMPA or any ecological or geomorphological process on which the conservation of any protected features in an ncMPA is dependent. In such circumstances authorisations must not be granted unless the person applying for the authorisation can satisfy the authority that:
- > There is no significant risk of the activity hindering the achievement of the conservation objectives for the ncMPA; or,
 - > There is no other means of proceeding with the activity which would create a substantially lower risk of hindering the achievement of those objectives, that the benefit to the public of proceeding with the act clearly outweighs the risk of damage to the environment that will be created by proceeding with it, and that the person will undertake measures of equivalent environmental benefit to the damage which the act will, or is likely to have on the ncMPA concerned.

- 2.7.2 If the authority considers that there is, or may be, a significant risk, then they must notify the appropriate statutory conservation bodies of that fact (e.g. NatureScot (for ncMPAs within 12 nm), or the Joint Nature Conservation Committee (JNCC) (for ncMPAs out with 12 nm).
- 2.7.3 Relevant information and assessment in this regard is contained within the EIA Report. There are no direct interactions with MPAs as part of the Array.

3. The Climate Change & Renewable Energy Policy Framework

3.1 Introduction

- 3.1.1 This Chapter sets out the climate change and renewable energy policy framework. Reference is made to International, UK Government, and Scottish Government climate change and renewable energy policies and targets. The Chapter also clearly sets out the relevant requirements of UK and Scottish Marine Policy as it is relevant to marine renewables, and how this is related to the wider renewable energy policy framework. This Chapters draws upon the Ossian Wind Farm, EIA Report, volume 1, chapter 2 (Policy and Legislation).
- 3.1.2 Reference is also made to the marine policy framework at both the UK and Scottish Government levels.
- 3.1.3 Notwithstanding the importance of the international policy framework for renewables and green energy, it is the UK and Scottish climate change, renewables and marine policies that are the most relevant elements of the overall framework under which to assess and determine the Array.
- 3.1.4 The framework discussed below is a relevant material consideration to be afforded substantial weight in the determination of the Section 36 application and the associated Marine Licences.

3.2 Climate Change & Renewable Energy Policy: International Commitments

The Paris Agreement (2016)

- 3.2.1 In December 2015, 195 countries adopted the first ever universal, legally binding global climate deal at the Paris Climate Conference (COP21). The Paris Agreement within the United Nations Framework Convention on Climate Change sets out a global action plan towards climate neutrality with the aims of stopping the increase in global average temperature to well below 20C above pre-industrial levels, and to pursue efforts to limit global warming to 1.5 °C.
- 3.2.2 Moving to a low carbon economy is a globally shared goal and will require absolute emission reduction targets. The UK Government's commitment under the Paris Agreement links through to the Climate Change Committee's (CCC) advice to both the UK and Scottish Governments on 'net zero' targets which have now, at both the UK and Scottish levels, been translated into new legislative provisions and targets for both 2045 (Scotland) and 2050 (UK). This is referred to below.
- 3.2.3 The Paris Agreement does not itself represent Government policy in the UK or Scotland. However, the purpose of domestic and renewable energy and GHG reduction targets is to meet the UK's commitment in the Paris Agreement.

UN Emissions Gap Report (2023)

- 3.2.4 The UN Emissions Gap Report (2023) was published in advance of COP28 and provides the annual independent science-based assessment of the gap between the pledged greenhouse gas emissions (GHG) reductions, and the reductions required to align with the long-term temperature goal of the Paris Agreement. The 2023 Report set out that not only have temperature records continued to be broken, but global greenhouse emissions and atmospheric concentrations of carbon dioxide have increased since 2022. The report sets out that energy is the dominant source of GHG emissions, currently accounting for 86% of global CO2 emissions.

- 3.2.5 The report (page 1) states the world is witnessing a disturbing acceleration in the number, speed, and scale of broken climate records. 2023 is on track to become the warmest year on record.

United Nations Statement (July 2023)

- 3.2.6 The UN issued a statement on 27 July 2023 with regard to increasing global temperatures. The UN Secretary General Antonio Guterres stated that it was “*virtually certain that July 2023 will be the warmest on record*”.
- 3.2.7 The Secretary General stated “*Climate change is here. It is terrifying. And it is just the beginning. The era of global warming has ended, and the era of global boiling has arrived.*”
- 3.2.8 The statement refers to climate conditions in the month of July 2023 as being remarkable and unprecedented, and that there is virtual certainty that the month of July as a whole will become the warmest July on record and the warmest month on record. In addition, the statement sets out that ocean temperatures are at their highest ever level recorded for this time of year [July].
- 3.2.9 The statement also refers to the net zero goal and the Secretary General stated, “*The need for new national emissions targets from G20 members and urged all countries to push to reach net zero emissions by mid-century.*”

COP 28, Dubai (2023)

- 3.2.10 The United Nations Climate Change Conference (COP28) closed on 13 December 2023. The UN press release of the same date states that the agreement reached “*Signals the ‘beginning of the end’ of the fossil fuel era by laying the ground for swift, just and equitable transition, underpinned by deep emissions cuts and scaled up finance.*”
- 3.2.11 The statement adds:
- “The stocktake recognises the science that indicates global greenhouse gas emissions need to be cut 43% by 2030, compared to 2019 levels, to limit global warming to 1.5°C. But it notes parties are off track when it comes to meeting their Paris Agreement goals.*
- The stocktake calls on parties to take actions towards achieving, at a global scale, a tripling of renewable energy capacity and doubling of energy efficiency improvements by 2030. The list also includes accelerating efforts towards the phase down of unabated coal power, phasing out inefficient fossil fuel subsidies, and other measures that drive the transition away from fossil fuels in energy systems, in a just, orderly and equitable manner, with developed countries continuing to take the lead.”* (underlining added)

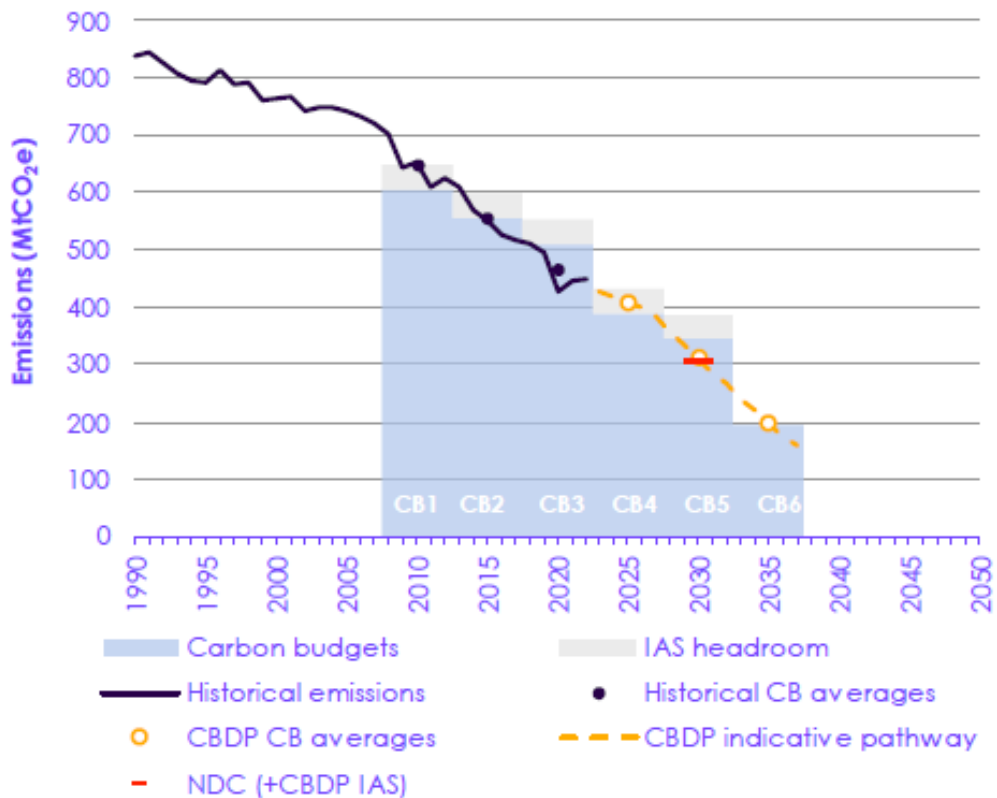
3.3 UK Climate Change & Energy Legislation & Policy

The Climate Change Act 2008 & Carbon Budgets

- 3.3.1 The Climate Change Act 2008 (the 2008 Act) provides a system of carbon budgeting. Under the 2008 Act, the UK committed to a net reduction in GHG emissions by 2050 of 80% against the 1990 baseline. In June 2019, secondary legislation was passed that extended that target to at least 100% against the 1990 baseline by 2050, with Scotland committing to net zero by 2045.
- 3.3.2 The 2008 Act also established the Climate Change Commission (now named the ‘Climate Change Committee’ - CCC) which advises the UK Government on emissions targets, and reports to Parliament on progress made in reducing GHG emissions.
- 3.3.3 The CCC has produced six, five yearly carbon budgets, covering 2008 – 2037. These carbon budgets represent a progressive limitation on the total quantity of GHG emissions to be emitted over the five-year period as summarised in Figure 3.1 below.
- 3.3.4 These legally binding ‘carbon budgets’ act as stepping-stones toward the 2050 target. The CCC advises on the appropriate level of each carbon budget and once accepted by

Government, the respective budgets are legislated by Parliament. All six carbon budgets have been put into law and run up to 2037. It is important to note that the indicative pathway shown in the figure, anticipates emissions in to be higher than the CB4 commitment, and that achieving the Nationally Determined Contribution (NDC) in 2030 requires the UK emit less carbon than the average CB5 commitment.

Figure 3.1: Carbon Budgets and Progress¹



3.3.5 The Sixth Carbon Budget (CB6) requires a reduction in UK greenhouse gas emissions of 78% by 2035 relative to 1990 levels. This is seen as a world leading commitment, placing the UK “decisively on the path to net zero by 2050 at the latest with a trajectory that is consistent with the Paris Agreement” (CCC, The Sixth Carbon Budget, p13).

3.3.6 Page 23 of CB6 refers to the devolved nations and sets out that “UK climate targets cannot be met without strong policy action across Scotland, Wales and Northern Ireland” and recognises that although the main policy levers are held by the UK Government, Scotland can take action through complementary measures at the devolved level including supporting policies such as “planning and consenting”.

3.3.7 Key points from CB6 include:

- > UK climate targets cannot be met without strong policy action in Scotland.

¹ Source: UK historical emissions, the government’s pathway and the UK’s targets [Climate Change Committee, Annual Progress Reports to Parliament (2023), Figure 3.2]. Note: Emissions from international aviation and shipping (IAS) are included in historical emissions and the Carbon Budget Delivery Plan (CBDP) pathway and added to the NDC to allow for a direct comparison, see Para 3.3.23 following.

- > The CCC is clear in setting out that new demand for electricity will mean that electricity demand will rise 50% to 2035 and potentially trebling by 2050.
- > CB6 needs to be met and that will need more and faster deployment of renewable energy developments than has happened in the past.
- > In terms of the expansion of low carbon energy supplies, in the CCC's 'balanced pathway' the low carbon share of generation is 100% by 2035 – the “*largest contribution is from offshore wind reaching the Government's goal of 40² GW in 2030, on a path to 65-125 GW by 2050.*” (page 25).

- 3.3.8 The UK electricity sector has led decarbonisation in the UK to date, and industry estimates are that CO₂ emissions per MWh generated have already fallen to around 25% of their 1990 levels³. This means that the UK will have to look for emissions reductions outside of the electricity sector to meet future carbon budgets. The CCC estimate that to achieve the UK's 2030 Nationally Determined Contribution commitment, the rate of emissions reduction outside the power sector must almost quadruple from what has been achieved so far⁴ and the electrification of those sectors (for example, heat, transport and industry) is a key strategy to reduce emissions.
- 3.3.9 The Array will produce significant quantities of low-carbon electricity which can be used to decarbonise those other sectors.
- 3.3.10 However, electrification must be supplemented by other low-carbon fuels to achieve full decarbonisation of society, including those other sectors. Substituting carbon-intensive fuels such as petrol and gas with hydrogen is a key element of the Government's strategy to decarbonise those sectors, however hydrogen must be produced without emissions for it to be a low-carbon fuel.
- 3.3.11 Low-carbon electricity, such as that produced by the Array, can be used to electrolyse water to produce hydrogen with zero carbon emissions. Hydrogen can then be transported to meet end use demand, or stored and burnt in hydrogen-turbines to generate low-carbon electricity when renewable supplies are insufficient to meet the required levels of demand. **Figure 3.1** shows how important the CCC expect hydrogen to be to the delivery of a net zero energy system in 2050, meeting approximately one sixth of UK annual final energy use in that timeframe.
- 3.3.12 The Array will therefore not only support decarbonisation of the UK's electricity system but will also support the production of hydrogen to decarbonise other sectors and to store low-carbon energy over long periods of time.
- 3.3.13 This is an important point because it provides evidence to support the scale of offshore wind facilities needed in the UK to meet net zero across all end-use sectors. The Array will, if consented, support meeting that need.

The UK Energy White Paper (December 2020)

- 3.3.14 The UK Government Energy White Paper 'Powering our Net Zero Future' (December 2020) sets out that: “*electricity is a key enabler for the transition away from fossil fuels and decarbonising the economy cost-effectively by 2050*”.

² The British Energy Security Strategy (2022) increased the Government's offshore wind capacity goal to 50GW by 2030, including 5GW of floating offshore wind.

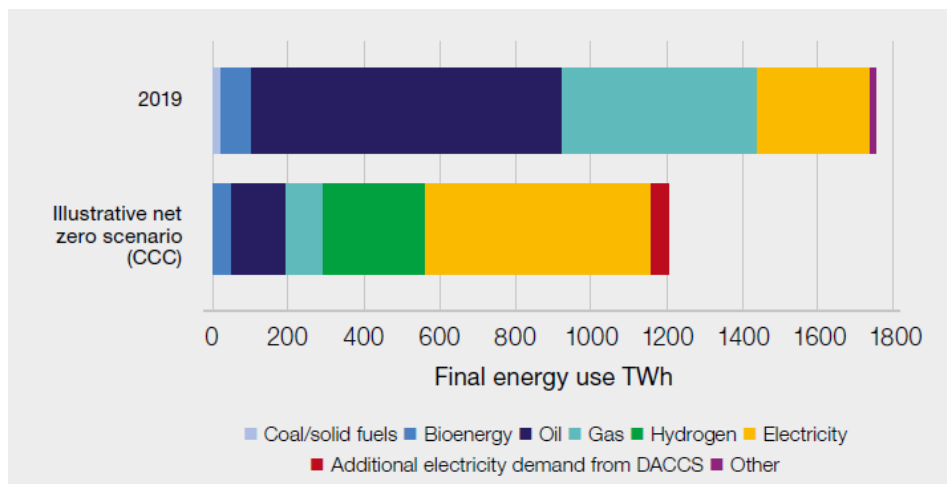
³ (see <https://www.carbonbrief.org/analysis-uk-electricity-from-fossil-fuels-drops-to-lowest-level-since-1957/>).

⁴ Climate Change Committee, Annual Progress Report to Parliament (2023), p13.

3.3.15 It adds a key objective is to “accelerate the deployment of clean electricity generation through the 2020s” (page 38). Electricity demand is forecast to double out to 2050, which will “require a four-fold increase in clean electricity generation with the decarbonisation of electricity increasingly underpinning the delivery of our net zero target” (page 42).

3.3.16 This anticipated growth of renewable electricity is illustrated in the graph below – **Figure 3.2.**

Figure 3.2: Illustrative UK Final Energy Use in 2050



3.3.17 Figure 3.2 illustrates that achieving net zero requires a significant increase in the use of electricity, all of which must be generated from low-carbon sources.

3.3.18 In terms of electricity policy in the White Paper, the UK Government clearly recognises that the scale of change that is required to respond to climate change is at a pivotal point. The anticipation is that there is going to need to be a global green industrial revolution and it is only through this that an appropriate response would be made to tackling climate change issues. Chapter 1 of the White Paper sets out this context and makes clear the likely change in the nature and volume of electricity generation. It recognises the very significant role that renewable electricity generation will play in relation to delivering total energy usage. This means it will have to play a much greater role in decarbonising both transport and heat.

The British Energy Security Strategy (April 2022)

3.3.19 The British Energy Security Strategy (“BESS”) was published by the UK Government on 7 April 2022. The BESS focuses on energy supply and states that in the future nuclear will have an expanded role and that renewables have an important role: the foreword states *inter alia*:

“Accelerating the transition away from oil and gas then depends critically on how quickly we can roll out new renewables.

The growing proportion of our electricity coming from renewables reduces our exposure to volatile fossil fuel markets.

3.3.20 In terms of offshore wind, the BESS states (page 16):

“Our island’s resources, with its shallow seabeds and high winds offers us unique advantages that have made us global leaders in offshore wind and pioneers of floating wind. With smarter planning we can maintain high environmental standards while increasing the pace of deployment by 25%. Our ambition is to deliver up to 50GW by 2030, including up to 5GW of innovative floating wind.

Our history of North Sea oil and gas expertise enables us rapidly to deploy our rich expertise in sub-sea technology and maximise our natural assets. Already, just off the coast of Aberdeenshire, we have built the world's first floating offshore wind farms. There will be huge benefits in the Irish and Celtic Sea. And by 2030 we will have more than enough wind capacity to power every home in Britain.

We will be the Saudi Arabia of wind power, with the ambition that by 2030 over half our renewable generation capacity will be wind, with the added benefit of high skilled jobs abounding these shores. But the development and deployment of offshore wind farms still takes up to 13 years.

On planning, these projects tend to have public support, and ultimately benefit the environment because they help reduce the damage to habitats that is caused by climate change.

On cost, the unit cost of offshore wind power has fallen by around two-thirds. The Contracts for Difference scheme has shared the risks of investing in new technologies to boost UK renewables and bring in billions of pounds of private investment.

On jobs, our technological leadership is delivering high skilled, high wage British jobs. Our increased ambition means we expect the sector will grow to support around 90,000 jobs by 2030."

3.3.21 The BESS is relevant to the case for need for the Array because it explains the important energy security and affordability benefits associated with developing electricity supplies which are not dependent on volatile international markets and are located within the UK's national boundaries. The urgency for an electricity system which is self-reliant and not reliant on fossil fuels is enormous in order to protect consumers from high and volatile energy prices, and to reduce opportunities for destructive geopolitical intrusion into national electricity supplies and economics. The Array would help the UK attain these objectives.

3.3.22 Reducing Scotland's and the wider UK's dependency on hydrocarbons has important security of supply benefits. Those actions already urgently required in the fight against climate change are now required more urgently for global political stability and insulation against dependencies on potentially volatile foreign hydrocarbon supplies.

Offshore Wind Net Zero Investment Roadmap (March 2023)

3.3.23 The HM Government published the Offshore Wind Net Zero Investment Roadmap (NZIR) in March 2023. It sets out in its introduction key points as follows:

"Offshore wind is an established and proven part of the UK energy mix and is set to become even more important in the future. It will play a key role in decarbonising our power system by 2035 and helping the UK achieve net zero by 2050.

With the highest deployment in Europe, we have proved that offshore wind can be delivered at ever increasing scale whilst decreasing the costs to consumers.

The UK has a world-leading ambition to deploy up to 50 GW by 2030, with up to 5 GW coming from floating offshore wind.

Investors from all over the world are already benefitting from the certainty that the UK offshore wind market offers. Our long-term ambitions mean significant, new investment opportunities for private capital in wind farms, transmission infrastructure, port infrastructure, new manufacturing, and services".

3.3.24 The NZIR also states (page 4) that the CCC estimates that up to 125 GW of offshore wind could be needed by 2050, as set out in the Sixth Carbon Budget.

Powering up Britain (March 2023)

- 3.3.25 On 30 March 2023 the UK Government (Department for Energy Security and Net Zero) published 'Powering Up Britain' which comprises a series of documents including an Energy Security Plan, Carbon Budget Delivery Plan (CBDP) and Net Zero Growth Plan.
- 3.3.26 The CBDP is the means by which the UK Government satisfies Section 14 of the Climate Change Act 2008 to publish proposals and policies for enabling Carbon Budgets 4, 5 and 6 to be met. The CBDP was published in response to the High Court ruling⁵ that the Government's 2021 Net Zero Strategy did not comply with the Climate Change Act. The Government has therefore had to provide a firmer public commitment to its plans, which has resulted in some changes in approach and ambition.
- 3.3.27 The Energy Security Plan sets out the steps that the UK Government is taking to ensure that the UK is more energy independent, secure and resilient. It builds upon the British Energy Security Strategy and the Net Zero Strategy. The report sets out that the Government is aiming for a doubling of Britain's electricity generation capacity by the late 2030s in line with the aim to fully decarbonise the power sector by 2035, subject to security of supply.
- 3.3.28 The Applicant notes that the CBDP has been found to be unlawful by the High Court following a second legal challenge⁶, and accordingly that a revised report under Section 14 of the Climate Change Act 2008 is anticipated to be produced by Government. No such revised report has been produced at the time of writing.
- 3.3.29 The introduction of the Net Zero Growth Plan states:
- "Energy Security and net zero are two sides of the same coin. The energy transition and net zero are among the greatest opportunities facing this country and we are committed to ensuring that the UK takes advantage of its early mover status. Global action to mitigate climate change is essential to long term prosperity..."*
- 3.3.30 The Net Zero Growth Plan also states (page 7) that the plan *"demonstrates the actions [the UK Government] will take to ensure the UK remains a leader in the net zero transition, by ensuring we drive investment into key green industries like offshore wind..."* Other key points include:
- > "Offshore wind turbines need to be constructed at pace to meet our ambitions for decarbonising power and delivering wholesale UK electricity prices that rank among the cheapest in Europe by 2035" (page 9).
 - > The Government states it is committed to the development of up to 50 GW of offshore wind by 2030 (page 19).
 - > The proposals and policies for growing the offshore wind sector in line with the ambition for up to 50 GW capacity could support up to 90,000 direct and indirect jobs (page 27).
- 3.3.31 The Net Zero Growth Plan makes reference to the planning system (page 34) and states that the Government will publish new energy National Policy Statements (NPS) covering renewables and other infrastructure sectors. It also states that there will be a new requirement *"for offshore wind to be considered as critical national infrastructure"*⁷.

⁵ The High Court ruled in July 2022 (*R (Friends of the Earth & Others) v Secretary of State for Business, Energy and Industrial Strategy* [2022] EWHC 1841) that the UK Government's Net Zero Strategy unlawful as it did not meet its obligations under the Climate Change Act 2008 to clearly evaluate how the Government intended to achieve its Carbon Budgets.

⁶ *R (Friends of the Earth & Others) v Secretary of State for Energy Security and Net Zero* [2024] EWHC 995 (Admin).

⁷ The new NPS for Renewable Energy Infrastructure (EN-3) was published on 22 November 2023. Paragraph 2.1.7 of the NPS states that *"as stated in Section 4.2 of EN-1, to support the urgent need for new low carbon infrastructure, all onshore and offshore electricity generation covered in this NPS that*

CCC – Report to Parliament (June 2023)

- 3.3.32 The CCC published its report to Parliament ‘Progress in Reducing Emissions’ in June 2023. It sets out (page 13) that despite the UK Government having issued the CBDP, *“policy development continues to be too slow and our assessment of the CBDP has raised new concerns. Despite new detail from Government, our confidence in the UK meeting its medium-term targets has decreased in the past year”*.
- 3.3.33 The CCC adds that:
“At COP26, the UK made stretching 2030 commitments in its Nationally Determined Contribution (NDC) – now only 7 years away. To achieve the NDC goal of at least a 68% fall in territorial emissions from 1990 levels, the rate of emissions reduction outside the power sector must almost quadruple. Continued delays in policy development and implementation mean that the NDCs achievement is increasingly challenging”.
- 3.3.34 Key messages include:
- > A lack of urgency – the CCC note that the net zero target was legislated in 2019 but there remains a lack of urgency over its delivery. It states, *“the net zero transition is scheduled to take around three decades, but to do so requires a sustained high intensity of action. This is required all the more, due to the slow start to policy development so far. Pace should be prioritised over perfection”*; (pages 14/15) and
 - > *“Reducing emissions from electricity generation, and then using low carbon electricity to power the economy, is a central pillar of reaching Net Zero. Sector emissions have fallen rapidly over the last decade, and the Government has made a strong commitment to fully decarbonise the sector by 2035, subject to security of supply.”* (page 200)

CCC - Report on COP28: Key Outcomes and Next Steps for the UK (January 2024)

- 3.3.35 The CCC issued a report and related Statement⁸ in January 2024 with reference to COP28 and next steps for the UK. The Statement set out that:
“2023 was the hottest year on record, with worsening extreme weather events across the world. With global greenhouse gas emissions at an all-time high, COP28 took important steps to try to change the direction of travel.
The UK played an important role in this hard-fought COP28 outcome. We may be further into the decarbonisation journey than many nations, but the obligation on every country is now to push even harder. This also frames the economic challenge for the UK. We must rapidly replace fossil fuels with low-carbon alternatives to get back on track to meet our 2030 goal.”
- 3.3.36 In terms of next steps for the UK, the Statement sets out that:
“In June 2023, the Committee noted a significant delivery gap to the UK’s Nationally Determined Contribution (NDC) of reducing emissions by 68% by 2030. The agreements made at COP28 require a sharper domestic response and time is now short for the gap to be bridged.
Achieving the 2030 NDC will require the rate of emission reductions outside of the electricity sector to quadruple from that of recent years. Addressing these gaps in a transparent way remains one of the most important ways for the UK to show climate leadership.”
- 3.3.37 The related Outcomes Report, in addressing next steps for the UK sets out the following points *inter alia*:

does not involve fossil fuel combustion (that is, renewable generation....) are considered to be Critical National Priority (CNP) infrastructure”.

⁸ CCC Statement ‘COP28 outcomes must lead to acceleration of action in the UK’ (30 January 2024).

- > *“The Global Stocktake undertaken at COP28 marks the first formal assessment of progress of the Paris Agreement process and it reinforced the growing momentum in renewables and other low carbon technology deployment.*
- > *Countries were called upon to support a trebling of renewables globally..... Alongside this was the crucial brokering of recognition of the need to transition away from all fossil fuels to achieve a net zero energy system by 2050.*
- > *The UK can continue to lead by example and support actions elsewhere to accelerate the pace of the low carbon transition and develop resilience to climate impacts. It must demonstrate delivery towards its ambitious 2030 and 2035 targets on the path to Net Zero.”*

3.3.38 UK and international calls for countries to triple their current renewable energy capacity by 2030, while optimistic and potentially practically unachievable in many cases, underscore the need for massive renewable deployment to continue into the 2030s, effectively regardless of the capacity of renewable capacity delivered at the end of this decade.

3.3.39 The Array will, if consented, bring new capacity online in the early 2030s and will therefore go towards meeting the urgent and enduring need for significant growth in offshore wind capacity in the UK.

3.4 Climate Change & Renewable Energy Policy: Scotland

The Scottish Energy Strategy (2017)

3.4.1 The Scottish Energy Strategy (SES) was published in December 2017. The SES references the target of 50% energy from renewable sources target to be attained by 2030. The SES did not and could not take account of what may be required in terms of additional renewable generation capacity to attain the new legally binding ‘net zero’ targets so it is out of date in that respect.

3.4.2 The SES refers to *“Renewable and Low Carbon Solutions”* as a strategic priority (page 41) and states: *“we will continue to champion and explore the potential of Scotland’s huge renewable energy resource, its ability to meet our local and national heat, transport and electricity needs – helping to achieve our ambitious emissions reduction targets”*.

3.4.3 The SES specifically refers to offshore wind (pages 44/45) and states that *“our deeper waters in particular offer tremendous potential for future development.”*

3.4.4 Reference is made to Scotland’s first National Marine Plan (2015) which it states sets the overall framework for the management of Scotland’s seas, including energy installations. Reference is also made to Marine Scotland’s role in producing Sectoral Marine Plans to support the development of offshore renewable energy. It adds:

“There is huge industrial and economic potential attached to offshore wind development. Our offshore wind supply chain is strengthening and expanding – building on Scotland’s established oil and gas expertise and experience. Scotland has the necessary competitive advantage and the building blocks – a skilled, committed workforce, excellent port infrastructure and a strong innovation hub.”

3.4.5 The SES adds: *“We are determined to continue supporting and growing the sector in Scotland – creating more opportunities for Scottish manufacturers and our supply chain from the developments taking place in our waters and beyond.”*

The Climate Change (Emissions Reduction Targets) (Scotland) Act 2019

- 3.4.6 The Scottish Government has set legal obligations to decarbonise and reduce emissions. Most notably, the Scottish Government has a statutory target to achieve “net zero” by 2045⁹. To have any hope of achieving the net zero target, significant expansion of renewable generation capacity needs to continue through the 2030s.
- 3.4.7 When it was enacted, the Climate Change (Scotland) Act 2009 set world leading greenhouse gas emissions reduction targets, including a target to reduce emissions by 80% by 2050. However, the Climate Change (Emissions Reduction Targets) (Scotland) Act 2019 amended the 2009 Act and has set more ambitious targets.
- 3.4.8 The Cabinet Secretary for Wellbeing Economy, Net Zero and Energy made a Statement to the Scottish Parliament on 18 April 2024 regarding the report to the Scottish Parliament prepared by the (CCC, ‘Progress in reducing emissions in Scotland’ (March 2024). The Statement focussed on the implications the CCC report contains for Scottish emission reduction targets as set out in legislation, namely as set out in the Climate Change (Scotland) Act 2009. The Statement sets out that the Scottish Government will bring forward expedited legislation to address matters raised by the CCC and this is expected to be a change to the 2030 emissions reduction target. This is further referenced below.

The Update to the Climate Change Plan (2018-2032) (December 2020)

- 3.4.9 The Scottish Government published the update to the Climate Change Plan (CCP) ‘Securing a Green Recovery on a Path to Net Zero’ on 16 December 2020. The plan covers the period 2018-2032. A key part of the plan is the green recovery, and it states (page 1) that:
- “It is essential that a recovery from the pandemic responds to the climate emergency and puts us on a pathway to deliver our statutory climate change targets and a just transition to net zero, by ensuring our actions in the immediate term are in line with our long-term goals”.*
- “The Scottish Government has been clear in its commitment to securing a just and green recovery, which prioritises economic, social and environmental well-being, and responds to the twin challenges of the climate emergency and biodiversity loss”.*
- 3.4.10 In terms of electricity, the CCP update announces, *“further policies to continue the rapid growth in renewable generation over the past 20 years, moving from a low to a zero-carbon electricity system”.*
- 3.4.11 Page 18 refers to the “pathway to 2032” and sets out what the policies mean in practice. It states:
- “our electricity system will have deepened its transformation for the better, with over 100% of Scotland’s electricity demand being met by renewable sources. More and more households, vehicles, businesses and industrial processes will be powered by renewable electricity, combined with green hydrogen production. There will also be a substantial increase in renewable generation, particularly through new offshore and onshore wind capacity” (page 18).*
- 3.4.12 Chapter 1 addresses electricity. Paragraph 3.1.4 recognises that as Scotland transitions to net zero, a growing and increasingly decarbonised electricity sector *“is critical to enabling other parts of our economy to decarbonise – notably transport, buildings and industry”.*
- 3.4.13 Annex A of the CCP contains policies and proposals. For the electricity sector, ‘outcome 1’ is that *“the electricity system will be powered by a high penetration of renewables, aided by a range of flexible and responsive technologies”.*
- 3.4.14 Key points from the Climate Change Plan Update include:

⁹ The Scottish Government announced changes to emission reduction targets in April 2024 – this is further referenced below.

- > Government views it as essential that a recovery from the pandemic responds to the climate emergency and puts Scotland on a pathway to deliver statutory climate change targets and a transition to net zero (page 1).
- > In terms of electricity, the plan states that the Government will deliver actions from the Offshore Wind Policy Statement which “*supports the development of between 8 and 11GW of offshore wind capacity by 2030.*” (page 10).
- > A growing and increasingly decarbonised electricity sector is seen as critical to enabling other parts of the economy to decarbonise, particularly transport, buildings and industry (page 32).
- > The need to invest in renewable generation and related infrastructure to reduce greenhouse gas emissions is critical to creating good, green jobs as part of the green recovery and longer-term energy transition (page 78).
- > Renewable generation is expected to increase substantially between now and 2032 with an expectation of development of between 11 and 16 Giga Watts (GW) of new capacity during this period, “*helping to decarbonise our transport and heating energy demand*” (page 40).

Climate Change Committee, Progress in reducing emissions in Scotland Report to Parliament (December 2022)

3.4.15 The report from the CCC published in December 2022 addresses Scotland's progress in emissions reduction. The report is specifically referenced in the Inquiry Report for the Corriegarth onshore Wind Farm Extension, which was prepared by Reporters (21 August 2023) and which informed the decision on the Corriegarth extension wind farm by the Scottish Ministers (20 December 2023). At paragraph 128 Inquiry Report, the Reporters state that with regard to the CCC report it “*includes several findings that are relevant to this application*”. The Reporters then note the following from the report:

- > Scotland met its 2020 target because of the impact of the Covid-19 pandemic.
- > To date, Scotland has missed 7 out of its 11 annual targets.
- > There is a significant risk of the remaining annual targets for 2020s being missed.
- > A stepped change in action across all sectors of the economy will be required.
- > If targets for the 2020s and early 2030s are not met, there will require to be compensatory overperformance against the later targets; and
- > It is not yet clear how much overperformance would be required in that later period.

3.4.16 The Reporters go on at paragraph 129 to state:

“On the basis of those findings, together with NPF4 Policy 1 on giving significant weight to the climate crisis, we conclude that the fact the proposed development would contribute towards reducing Scotland's greenhouse gas emissions, and achieving its targets thereon, should be given significant weight in the planning balance for this case.”

The Draft Energy Strategy and Just Transition Plan

3.4.17 The Scottish Government published a new Draft ‘Energy Strategy and Just Transition Plan’ entitled ‘Delivering a fair and secure zero carbon energy system for Scotland’ on 10 January 2023. The new Strategy is to replace the one previously published in 2017. The consultation period ended in April 2023. As a draft document it can only be afforded limited weight. The draft document is however consistent with the adopted policy set out in NPF4 and the identification of the 2020s as a crucial decade for the large-scale delivery of renewable energy projects supporting urgent transition to net zero.

- 3.4.18 The Ministerial Foreword states:
- “The imperative is clear: in this decisive decade, we must deliver an energy system that meets the challenge of becoming a net zero nation by 2045, supplies safe and secure energy for all, generate economic opportunities, and builds a just transition...”*
- The delivery of this draft Energy Strategy and Just Transition Plan will reduce energy costs in the long term and reduce the likelihood of future energy cost crises....*
- It is also clear that as part of our response to the climate crisis we must reduce our dependence on oil and gas and that Scotland is well positioned to do so in a way that ensures we have sufficient, secure and affordable energy to meet our needs, to support economic growth and to capture sustainable export opportunities....*
- For all these reasons, this draft Strategy and Plan supports the fastest possible just transition for the oil and gas sector in order to secure a bright future for a revitalised North Sea energy sector focused on renewables.”*
- 3.4.19 The Foreword adds that the draft Strategy sets out key ambitions for Scotland’s energy future including:
- > More than 20 GW of additional renewable electricity on and offshore by 2030.
 - > Accelerated decarbonisation of domestic industry, transport, and heat.
 - > Generation of surplus electricity, enabling export of electricity and renewable hydrogen to support decarbonisation across Europe.
 - > Energy security through development of our own resources and additional energy storage.
 - > A just transition by maintaining or increasing employment in Scotland’s energy production sector against a decline in North Sea production.
- 3.4.20 The draft Strategy states (page 7, Executive Summary) that the vision for Scotland’s energy system is:
- “...that by 2045 Scotland will have a flourishing, climate friendly energy system that delivers affordable, resilient and clean energy supplies for Scotland’s households, communities and business. This will deliver maximum benefit for Scotland, enabling us to achieve a wider climate and environmental ambitions, drive the development of a wellbeing economy and deliver a just transition for our workers, businesses, communities and regions.*
- 3.4.21 *In order to deliver that vision, this Strategy sets out clear policy positions and a route map of actions with a focus out to 2030”.*
- 3.4.22 A fundamental part of the Strategy is expanding the energy generation sector. The Executive Summary states (page 8) that Scotland’s renewable resources mean that:
- “... we can not only generate enough cheap green electricity to power Scotland’s economy, but also export electricity to our neighbours, supporting jobs here in Scotland and the decarbonisation ambitions of our partners.*
- We are setting an ambition of more than 20 GW of additional low cost renewable electricity generation capacity by 2030, including 12 GW of onshore wind....*
- An additional 20 GW of renewable generation will more than double our existing renewable generation capacity by 2030.....”*

3.5 Scottish Emission Reduction Targets

Current Progress against Emission Reduction Targets

3.5.1 The Scottish Government publishes an annual report that sets out whether each annual emissions reduction target has been met. **Figure 3.3** below sets out the annual targets for every year to net zero. The report for the 2019 target year was published in June 2021. The report states that the ‘GHG Account’ reduced by only 51.5% between the baseline period and 2019. As noted, the 2019 Act specifies a 55% reduction over the same period – therefore the targets for 2018 and 2019 were not met.

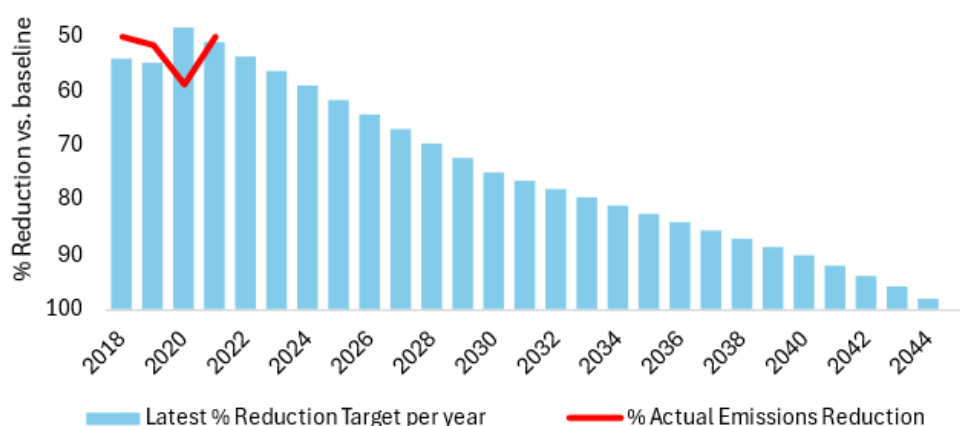
3.5.2 The Scottish GHG Statistics for 2020 were released in June 2022. These show that the GHG account reduced by some 58.7% between the baseline period and 2020. However, according to the report¹⁰, the drop in emissions between 2019 and 2020 was mainly down to lower emissions from domestic transport, international flights and shipping and energy supply. All other sectors demonstrated modest reductions over this period, except the housing sector.

3.5.3 Coronavirus restrictions were responsible for the large drop in emissions from transport, while residential emissions increased by 0.1 MtCO₂e as more people worked from home during the pandemic. The Scottish Cabinet Secretary for Net Zero, Energy and Transport Michael Matheson made a Statement¹¹ to the Scottish Parliament on 07 June 2022 on the release of the statistics for 2020. In the Statement he commented as follows:

“Nonetheless, the most significant changes are in the transport sector and are associated with the temporary measures taken in response to the Covid-19 pandemic. We must be prepared for these figures to substantially rebound in 2021. There can be no satisfaction taken in emissions reductions resulting from the health, economic and social harms of the pandemic.” (emphasis added)

3.5.4 The Scottish GHG Statistics for 2021 were released in June 2023¹². The 2009 Act (as amended) required that GHG emissions reduce by 51.1% between the baseline period and 2021¹³. GHG emission reduced by 49.9% therefore the interim target for 2021 was not achieved.

Figure 3.3: Scotland’s Annual Emission Reduction Targets to Net Zero



¹⁰ Scottish Government. Official Statistics, Scottish Greenhouse Gas Statistics 2020, (June 2022).

¹¹ Ministerial Statement to Scottish Parliament by Cabinet Secretary for Net Zero, Energy and Transport on 07 June 2022, ‘Greenhouse gas emission statistics 2020’.

¹² Scottish Government. Official Statistics, Scottish Greenhouse Gas Statistics 2021, (June 2023). The publication explains that the target figures have been revised since 2022 to incorporate methodological improvements and new data.

¹³ Note this is a revised target in line with the Climate Change (Scotland) Act 2009 (Interim target) Amendment Regulations 2023. These Regulations adjust the annual target figures for 2021 to 2029. The reason for the change is based on advice from the CCC regarding international carbon reporting practice.

- 3.5.5 In their 2024 Progress in Reducing Emissions in Scotland report, the CCC stated that Scotland has missed its annual emission reduction targets eight times and **Figure 3.3** shows that in the years since 2018 where data is available, Scotland has only met its emissions reduction target once. This was in 2020, during which lockdown restrictions severely reduced commercial, industrial and transport emissions. Importantly, in 2021, annual emissions exceeded those of both 2018 and 2019 despite new legislation coming into effect in 2019 to increase Scotland's emission reductions targets.
- 3.5.6 Scotland has already made good progress in decarbonising its electricity supply through the development of onshore and offshore wind and other renewables, as well as through the closure of coal fired power stations in the last decade. Emissions reductions now need to come from other sectors through the electrification of the energy they consume, or the substitution of fossil fuels in their energy supply for low-carbon energy sources such as hydrogen. Both methods (direct electrification, or the use of low-carbon hydrogen, a significant proportion of which is expected to be produced by using low-carbon electricity to electrolyse water) will require significant capacities of new low-carbon electricity generation to be developed each and every year from now and into the 2040s.
- 3.5.7 This means the trajectory, in terms of the scale and pace of action to reduce carbon dioxide emissions, is steeper than before and although the 2020s is a critical decade, all the indicators are that the 2030s will be even more critical, because of slower-than-planned action to date, and plans also short-falling for the rest of this decade.
- CCC Report to the Scottish Parliament entitled 'Progress in reducing emissions in Scotland' (March 2024)**
- 3.5.8 The CCC produced a report to the Scottish Parliament entitled 'Progress in reducing emissions in Scotland' in March 2024. The related Press Release of the same date states that Scotland's 2030 climate goals are no longer credible. It states:
- "Continued delays to the updated Climate Change Plan and further slippage in promised climate policies mean that the Climate Change Committee no longer believes that the Scottish Government will meet its statutory 2030 goal to reduce emissions by 75%. There is no comprehensive strategy for Scotland to decarbonise towards Net Zero.*
- The Scottish Government delayed its draft Climate Change Plan last year despite the 2030 target being only six years away. This has left a significant period without sufficient actions or policies to reach the target; the required acceleration in emissions reduction in Scotland is now beyond what is credible."*
- 3.5.9 The CCC calls in the report for Scotland's Climate Change Plan to be published urgently in order that the CCC can assess it and identify the actions which will deliver on its future targets.
- 3.5.10 The Press Release states that there is a path to Scotland's post-2030 targets, but stronger action is needed to reduce emissions across the economy.
- 3.5.11 The CCC Report (page 10) states that *"The Scottish Government should build on its high ambition and implement policies that enable the 75% emissions reduction target to be achieved at the earliest date possible."*
- 3.5.12 Page 18 of the report addresses electricity supply, and it states that there has been some progress in delivering renewable electricity generation in Scotland. Reference is made to the Government aim to develop 8-11 GW of offshore wind and 20 GW on onshore wind capacity, both by 2030. The report notes that *"The growth in onshore wind capacity has slowed, however, and is slightly off track to deliver its 2030 target, which will require operational capacity to more than double."*

Statement to Scottish Parliament (18 April 2024)

3.5.13 In light of the CCC Report, the Cabinet Secretary made a statement to the Scottish Parliament on 18 April 2024 entitled 'Climate Change Committee Scotland Report – Next Steps: Net Zero Secretary Statement'.

3.5.14 The key points in the statement include:

- > The Scottish Government has an *“unwavering commitment to ending our contribution to global emissions by 2045 at the latest, as agreed by Parliament on a cross-party basis”*.
- > The Cabinet Secretary states that she is *“announcing a new package of climate action measures which we will deliver with partners to support Scotland’s transition to net zero”* and the Statement goes out to reference these specific measures.
- > The Statement states sets out that in terms of the policies for these measures that *“they sit alongside extensive ongoing work that will be built upon through our next Climate Change Plan and Green Industrial Strategy.”*
- > The Cabinet Secretary states that, *“The Climate Change Committee is clear that the ‘UK is already substantially off track for 2030’ and achieving future UK carbon budgets ‘will require a sustained increase in the pace and breadth of decarbonisation across most major sectors’. Indeed, we do see climate backtracking at UK level.”*

3.5.15 The Cabinet Secretary adds:

- > *“And with this in mind, I can today confirm that, working with Parliament on a timetable, the Scottish Government will bring forward expedited legislation to address matters raised by the CCC and ensure our legislative framework better reflects the reality of long term climate policy making.”*

3.5.16 The last reference in the Statement (as set out above) is key, namely that the Scottish Government intends to work with Parliament to amend existing legislation. This is anticipated to be a change from the current 75% emissions reductions target by 2030 to a lower figure, possibly around 65% to match the UK position.

3.5.17 A further key point in the Statement is that the Scottish Government has reiterated its commitment to achieving net zero by 2045. It would seem therefore that the proposed approach to dealing with the position set out by the CCC in relation to the 2030 target being unachievable, is to amend the emissions reduction target for 2030 such that it better reflects reality and move to a carbon budget approach to measuring emissions reduction which would bring the Scottish Parliament in line with the Welsh and UK approaches. There is as yet, no clarity on what the new target will be, however it will remain a 'stepping stone' en route to achieving the net zero legally binding target by 2045.

3.6 The Marine Policy Framework: UK Level

3.6.1 This section describes the UK marine policy framework that is applicable to the consideration of the Array. The key marine policies are:

- > The UK Marine Policy Statement (2011) (and Guidance effective from 1 January 2021);
- > The UK Offshore Wind sector Deal (2020); and
- > Sectoral Marine Plan for Offshore Wind Energy (Scottish Government, 28th October 2020).

The UK Marine Policy Statement (2011)

3.6.2 The Marine Policy Statement (MPS) is a joint policy adopted by all UK Governments including the Scottish Government and sets the framework for preparing Marine Plans and taking

decisions affecting the marine environment. It was prepared and adopted for the purposes of section 44 of the Marine and Coastal Access Act 2009.

- 3.6.3 The MPS restates the Marine and Coastal Access Act 2009 requirement that *“all public authorities taking authorisation or enforcement decisions that affect or might affect the UK marine areas do so in accordance with the MPS unless relevant considerations indicate otherwise”*.
- 3.6.4 The MPS facilitates and supports the formulation of Marine Plans to ensure that marine resources are used in a sustainable way in line with high level marine objectives to:
- > *“Promote sustainable economic development;*
 - > *Enable the UK’s move towards a low carbon economy, in order to mitigate the cause of climate change and ocean acidification and adapt to their effects;*
 - > *Ensure a sustainable marine environment which promotes healthy, functioning marine ecosystems and protects marine habitats, species and heritage assets; and*
 - > *Contribute to the societal benefits of the marine areas, including the sustainable use of marine resources to address local social and economic issues”*.
- 3.6.5 The MPS also sets the direction for marine licensing and other relevant authorisation systems. In doing so marine planning is directed to:
- > *“Achieve integration between different objectives;*
 - > *Recognise that the demand for use of our seas and the resulting pressures on them will continue to increase;*
 - > *Manage competing demands on the marine areas, taking an ecosystem-based approach;*
 - > *Enable the co-existence of compatible activities wherever possible; and*
 - > *Integrate with terrestrial planning”*.
- 3.6.6 The MPS and Marine Plans for a *“plan-led system for marine activities and provide a greater coherence in policy alongside a proactive and spatial planning approach to the management of the marine area, its resources and the activities and interactions that take place within it”*. Marine Plans require to be prepared and adopted in accordance with the relevant legislation. Scottish Ministers are the authority responsible for preparation of the Marine Plan for the Scottish inshore and offshore region. Marine Plans for each area are required to provide detailed policy and spatial guidance for an area and help ensure that decisions within a plan area contribute to the delivery of UK, national and area specific policy objectives.
- 3.6.7 The MPS and marine planning systems sit alongside and interact with existing planning regimes. In Scotland this includes the National Planning Framework.
- 3.6.8 Chapter 2 of the MPS sets out high level marine objectives for the marine environment which are summarised as:
- > Achieving a sustainable marine economy;
 - > Ensuring a strong, healthy and just society;
 - > Living within environmental limits;
 - > Promoting good governance; and
 - > Using sound science responsibly.
- 3.6.9 Thereafter the MPS sets out a number of high level principles for marine decision making, those of relevance include:

- > Be conducted in a manner that meets requirements under UK and EU legislations;
- > Be based on detailed information and advice in the relevant marine policy documents for the administrative area;
- > Be conducted in a manner that takes account of other relevant projects, programmes, plans and national policies and guidance;
- > Be taken after appropriate liaison with terrestrial planning authorities and other regulators, and in consultation with statutory and other advisors when appropriate;
- > Be taken using risk-based approach that allows for uncertainty, recognising the need to use sound science responsibly;
- > Be sensitive to any potential impacts on sites of particular significance including those:
 - Protected under environmental legislation or designed in relation to cultural heritage;
 - Of particular social or economic significance.
- > Take account of potential impacts of climate change mitigation and adaptation in individual applications to ensure that any appropriate adaptation and mitigation measures have been identified;
- > Take account of the benefits of good design (including the best use of available technologies and innovation) can delivery; and
- > Look to avoid and then mitigate negative impacts where possible at various stages of development, including appropriate conditions in line with legal obligations, in a manner that is proportionate to the potential impacts of the proposal under consideration. Where alternative site selection or design could mitigate negative effects whilst retaining benefits, this should be considered, where appropriate.

3.6.10 As regards the consideration of benefits and adverse effects the marine plan authority (Scottish Ministers) will need to assess the impacts of proposals for the marine plan area. The precise nature of the benefits or adverse effects will depend on a number of factors depending on the type of activity proposed, the specific characteristics of the area affected, and the compatibility of the proposed use with other existing or planned activities. The consideration of cumulative impact is stated as an essential step in the process.

3.6.11 MPS states that all these considerations should be picked up within the Marine Plan making process through the Sustainability Appraisal for each Marine Plan that is created, highlighting that that should include a Strategic Environmental Appraisal (SEA) and an Appropriate Assessment (AA) for the Marine Plan.

3.6.12 Other key considerations that Marine Plan Authorities should consider when preparing the required assessments as part of the marine planning process are discussed in detail and include economic social and environmental benefits and potential adverse effects that may arise from any activity. A summary of the key issues to be considered within marine plans includes:

- > Marine ecology and biodiversity;
- > Air quality;
- > Noise;
- > Ecological and chemical water quality and resources;
- > Seascape;
- > Historic environment;

- > Climate change adaption and mitigation; and
- > Coastal change and flooding.

3.6.13 Section 3.3 of the MPS specifically relates to 'Energy Production and Infrastructure Development'. It advises that when decision makers are determining application for energy infrastructure the following issues should be taken into account:

- > The national level of need for energy infrastructure as set out in the National Planning Framework (in Scotland);
- > The positive wider environmental, societal and economic benefits of low carbon electricity generation and carbon capture and storage as key technologies for reducing carbon dioxide emissions;
- > That renewable energy resources can only be developed where that resource existing and where economically feasible;
- > The potential impact of inward investment in offshore wind, wave, tidal stream and tidal range energy related manufacturing and deployment activity, as well as the impact of associated employment opportunities on the regeneration of local and national economies – all of which support the objective of developing the UK's low carbon manufacturing capability; and
- > The UK's programme to support the development and deployment of Carbon Capture and Storage (CCS) and in particular the need for suitable locations that provide for the permanent storage of carbon dioxide.

3.6.14 Paragraph 3.3.19 identifies that *"the UK has some of the best wind resources in the world and offshore wind will play an important and growing part in meeting our renewable energy and carbon emission targets and improving energy security by 2020, and afterwards towards 2050"*.

3.6.15 The MPS is a strategic policy document and sets the requirements for the area specific Marine Plans detailed policy provisions and direction.

3.7 The Marine Policy Framework: Scotland

3.7.1 This section describes the Scottish marine policy framework that is applicable to the consideration of the Proposed Development. The key marine documents are:

- > The Scottish National Marine Plan (2015);
- > Sectoral Marine Plan for Offshore Wind Energy in Scotland (2020); and
- > The Offshore Wind Policy Statement (2020).

The Scottish National Marine Plan (2015)

3.7.2 Scotland's National Marine Plan (NMP) was adopted in March 2015 and sets out a national strategy, ensuring sustainable economic growth of marine industries which takes into account environmental protection, and sets out policies with economic, social and marine ecosystem objectives. The plan covers the management of both Scottish inshore and offshore waters.

3.7.3 The NMP sets several general policies applicable to all marine applications underpinned by the need for marine planning to contribute to sustainable development and use of marine resources by enabling development and use that balances costs and benefits. The NMP acknowledges that development and use of the marine environment, if undertaken in the right place at the right time, can provide multiple benefits. The presumption in favour of sustainable development and use is presented as an overarching general principle of the Plan.

3.7.4 Chapter 11 provides specific objectives and policies for the Offshore Wind and Marine Renewable Energy sector. It is noted that *"not all the objectives listed can necessarily be*

achieved directly through the marine planning system, but they are considered important context for planning and decision making”.

Objectives:

- > Sustainable development of offshore wind, wave and tidal renewable energy in the most suitable locations;
- > Economic benefits of offshore wind, wave and tidal energy developments maximised by securing a competitive local supply chain in Scotland;
- > Alignment of marine and terrestrial planning and efficient consenting and licensing processes;
- > Aligned marine and terrestrial electricity transmission grid planning and development in Scottish Waters;
- > Contribute to achieving the renewables target to generate electricity equivalent to 100% of Scotland’s gross annual electricity consumption from renewable sources by 2020;
- > Contribute to achieving the decarbonisation target by 2030;
- > Sustainable development and expansion of test and demonstration facilities for offshore wind and marine renewable energy devices; and
- > Coordinated government and industry-wide monitoring.

3.7.5

A series of 10 Marine Planning Policies for ‘Renewables’ are set a summary of those most relevant to the Proposed Development are provided in **Table 3.1** below:

Table 3.1: Relevant NMP Marine Planning Policies for Renewables

Policy	Summary
Renewables 1	Proposals for commercial scale offshore wind and marine renewable energy development should be sited in Plan Option (PO) areas identified through Sectoral Marine Plan process. POs are preferred strategic locations for the sustainable development of offshore wind and marine renewables. Proposals are subject to consenting and licensing processes.
Renewables 4	Application for marine licences and consents relating to offshore wind and marine renewable energy projects should be made in accordance with the Marine Licensing Manual and Marine Scotland’s Licensing Policy Guidance.
Renewables 5	Marine planners and decision makers must ensure that renewable energy projects demonstrate compliance with Environmental Impact Assessment and Habitats Regulation Appraisal (HRA) legislative requirements.
Renewables 6	New and future planning grid connections should align with relevant sectoral and other marine spatial planning processes, where appropriate, to ensure a co-ordinated and strategic approach to grid planning.
Renewables 8	Developers bringing forward proposals for new developments must actively engage at an early stage with the general public and interested stakeholders of the areas to which the proposal relates and of adjoining areas which may be affected.
Renewables 10	Good practice guidance for community benefit from offshore wind and renewable energy development should be followed by developers where appropriate.

- 3.7.6 The Plan sets out its understanding of the key issues for marine planning and discusses the opportunities to support economically productive activities arising from offshore wind and renewable energy proposals not least though onshore support, manufacturing, and other support functions. The plan addresses grid provision and potential interactions with other users also addressed the need to operate within environmental limits and the need to recognise and support mechanisms used to address uncertainties. It also states the importance of HRA and EIAs as means to assess key environmental risks and that these will be considered in plan and project development and consenting procedures.

Sectoral Marine Plan for Offshore Wind Energy in Scotland (2020)

- 3.7.7 The Sectoral Marine Plan (SMP) aims to identify sustainable plan options for the future development of commercial-scale offshore wind energy, including deep water wind technologies and covers both Scottish inshore and offshore water. In doing so the Plan seeks to contribute to achieving the objectives of climate change objectives and targets through the provision of a spatial strategy to inform the seabed leasing process in Scottish water which:
- > *“Minimises the potential adverse effects on other marine users, economic sectors and the environment resulting from further commercial scale offshore wind development; and*
 - > *Maximises opportunities for economic development, investment, and employment in Scotland, by identifying new opportunities for commercial scale offshore wind development, including deeper water wind technologies”.*
- 3.7.8 The Plan identifies 15 Plan Options (POs) across four regions, which are capable of generating many GW of renewable energy. As a result of consultation feedback, amendments were made to the boundaries of seven of the Draft Plan Options (DPOs) and two DPOs were not progressed. Amendments were made primarily to mitigate potential negative impacts on commercial fishing, natural heritage, and the shipping sectors and in response to strong public opposition.
- 3.7.9 The SMP established the footprint for the ScotWind Leasing cycles and is kept under review for any future requirements as new evidence comes forward. Rapid technological advances and cost reductions as well as ever changing industry innovations are recognised as key factors to help Scotland capitalise on its excellent natural resources. Each round of leasing requires a strategic planning exercise to assess the suitability of potential locations and to ensure compatibility with other projects and marine users in Scotland.
- 3.7.10 The SMP was developed in accordance with the strategic aims of the NMP (2015). Regional Marine Plans are in the process of being prepared within the Scottish Marine Regions established. The planning competence of Regional Marine Planning Partnerships extends to 12 nm from shore.
- 3.7.11 From a national perspective the SMP identifies 15 POs across the four regions which are spatially distinct. There is potential for cumulative positive effects through a significant contribution to the decarbonisation of the energy sector and the establishment of a secure energy supply.
- 3.7.12 The SMP aims to identify sustainable options for commercial scale offshore wind energy and provides a spatial strategy to inform the seabed leasing process via the identification of PO Areas available for development. It should be noted that the identification of SMP PO Areas does not predetermine decision making processes. The SMP has been developed to ensure consistency with the objectives and principles set out within Scotland’s NMP (Marine Scotland, 2015) and the UK MPS (HM Government, 2011).
- 3.7.13 As part of the ScotWind Leasing Round, 20 potential development sites were awarded, with a total generating capacity of just under 27.6 GW. The partnership between SSE Renewables (SSER), Copenhagen Investment Partners (CIP) and Marubeni Corporation were one of these recipients of an Option for Lease in this leasing round with their application for Ossian (Crown Estate Scotland, 2022).

- 3.7.14 In November 2022 a roadmap of actions was published for the SMP, concluding that further verifiable evidence was needed for five of the 15 PO Areas to reduce the risk to seabirds to an acceptable level (Scottish Government, 2022). The SMP SEA noted that the PO Area which Ossian is located within (the E1 PO Area) was considered to have a likely impact of “*minor negative – moderate negative*” on designated features of protected sites due to the distance offshore making it likely to have a lower bird density (Scottish Government, 2022).
- 3.7.15 However, the SMP HRA highlighted the developments within the E1 PO Area would be required to reduce the uncertainty regarding the scale of cumulative impacts on seabird species, as well as collect data in relation to seabird densities and behaviours during the non-breeding season.
- 3.7.16 It should be noted that the SMP is subject to an iterative plan review process to ensure that the SMP and its underpinning assessments are informed by the most up-to-date scientific research and understanding, the spatial/regional context of the SMP (i.e. level of construction, operational and other activity within the region) and the potential transboundary impacts are reflected accurately, and the prevailing market conditions, technological advancements and regulatory environment are reflected in the SMP, including grid connections and connections to coastal infrastructure. To support this iterative review process, requests for new evidence which could impact the implementation of the SMP and resulting development will be submitted to key stakeholder representatives, who form part of the Sectoral Evidence Group, on at least an annual basis. The review of the SMP is expected to take place in Autumn 2024 and publication is expected in Spring 2025. The Marine Directorate has confirmed that the delay to the iterative plan review and publication of the updated SMP will not prevent determination of ScotWind projects, which will be considered on a case-by-case basis in line with the extant SMP as well as other planning, consenting and assessment frameworks available at the time.
- 3.7.17 Overall, the Marine Plan sets out support for substantially increased offshore wind generation in the offshore waters of Scotland.

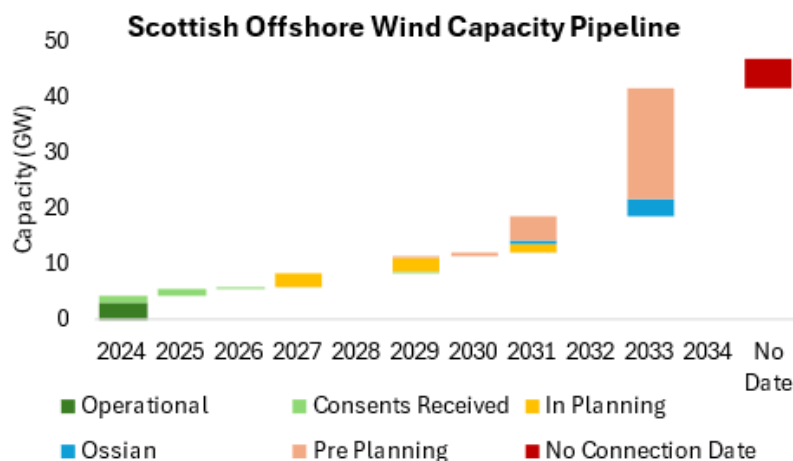
The Scottish Offshore Wind Policy Statement (2020)

- 3.7.18 The Offshore Wind Policy Statement (OWPS) (2020) sets out ambitions to capitalise on offshore wind development and the role this technology could play in meeting commitments of Net Zero by 2045. The OWPS builds upon the ambitions outlined in Scotland’s Energy Strategy. It also refers to the Offshore Wind Sector Deal published in 2019 which details specific actions to be undertaken by Governments and industry, designed to promote and grow the sector.
- 3.7.19 The OWPS highlights the intention of the Scottish Government to achieve as much as 11 GW of offshore wind capacity in Scottish waters by 2030. The report shows that the total consented capacity in Scotland (both from fixed and floating technologies) was 5.6 GW in September 2020.
- 3.7.20 Furthermore, the OWPS states:
- “Looking beyond 2030, we know that huge increases in renewable capacity and generation are likely to be needed in order to decarbonise our energy use, and to meet the potential for much greater demand for clean electricity – as well as for green hydrogen – to reduce emissions associated with heat, transport and industrial energy demand as we move towards 2045 and net zero. The 2020 Future Energy Scenarios, published by National Grid ESO, includes the potential requirement for 24 GW of offshore wind capacity dedicated solely to hydrogen production”. (paragraph 10)*
- 3.7.21 National Grid ESO update the Future Energy Scenarios every year, and their 2023 analysis showed a smaller although still substantial need for approximately 19 GW of offshore wind capacity for hydrogen production purposes.

Scottish Offshore Wind Capacity Pipeline

3.7.22 **Figure 3.4** shows, at the time of writing this Statement, the current operational and pipeline Scottish offshore wind capacities¹⁴. The data has been cross referenced with other industry publications, including developer websites, industry news and information provided by Offshore Wind Scotland.

Figure 3.4: Scottish Offshore Wind Capacity Pipeline



3.7.23 **Figure 3.4** uses data from the TEC Register¹⁵ to determine the capacity of each offshore wind farm and the year of its grid connection. For offshore wind farms which are not listed on the TEC Register, Crown Estate Scotland's data has been used to determine the capacity of each project.

3.7.24 The data shows that 2.9 GW of offshore wind is currently operational in Scotland. A further 3.3 GW has achieved consent and is preparing for, or is under construction, with commissioning estimated between 2024 and 2026. Upon commissioning of this capacity, the cumulative capacity of Scottish offshore wind would rise to 5.9 GW by the end of 2026. The first project in the Crown Estate Scotland's Innovation and Targeted Oil and Gas (INTOG) leasing round achieved consent in April 2024, with a plan to construct ahead of progressive commissioning through 2029.

3.7.25 A further 6.4 GW of capacity has submitted applications for consent. 4.9 GW of this capacity holds agreements to connect to the national electricity system between 2027 and 2029 and a further 1.5 GW aims to produce first power from 2029 with full commissioning from 2031.

3.7.26 In 2020, the Scottish Government set an ambition to increase offshore wind capacity to 11 GW by 2030. All the capacity listed above must be commissioned in full and on time for Scotland to achieve that ambition. However, if any of these projects deliver later than is currently indicated, with no options to substitute one struggling development with another which is progressing more quickly, it would then be the case that Scotland will miss its 2030 offshore

¹⁴ Data has been sourced from Crown Estate Scotland's website (<https://www.crownestatescotland.com/scotlands-property/offshore-wind/current-projects>) and cross-checked with National Grid's Transmission Entry Capacity Register (TEC Register) (https://www.nationalgrideso.com/data-portal/transmission-entry-capacity-tec-register/tec_register, accessed 23 May 2024).

¹⁵ The Transmission Entry Capacity (TEC) Register is a record of generation projects that hold contracts for Transmission Entry Capacity with National Grid ESO. This includes both connected projects and future connection projects as well as projects that are directly connected to the National Electricity Transmission System

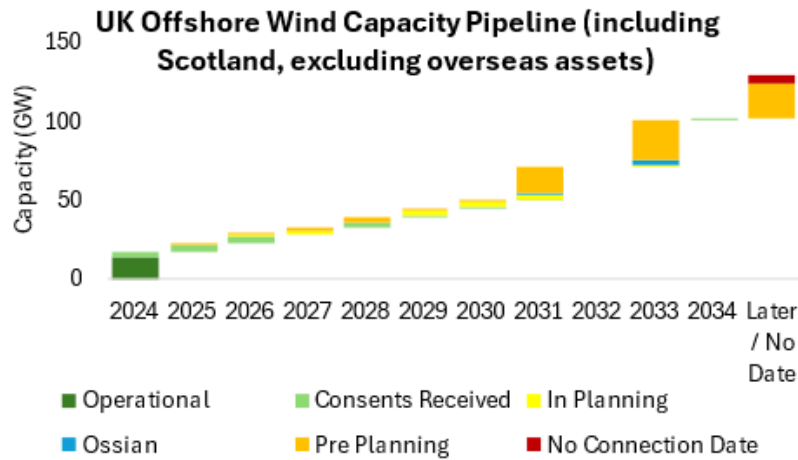
wind capacity target. Projects do frequently suffer delay, and this is compounded by high levels of attrition which has been observed for UK offshore windfarm projects (see 3.7.31- 3.7.32)

- 3.7.27 It will be important, as 2045 and 2050 approach, to ensure that Scotland and the UK retain options between projects to achieve their targets. Consenting Ossian provides up to 3.6 GW more optionality than if the Array did not secure its consents.
- 3.7.28 The data lists a further 34.2 GW of capacity which is at various stages of development and has not yet submitted applications for consent. The Array comprises up to 3.6 GW of this total. A further 0.9 GW holds agreement to connect to the grid before the end of 2030 and 5.7 GW during 2031. 22.9 GW holds agreements to connect to the grid on 1st October 2033, and some 5.2 GW is currently listed on the TEC Register without a connection date.
- 3.7.29 National Grid is currently building on their 2022 Holistic Network Design (HND) to facilitate the connection of 21 GW of offshore wind directly as a result of the ScotWind leasing rounds, in addition to the 23 GW of offshore wind connections facilitated in the HND. Their proposed network for 2035, which must also accommodate projects which were successful in the 5 GW INTOG leasing round, includes a significant amount of coordinated offshore infrastructure. The resulting network development activities include design, consent delivery and construction in coordination with offshore wind developments to ensure that as much power from Scottish offshore wind can be harnessed as soon as possible.
- 3.7.30 It is therefore likely that the 22.9GW of connections recorded for delivery on 1st October 2033 will move as a result of an optimised and coordinated delivery plan, potentially prioritising those projects judged to be capable of earlier delivery than others.
- 3.7.31 However other factors can determine whether and when projects connect and analysis from National Grid¹⁶ showed that only 30-40% of projects in their connection queue make it to fruition.
- 3.7.32 Scottish Renewables recommended a 30% MW attrition rate in their 2018 *“An industry view of the Draft Sectoral Marine Plan for Offshore Wind”* to reflect the more challenging conditions in Scottish offshore waters relative to the rest of the UK, particularly regarding water depth, ground conditions and grid charges¹⁷.
- 3.7.33 It is likely therefore that there will be attrition within the 34.2 GW pipeline of ‘future’ wind, of which the Array comprises approximately 10%, reducing it to between 10 GW and 14 GW (using the attrition rates above).
- 3.7.34 National Grid ESO, in their 2023 Future Energy Scenarios report, projected the need for between 97 & 115 GW of offshore wind in the UK by 2050. Delivery of the ScotWind ambition without significant attrition will be important for the UK to meet these targets.
- 3.7.35 The Array will be a key contributor towards the offshore wind capacity growth required in the 2030s in Scottish waters to aid Net Zero goals.
- 3.7.36 **Figure 3.5** shows the current operational and pipeline offshore wind capacities for all offshore wind projects located in the UK.

¹⁶ Published <https://www.nationalgrideso.com/news/eso-leads-way-major-initiative-accelerate-connections-electricity-transmission-grid>, 27th Feb 2023,

¹⁷ Sectoral Marine Plan for Offshore Wind Energy, p31.

Figure 3.5: UK Offshore Wind Capacity Pipeline



- 3.7.37 The UK is targeting 50GW of operational offshore wind generation capacity by 2030, including 5GW of floating offshore wind.
- 3.7.38 **Figure 3.5** uses data from National Grid's TEC Register to show that the UK's operational offshore wind capacity is currently 13.8 GW. 3.8GW of consented projects are due to become operational before the end of 2024, and a further 14GW of consented projects have connection dates before the end of 2030. The total potential capacity of projects which have been consented with connection dates before the end of 2030, is 31.6GW. Projects totalling a further 10.1GW are currently in planning, but any other projects required to come forwards to meet the UK target of 50GW operational wind by 2030, have not (at the time of submission of this report) entered planning.
- 3.7.39 Note that this figure excludes renewable generation projects located outside of the UK which propose to connect directly into the UK. This is because although those projects, if they deliver, would support security of supply and decarbonisation and would help reduce the UK's dependency on international hydrocarbon supplies, they cannot be considered to count towards the UK's decarbonisation targets because they are not located in the UK.
- 3.7.40 If all offshore wind projects which have already received consent in the UK become operational at their nameplate capacities, 98% of currently unconsented capacity with connection dates in 2030 or earlier will need to achieve consent, complete construction and connect for the 2050 target to be met. This is in stark contrast to National Grid's analysis in which they found that only 30-40% of projects on their registers make it through to operation. It is very possible therefore that the current pipeline of projects is not sufficient to meet the UK's offshore wind target.
- 3.7.41 The implication therefore is that capacity growth into the 2030s may need to make up for slower offshore wind capacity growth to date and up to 2030 across the UK as well as in Scotland.
- 3.7.42 Because floating offshore wind farms are less dependent on seabed conditions and sea depth for identifying suitable locations, it is possible to locate floating projects nearer to existing shared offshore infrastructure.
- 3.7.43 All but 2 GW of the total capacity of UK offshore wind projects with current connection dates before the end of 2030 (50.4 GW in total) use fixed bottom technology. In contrast, 66% of the total offshore wind pipeline capacity with current connection dates in 2031 – 2034 propose to use floating technology. Aside from 1.5 GW of floating offshore wind proposing to connect prior to 2030, the majority of floating offshore wind projects have connection contracts in the early 2030s, consistent with the Ossian array.

- 3.7.44 Pushing forward with technically and environmentally achievable floating offshore wind projects such as this project, is vitally important to support the delivery of this technology in UK waters.
- 3.7.45 Without floating offshore wind, the UK will be unlikely to meet its current 2030 capacity targets and the portfolio of future potential projects will, based on current attrition rates, be unlikely to be of a sufficient scale to meet the required capacity growth beyond 2030. This poses a significant threat to the UK's plans to deliver net zero by 2050.
- 3.7.46 Being an early-developer floating offshore wind project with the benefit of scale, Ossian has the opportunity to attract investment in the floating offshore wind sector in the UK, so helping the sector drive deployment and innovation to deliver the capacity of low-carbon generation required in the UK in the 2030s to drive to net zero.

Connections and Benefits of Early Consenting

- 3.7.47 National Grid's TEC Register shows the significant task ahead, to deliver the infrastructure for parties which have accepted offers to connect to the National Electricity Transmission System.
- 3.7.48 The Ofgem / UK Government Connections Action Plan provides a pathway to prioritise the connections queue to ensure that projects which have a higher likelihood of delivering to stated timelines, are not held up at connection. This initiative supports the need to decarbonise the electricity system without delay.
- 3.7.49 Projects which are further advanced in their development, for example those which have consent, land rights and are fully funded, are likely to have a lower attrition rate than less well advanced projects, because of the gates which have been successfully navigated to bring the project to its status.
- 3.7.50 By consenting the Ossian Array, the developers would be eligible to apply for the UK government's Contracts for Difference scheme and secure funding. A funded and consented project would therefore provide a priority focus for National Grid to develop connections for the project.
- 3.7.51 This is an important consideration because of the proposed scale of the project. The Ossian array provides a significant generation asset, and it is noted that the Ossian Array will help facilitate the transfer of power from other offshore wind farms as set out in the ESO Beyond 2030 Report.

3.8 National Planning Policy

National Planning Framework 4 (NPF4)

- 3.8.1 NPF4 came into force on 13 April 2023. Although it sets out development management policies for the terrestrial planning system in Scotland, it contains up to date national policy in relation to strategic, nationally important renewable energy generation and its Statement of Need in that regard is relevant. It also specifically references offshore electricity generation.
- 3.8.2 Annex states that NPF4 is required by law to set out the Scottish Ministers' policies and proposals for the development and use of land. It adds:
"It plays a key role in supporting the delivery of Scotland's national outcomes and the United Nations Sustainable Development Goals. NPF4 includes a long-term spatial strategy to 2045."
- 3.8.3 Reference is made to NPF4 strategy, policies and identification of national developments which are aligned to the strategic themes of the Government's Infrastructure Investment Plan (IIP). It contains national level development management policies.
- 3.8.4 Annex A adds that NPF4 is required by law to contribute to six outcomes. These relate to meeting housing needs, health and wellbeing, population of rural areas, addressing equality

and also "meeting any targets relating to the reduction of emissions of greenhouses gases, and, securing positive effects for biodiversity".

National Developments

- 3.8.5 Page 97 of NPF4 sets out that 18 national developments have been identified. These are described as "significant developments of national importance that will help to deliver the spatial strategy ... National development status does not grant planning permission for the development and all relevant consents are required".
- 3.8.6 It adds that "Their designation means that the principle for development does not need to be agreed in later consenting processes, providing more certainty for communities, businesses and investors. ... In addition to the statement of need at Annex B, decision makers for applications for consent for national developments should take into account all relevant policies".
- 3.8.7 Annex B of NPF4 sets out the various national developments and related statements of need.
- 3.8.8 It states that national developments are significant developments of national importance that will help to deliver our spatial strategy. It adds that:
"The statements of need set out in this annex are a requirement of the Town and Country Planning (Scotland) Act 1997 and describe the development to be considered as a national development for consent handling purposes".
- 3.8.9 National Development 3 (ND3) is "Strategic Renewable Electricity Generation and Transmission Infrastructure".
- 3.8.10 Page 103 of NPF4 describes ND3 and it states:
"This national development supports renewable electricity generation, repowering, and expansion of the electricity grid.
A large and rapid increase in electricity generation from renewable sources will be essential for Scotland to meet its net zero emissions targets. Certain types of renewable electricity generation will also be required, which will include energy storage technology and capacity, to provide the vital services, including flexible response, that a zero carbon network will require. Generation is for domestic consumption as well as for export to the UK and beyond, with new capacity helping to decarbonise heat, transport and industrial energy demand. This has the potential to support jobs and business investment, with wider economic benefits.
The electricity transmission grid will need substantial reinforcement including the addition of new infrastructure to connect and transmit the output from new on and offshore capacity to consumers in Scotland, the rest of the UK and beyond. Delivery of this national development will be informed by market, policy and regulatory developments and decisions."
- 3.8.11 The location for ND3 is set out as being all of Scotland and in terms of need it is described as:
"Additional electricity generation from renewables and electricity transmission capacity of scale is fundamental to achieving a net zero economy..."
- 3.8.12 Reference is made in NPF4 to the designation and classes of development and it states in this regard:
"A development contributing to 'Strategic Renewable Electricity Generation and Transmission' in the location described, within one or more of the Classes of Development described below and that is of a scale or type that would otherwise have been classified as 'major' by 'The Town and Country Planning (Hierarchy of Developments) (Scotland) Regulations 2009', is designated a national development:
(a) on and off shore electricity generation, including electricity storage, from renewables exceeding 50 megawatts capacity" (emphasis added).

NPF4: Contribution to National Outcomes

- 3.8.13 NPF4 must contribute to a series of six outcomes and one of these includes “meeting targets for emissions of greenhouse gases” (revised draft NPF4, Annex a, page 95).
- 3.8.14 The Array would make a valuable contribution to the emissions reduction outcome and the delivery of Net Zero.

National Policy Statements

- 3.8.15 The Array will landfall and connect to the grid in England. The wider climate change and renewable energy policy framework has been addressed above in including reference to the UK legislative and policy position. In terms of UK level planning policy, it is relevant to take into account the UK Government’s overarching National Policy Statement (NPS) for Energy (known as “EN-1”) and also the NPS for Renewable Energy Infrastructure (known as “EN-3”).
- 3.8.16 It is also relevant to recognise that the Scottish Ministers have specifically taken into account these planning policy documents in the recent consideration of the application for consent under Section 36 of the Electricity Act 1989 for the construction and operation of the Green Volt Offshore Wind Farm and associated transmission infrastructure. The Green Volt development is located approximately 80 km off the Aberdeenshire coast. The Scottish Ministers’ decision on the application was made on 18 April 2024.
- 3.8.17 In the Scottish Ministers consideration of the Derogation Report¹⁸ for the Green Volt project, the Scottish Ministers reference both EN-1 and EN-3 (page 13).
- 3.8.18 The Ministers state at paragraph 6.7.1 that “*The global climate emergency and energy pressure, ensures that UK wide energy security and energy policy, although a reserved matter, is a crucial consideration for Scottish Ministers.*”
- 3.8.19 At paragraph 6.8.1 the Scottish Ministers go on to state:
“As mentioned above, EN-1 came into force on 17 January 2024, and sets out UKG policy on delivering major energy infrastructure. While a UK Government policy, it is a relevant consideration for Scottish Ministers when they are exercising their functions on licensing and consenting of offshore wind projects as energy policy is generally a matter reserved to UK Ministers. EN-1 notes that the provision of nationally significant low carbon infrastructure, which includes offshore wind, is a Critical National Priority (“CNP”) for the UK Government and further that energy security and decarbonising the power sector to combat climate change are “...capable of amounting to IROPI for HRAs [Habitats Regulations Assessments] ... for CNP infrastructure” (EN-1 para 4.2.21).”
- 3.8.20 In addition, the Ministers continue at paragraph 6.8.2 of the report to state:
“EN-3 sets out that applications for offshore wind above 100MW in England will be considered as Nationally Significant Projects (“NSIPs”) and that because energy policy is generally a matter reserved to UK Ministers, this policy may be a relevant consideration in planning decisions in Wales and Scotland (Section 1.4.5). EN-1 further notes that in recognition of the level and urgency of need for NSIPs that the Secretary of State will start with a presumption in favour of granting consent to these projects (Section 4.1.3).”
- 3.8.21 Therefore, national planning policy in both Scotland by way of NPF4 and for the UK by way of the NPS documents referred to above, are relevant considerations.

¹⁸ In the Scottish Ministers consideration of a Derogation Report (under the Conservation (Natural Habitats & C) Regulations 1994 and the Conservation of Marine Habitats and Species Regulations 2017, the Scottish Ministers reference both EN-1 and EN-3 dated April 2024.

3.9 Conclusions

- 3.9.1 It is considered that the need case for the Array is very strongly supported by the climate change and renewable energy policy and legislative framework.
- 3.9.2 The trajectory, in terms of the scale and pace of action required to reduce emissions, grows ever steeper than before and it is essential that rapid progress is made otherwise the legally binding target in Scotland of net zero by 2045 will not be met.
- 3.9.3 It is clear from the UK Energy White Paper and the forecasts by the CCC that electricity demand is expected to grow substantially (scenarios vary but potentially by a factor of three or four) as carbon intensive sources of energy are displaced by electrification of other industry sectors, particularly heat and transport. The UK Government has made it clear in the various documents referred to above that there is a 50 GW offshore capacity target to be met by 2050.
- 3.9.4 The CCC has stated (June 2023) that there is declining confidence in the UK meeting its target obligations. Following COP28 the CCC has advised that the agreements made at COP28 require a sharper domestic response and *“time is now short for the gap to be bridged”*.
- 3.9.5 Any amendments that may be made to Scottish statute to reflect the CCC’s advice (in relation to the 2030 emission target not being credible) does not dilute the Applicant’s position that the Array is very strongly in the public interest and would deliver a range of nationally important benefits. Whilst emission reduction targets may be adjusted at the interim stage (2030) in terms of attaining net zero, all this means is that there is a change to the trajectory, but the overall target of net zero remains unchanged. Indeed, as set out in the Cabinet Secretary’s Statement referenced above, the Government retains its “unwavering” commitment to attaining that legally binding target for net zero.
- 3.9.6 Decisions through the planning and wider consenting system must be responsive to this position. Decision makers can do this by affording substantial weight to the energy policy objectives articulated above, in the planning balance in a given case.
- 3.9.7 In the most recent renewable energy policy documents referred to, there is a consistent and what might be termed a ‘green thread’ which ties a number of related policy matters together: namely the urgent challenge and imperative of attaining and sustaining Net Zero and the need to substantially increase renewable capacity, notably offshore wind.
- 3.9.8 The Draft Energy Strategy for Scotland forms part of the new policy approach alongside NPF4. These documents confirm the Scottish Government’s policy objectives and related targets, reaffirming the crucial role that offshore wind will play in response to the climate crisis which is at the heart of all these policies.
- 3.9.9 Key concluding points include:
- > Consenting Ossian provides certainty to the National Grid Electricity System Operator for their network design activities which should speed up those activities and get more generation connected and earlier.
 - > As electricity generated by floating wind is not dependent on input fuels, the price of the electricity it generates, will provide a shield for electricity consumers against volatile international fuel markets.
 - > The UK’s approach to achieving Net Zero has been to decarbonise electricity supply and use that clean energy as a substitute for carbon intensive fuels in other sectors. Electrolysing water into hydrogen will be important to achieve cross-sector decarbonisation and the Proposed Development will be able to provide energy to electrolyzers to support that activity.
 - > The Scottish Government has no options ‘on the table’ to achieve its 2030 offshore wind capacity targets in the event that any one project capable of delivering by then fails in or delays its commercial operation. Consenting the Array can provide the Scottish

Government with options on how to achieve any post 2030 climate change targets in the event that one or more projects fails in or delays its delivery.

- > National planning policy documents also provide strong support for the Array – it is deemed national development in Scotland by way of NPF4 and as Critical National Infrastructure by way of NPS EN-3.

3.9.10 It must follow that the need case is to be afforded substantial weight in the planning balance. The way that decision makers can do that is by properly recognising the seriousness and importance of energy policy related considerations in the planning balance. It is the cumulative effect of a large number of individual projects which will move Scotland towards where it needs to be.

3.9.11 In addition, the relevant marine policy documents provide significant support for the Array subject to demonstrating the effects of development are acceptable. The MPS provides the statutory framework within which to consider the Array. The SMP for Scotland clearly sets out the strategic baseline and acceptance for development in this location and clearly states the additional clarifications and information required to determine acceptability at project specific level.

4. Summary Appraisal of Likely Significant Effects

4.1 Introduction

4.1.1 The preceding Chapters have set out the policy framework against which the Array should be assessed. This Chapter provides a high-level consideration of the key findings of the EIA to allow conclusions to be drawn on the accordance of the Array against the relevant policy objectives identified within this Planning & Needs Statement.

4.1.2 The EIA has been prepared drawing on the legislative requirements of the EIA Regulations (comprising the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 and the Marine Works (Environmental Impact Assessment) Regulations 2007). The EIA Report clearly identifies the predicted environmental effects of the Array on key topic areas identified in the Ossian EIA Scoping Opinion (MD-LOT, 2023) and through discussions with stakeholders. These can be broadly assessed in the context of the policy requirements as identified in the preceding Chapters under the following core headings:

Core Heading	Chapters
Physical Environment	Physical Processes – EIA Report volume 2 chapter 7 Climate Effects, EIA Report, volume 2, chapter 17.
Biological Environment	Benthic Subtidal Ecology, EIA Report, volume 2, chapter 8 Fish and Shellfish Ecology, EIA Report, volume 2, chapter 9 Marine Mammals, EIA Report, volume 2, chapter 10 Offshore Ornithology, EIA Report, volume 2, chapter 11.
Human Environment	Commercial Fisheries, EIA Report, volume 2, chapter 12 Shipping and Navigation, EIA Report, volume 2, chapter 13 Aviation, Military Communications, EIA Report, volume 2, chapter 14 Marine Archaeology, EIA Report, volume 2, chapter 19 Infrastructure and Other Users, EIA Report, volume 2, chapter 15 Offshore Socioeconomics, EIA Report, volume 2, chapter 18 Major Accidents and Disasters, EIA Report, volume 2, chapter 16

4.1.3 The extent to which the Applicant has had regard to Schedule 9 of the Electricity Act 1989 and complied with the EIA Regulations noted above, is reflected throughout the EIA Report as a whole and is considered further within the conclusions of this Chapter and of this Planning & Need Statement as a whole. It should be noted that this Chapter presents a high-level summary of likely significant effects, and more detail is contained in the EIA Report topic chapters and in the overall Non-Technical Summary for the EIA.

4.2 Residual Environmental Likely Significant Effects

4.2.1 The methodology adopted for the EIA is detailed in volume 1, chapter 6 of the EIA Report and is not repeated here. This has been heavily influenced through consultation with relevant consultees and stakeholders to ensure likely significant effects are correctly identified and assessed.

4.2.2 Where practicable, likely significant effects have been reduced to non-significant in EIA terms through detailed iterative design, assessments, and analysis, enabling the formulation and application of appropriate mitigation. The assessment of likely significant effects and identification of residual environmental likely significant effects has been based on realistic worst-case scenarios. Importantly, it should be noted that these likely significant effects can be limited in duration, location or to a specific receptor. Where likely significant effects are beneficial, this is specifically reported.

4.3 The Need to Protect the Physical Environment

4.3.1 The need to protect the physical environment has been a key design objective within the Ossian Array's design and EIA process. This includes consideration of effects on physical processes, and climate. A summary of the physical environment effects reported within the EIA Report is provided in tabular form below.

Table 5.1 Summary of Key EIA Report Findings – Need to Protect the Physical Environment

Receptor Group	Likely Significant Effects	Likely Significant Cumulative Effects	Summary Description of Likely Significant Effects
Physical Processes	No	No	<p><u>Ossian Array</u></p> <p>Physical processes refer to the coastal and marine processes and includes tidal currents, wave climate and the sediment transport regime. The physical processes of the Ossian Array were collected through a detailed desktop review of existing studies and datasets, in addition to site specific surveys. The information is summarised in Table 7.5 and 7.6 of volume 2, chapter 7 of the EIA Report. No likely significant effects are predicted.</p> <p><u>Cumulative</u></p> <p>No significant cumulative effects from the Array alongside other projects/plans.</p> <p><u>Transboundary</u></p> <p>No likely significant transboundary effects with regard to physical processes from the Ossian Array on the interests of other EEA States were predicted.</p>
Climate Change	Yes- beneficial	Yes- beneficial	<p>The carbon savings and climate change benefits that would result from the Array are summarised at section 6.2 below in relation to the Array benefits. The Array would result in a significant beneficial effect on climate. Despite greenhouse gas emissions resulting from construction, the magnitude of avoided emissions resulting from the operation and maintenance phase allows the Array will achieve a payback of two years at the earliest. Over the lifetime of the Array, up to 143,082,086 tonnes of carbon dioxide emissions would be avoided. This would result in a beneficial effect which is significant in EIA terms.</p>

Receptor Group	Likely Significant Effects	Likely Significant Cumulative Effects	Summary Description of Likely Significant Effects
			<p>Cumulative effects as a result of the Array and the Proposed offshore export cable corridor(s) and Proposed onshore transmission infrastructure have been assessed. This shows that it will take Ossian three years at the earliest to 'pay back' the GHG emissions relating to the construction, operation and maintenance and decommissioning phase emissions from both the Array and the associated transmission infrastructure. This will result in a beneficial net effect owing to the contribution toward the UK and Scotland achieving their net zero goals and policy, and the high sensitivity of the climate as a receptor.</p> <p>It should be noted that the climate assessment has been undertaken using precautionary calculations of material quantities and the actual associated avoided emissions would likely be greater than those presented in the conservative case.</p>

4.4 The Need to Protect the Biological Environment

4.4.1 Potential impacts to the biological environment which includes effects on benthic ecology, fish and shellfish, marine mammals and ornithology are summarised in Table 5.2 below.

Table 5.2 Summary of Key EIA Report Findings – Need to Protect the Biological Environment

Receptor Group	Likely Significant Effects	Likely Significant Cumulative Effects	Summary Description of likely significant Effects
Benthic Ecology	No	No	<p><u>Ossian Array</u></p> <p>Benthic ecology refers to the communities of animals and plants which live on or in the seabed and the relationships they have with each other and with the physical environment. The subtidal benthic ecology of the Array was characterised via a series of site-specific surveys using grab sampling, underwater video, and benthic trawls.</p> <p>A number of potential impacts on benthic subtidal ecology associated with all phases of the Array were identified. These included temporary and long term effects which are discussed in detail within EIA Report volume 2, chapter 8. With the proposed designed in mitigation measures in place, all of the identified impacts result in effects of negligible to minor adverse significance in EIA terms.</p> <p>In all phases of development, temporary and long term habitat loss and disturbance was deemed to be of negligible to minor significance. This is due to the low proportion of habitat loss and disturbance in the context of available habitats in the Array. In addition, the reversibility of temporary habitat loss and</p>

Receptor Group	Likely Significant Effects	Likely Significant Cumulative Effects	Summary Description of likely significant Effects
			<p>disturbance provided further justification for these conclusions.</p> <p>Effects of minor significant (not significant in EIA terms) relative to infrastructure installed on the seabed and in the water column as part of the Array are identified.</p> <p><u>Cumulative</u></p> <p>Using a 50km screening buffer, there were eight projects identified with the potential to result in cumulative impacts with the Array. No likely significant effects in EIA terms are predicted upon benthic subtidal ecology.</p> <p><u>Transboundary</u></p> <p>No likely significant transboundary effects are identified on the interests of European Economic Area (EEA) States were predicted.</p>
Fish & Shellfish Ecology	No	No	<p><u>Ossian Array</u></p> <p>Fish and shellfish ecology refers to the study of these interests and how they behave and interact with their environment, such as some species moving between freshwater and marine environments. The fish and shellfish baseline ecology of the Array was characterised by underwater survey using grab sampling, videography, and trawls over the seabed, along with publicly available reports. The Array supports a variety of fish and shellfish typical of this area.</p> <p>No likely significant effects are predicted as a result of all phases of the Array on habitats or disturbance to receptors or from noise. Some minor beneficial effects due to increases in prey availability are predicated in the colonisation of hard structures phases.</p> <p>Detailed assessments are provided in the EIA Report volume 2, chapter 9.</p> <p><u>Cumulative</u></p> <p>No likely significant effects are predicted on fish and shellfish species within a 50 km buffer of the site boundary. Noise impacts were assessed during the site preparation and construction phases within a 100 km buffer and no likely significant effects were predicted.</p> <p><u>Transboundary</u></p> <p>No likely significant transboundary effects with regard to fish and shellfish ecology from the Proposed Development on the interests of other EEA States were predicted.</p>
Marine Mammals	No	No	<p><u>Ossian Array</u></p> <p>Information on marine mammals within the marine mammal study areas was collected through desktop</p>

Receptor Group	Likely Significant Effects	Likely Significant Cumulative Effects	Summary Description of likely significant Effects
			<p>review, site-specific surveys, and consultation. Detailed information is provided in volume 2, chapter 10.</p> <p>It is concluded that there will be no likely significant effects (after implementation of measures adopted as part of the Array and secondary mitigation).</p> <p><u>Cumulative</u> No likely significant cumulative effects are predicted.</p> <p><u>Transboundary</u> No significant transboundary effects have been identified in regard to effects of the Proposed Development.</p>
Ornithology	No	Yes	<p><u>Ossian Array</u> EIA Report volume 2 chapter 11 provides a detailed assessment of offshore ornithological effects of the Proposed Development. - Offshore ornithology refers to birds that may interact with the Array. This includes seabirds and other birds that may pass through, or near to, the array on migration. The birds likely to interact with the Array were characterised by both a desk-based review of available information, and also site-specific surveys undertaken by using digital cameras on aircraft flying over the site.</p> <p>A number of key species were identified and potential impacts thereof categorised and assessed. With the proposed design in measures in place, none of the resulting impacts result in a likely significant effect.</p> <p><u>Cumulative</u> When assessed cumulatively with other projects that may also impact birds, primarily other offshore windfarms it was found that there was predicted minor adverse effects with the exception of a likely except for the combined impact – collision and displacement on kittiwake populations during the operation and maintenance phase.</p> <p><u>Transboundary</u> No transboundary likely significant effects are predicted on the interests of EEA States.</p>

4.5 The Need to Protect the Human Environment

4.5.1 This section seeks to assess the summary of the effects on maritime users identified within the EIA Report. Again, these effects are assessed within the context of legislative requirements as identified within chapters 3 and 4.

4.5.2 Furthermore, amenity considerations and potential impacts to onshore residents relating to landscape and visual matters and socio-economic and tourism are also considered in this section.

Table 5.3 Summary of Key EIA Report Findings – Need to Protect the Human Environment

Receptor Group	Likely Significant Effects	Likely Significant Cumulative Effects	Summary Description of likely significant Effects
Commercial Fisheries	No	Yes	<p><u>Ossian Array</u></p> <p>Commercial fisheries refer to any form of fishing activity legally undertaken and sold for taxable profit. The commercial fisheries active across the Array and wider regional areas were characterised via analysis of landing statistics and mapping of fishing grounds, vessel monitoring systems data. Aerial surveillance, vessel plotter data and consultation. Full assessment details are presented within the EIA Report volume 2, chapter 12.</p> <p>The findings show that the commercial fisheries found in the Array area, compared to the wider regional areas, is not heavily fished, or targeted by UK vessels with relatively low value catches noted.</p> <p>Whilst potential effects were identified, with the proposed mitigation measures in place, all of these impacts result in non-significant (in EIA Terms) effects.</p> <p><u>Cumulative</u></p> <p>The majority of cumulative effects were found not to be significant in EIA terms.</p> <p>However, effects of moderate adverse cumulative significance (significant in EIA terms) were identified across all phases in relation to temporary and long term loss or restricted access to fishing grounds for the demersal otter trawl and demersal seine haddock fishery. There is a level of uncertainty attached to this level of significance and this uncertainty leads to a potential overstatement of the effects, rather than understatement. As a result of this precautionary assessment, additional monitoring has been proposed to examine patterns of fishing activity in the local area surrounding the Array.</p> <p><u>Transboundary</u></p> <p>No likely significant transboundary effects on the interests of EEA States are predicted.</p>
Shipping & Navigation	No	No	<p><u>Ossian Array</u></p> <p>Shipping and navigation refers to the regular activity and behaviour of surface based vessels. The shipping and navigation baseline in vicinity to the site boundary was characterised by Admiralty charts (which provided the navigational features of the area), maritime incident data (which provided an</p>

Receptor Group	Likely Significant Effects	Likely Significant Cumulative Effects	Summary Description of likely significant Effects
			<p>indication of incident rates) and vessel traffic data which captured local vessel traffic patterns.</p> <p><u>Cumulative</u></p> <p>With the proposed designed in measures in place, all these impacts result in effects that are not significant in EIA terms and at most tolerable with mitigation.</p> <p>Cumulative impacts arising from the Array together with other projects and plans were assessed and predicted to result in effects that are not significant in EIA terms and at most tolerable with mitigation.</p> <p><u>Transboundary</u></p> <p>Transboundary impacts in terms of vessel routeing (including to international ports) have been assessed within the Array alone and cumulative assessments.</p>
Aviation. Military and Communications	No	No	<p><u>Ossian Array</u></p> <p>EIA Report volume 2, chapter 14 provides a detailed assessment of aviation, military and communication effects arising as a result of the Ossian Array. The receptors of this nature around the Array were characterised via a desktop review utilising UK and international aviation, military and communications guidance material and communication constructs.</p> <p>No likely significant effects are predicted after designed and secondary mitigation,</p> <p><u>Cumulative</u></p> <p>No significant adverse cumulative effects are predicted within a 100 km buffer of the Array.</p> <p><u>Transboundary</u></p> <p>No likely significant transboundary effects on the interests of EEA states have been identified.</p>
Marine Archaeology	No	No	<p><u>Ossian Array</u></p> <p>Volume 2, chapter 19 of the EIA Report sets out the assessment of effects in relation to marine archaeology which refers to the physical remains of the human past that survive within the marine environment. The existing baseline has been characterised through an assessment of site-specific geophysical surveys alongside a review of existing data and relevant studies.</p> <p>With designed in measures in place no significant adverse effects (in EIA terms) are identified.</p> <p><u>Cumulative</u></p> <p>No significant adverse cumulative effects are predicted.</p> <p><u>Transboundary</u></p> <p>No transboundary effects with regard to marine archaeology from the Array on interest of EEA states are predicted.</p>

Receptor Group	Likely Significant Effects	Likely Significant Cumulative Effects	Summary Description of likely significant Effects
Infrastructure & Other Users	No	No	<p><u>Ossian Array</u></p> <p>Information on infrastructure and other users within the broad infrastructure and other users study area was collected through desktop review and consultation. Full assessment details are provided in EIA Report volume 2, chapter 15.</p> <p>A series of potential impacts are identified and assessed with the conclusion arising that there will be no likely significant effects arising from all phases of the Array.</p> <p><u>Cumulative</u></p> <p>No predicted significant cumulative effects are likely.</p> <p><u>Transboundary</u></p> <p>No transboundary effects are predicted.</p>
Socio-Economic.	Yes- beneficial.	Scotland Wide Positive effect with other projects.	<p><u>Ossian Array</u></p> <p>EIA Report volume 2, chapter 18 provides a detailed analysis of the socio economic effects of the Array. The array is expected to give rise to a positive net benefit in employment and contribute to the transition to a more sustainable economy. The Array is expected to generate the equivalent of 5% of current electricity consumption. As a result, the Array's contribution to a net zero economy was assessed as significant and beneficial.</p> <p>The Array is expected to result in [REDACTED] worth of construction related contracts in Scotland and [REDACTED] worth of contracts in the UK, out of a total [REDACTED] expenditure. It was estimated that in the peak year this could support 6,340 jobs in Scotland and 11,201 jobs in the UK, this was assessed as a significant beneficial impact in Scotland.</p> <p>A series of port-specific impacts at the main construction and operation ports are predicted with a potential peak direct employment of around 240 jobs at the main construction port and annual direct employment of 70 jobs at the main operation and maintenance port. This will in turn generate social impacts such as population changes and increased in housing demand.</p> <p><u>Cumulative</u></p> <p>The wider impact of the Ossian project as a whole is also expected to represent expenditure of [REDACTED]. This is significant and beneficial to the Scottish Economy. In addition, the Array has the potential to increase the critical mass of offshore wind projects in Scotland, attracting manufacturers to the area, this would be expected to generate impacts for the regional and UK wide economies and direct positive effects to the local area.</p>

Receptor Group	Likely Significant Effects	Likely Significant Cumulative Effects	Summary Description of likely significant Effects
			<p><u>Transboundary</u></p> <p>A proportion of expenditure associated with the Array will be secured by companies based in the EU and elsewhere which is expected to have beneficial economic impacts.</p>
Major Accidents and Disasters	No	No	<p><u>Ossian Array</u></p> <p>An assessment of the likely significant effects both that the Array presents and is susceptible to from the existing environment regarding major accidents and disasters has been undertaken and is presented in EIA Report volume 2, chapter 16.</p> <p>Potential impacts on collision and allision to and from vessels and aircraft, unexploded ordinance, pollution of the marine environment from vessels, fire at wind turbines. OSPs and snagging to and from fish vessels were identified and assessed. For all risks identified, designed in measures would be sufficient to suitably manage the risk.</p> <p><u>Cumulative and Transboundary</u></p> <p>No assessment of cumulative or transboundary effects is considered necessary and therefore has not been undertaken.</p>

4.6 Habitats Regulation Appraisal (HRA)

- 4.6.1 In addition to the EIA conclusions, summarised in Table 5.2, a Report to Inform Appropriate Assessment (RIAA) has been completed and provided with the consent application. The RIAA assesses whether the Array could have an adverse effect, either alone, or in combination with other plans or projects, on the integrity of any designated site. Designated sites include Special Areas of Conservation (SACs), candidate SACs (cSACs), Site of Community Importance (SCI), Special Protection Areas (SPAs) and, as a matter of policy (Scottish Government 202) possible SACs (pSACs), potential SPAs (pSPAs) and Ramsar Sites (listed under the Ramsar Convention on Wetlands of International Importance – where also included as a designated Site).
- 4.6.2 For SACs with designated features including diadromous fish and marine mammals, the RIAA concluded ‘No adverse effect on the integrity of the site’, either from the project alone or in-combination with other developments. For SPAs, the RIAA again concluded ‘no adverse effect on the integrity of the site’ for project-along impacts. However, the RIAA concludes that a potential adverse effect cannot be ruled out, when considered in-combination with other plans and projects, at seven sites and for three qualifying species. This impact is a result of disturbance and displacement and/or collision during the operation and maintenance phase of the Array.
- 4.6.3 The sites and features where ‘adverse effects on the integrity of the site’ cannot be ruled out are:
- > Buchan Ness to Collieston Coast SPA;
 - Seabird assemblage (with regards to kittiwake)
 - > East Caithness Cliffs SPA;

- Kittiwake and seabird assemblage (with regards to kittiwake)
- > Flamborough and Filey Coast SPA;
 - Kittiwake, gannet and seabird assemblage (with regards to gannet and kittiwake)
- > Forth Islands SPA;
 - Gannet and seabird assemblage (with regards to gannet and kittiwake)
- > Fowlsheugh SPA;
 - Kittiwake and seabird assemblage (with regards to kittiwake and razorbill)
- > North Caithness Cliffs SPA;
 - Seabird assemblage (with regards to kittiwake)
- > Troup Pennan and Lion's Head SPA;
 - Kittiwake and seabird assemblage (with regards to kittiwake).

4.6.4 As such, a derogation case has been provided, including measure to compensate for predicted impacts on SPAs, as detailed in Section 4.6.

4.7 Other Considerations & Derogation Case

4.7.1 As set out above, the Report to Inform Appropriate Assessment (RIAA) prepared as part of the consent application concludes that there is a risk that the Ossian Array would have an adverse effect on the integrity (AEOI) of seven SPAs either from the Proposed Development in isolation or in-combination with other projects. (none of which are priority species as defined by the Habitat Directive).

4.7.2 The species at these sites for which adverse effects have been identified include kittiwake, gannet and razorbill.

4.7.3 In accordance with the relevant provisions of the Habitats Regulations, the Applicant has (see the Derogation Case Report) demonstrated that:

- > there are no alternative solutions to Ossian;
- > There are "*imperative reasons of overriding public interest*" (IROPI) for the project to proceed; and
- > Any necessary compensatory measures can be secured to ensure that the overall coherence of the national site network is maintained.

4.7.4 Together these provisions are referred to as the 'HRA Derogation Provisions'.

4.7.5 The Applicant accepts that the application of the HRA Derogation Provisions is necessary, because of a risk of AEOI of the SPAs listed; and has therefore provided the information necessary to support a clear and overriding HRA Derogation Case for Ossian, which could be relied upon by the Scottish Ministers if required.

4.7.6 The Applicant is confident that the public interest in Ossian overrides any potential harm to each of the above SPAs (and cumulatively) for the reasons set out in the HRA Derogation Case, which in summary include:

- > Ossian will contribute significantly to meeting climate change reduction targets into the early 2030s;
- > Ossian is essential to close the UK Government's offshore wind deployment target;
- > Ossian will contribute significantly to grid stability and security of supply;

- > Ossian is capable of making a substantial contribution to the Scottish economy;
- > Ossian is capable of stimulating the Scottish supply chain for offshore wind; and
- > Ossian is compatible with Scottish planning and energy policies, serving the public interest.

4.7.7 The Derogation Case concludes that the long-term public interest that Ossian delivers demonstrably outweighs the potential harm to each of the European sites (and cumulatively). Moreover, any harm that does result will be compensated for via a developed, deliverable programme of compensation measures. There are no alternatives to Ossian. As the Array is a fundamental component of both Scotland and the UK's need and obligations to address climate change, the potential harm is considered to be clearly outweighed by the clear public interest.

4.8 Conclusions

4.8.1 From consideration of all the factors discussed and presented above, residual significant environmental effects are considered to be very limited. When considered in the context of the relevant policy and legislative considerations, it is considered that the Array meets the relevant policy requirements which are aimed at, increasing renewable energy capacity, whilst reducing likely significant effects on human, biological and physical receptors.

5. The Benefits of the Array

5.1 Introduction

5.1.1 This Chapter describes the benefits of the Array, the key elements of which relate to the generation of renewable electricity, climate change and socioeconomics. The conclusions of this Chapter refer to support which can be drawn in this regard from relevant climate change and renewable energy policy objectives as set out in Chapter 3.

5.2 Renewable Generation, Emission Savings & Security of Supply

Renewable Generation

5.2.1 As explained, the Array will involve up to 265 floating wind turbines to be installed in the Array Area.

5.2.2 The Array has secured Grid Connection Offers from National Grid Electricity System Operator (NGESO) for up to 3.6 GW of Transmission Entry Capacity. Maximising the capacity of generation in the resource-rich, accessible and technically deliverable Ossian area, is to the benefit of all Scottish and UK consumers, and the wind industry generally.

5.2.3 The Array proposes a substantial infrastructure asset, capable of delivering large amounts of low-carbon electricity – enough to power in excess of 6 million homes each year, from the early 2030's. This is in line with the CCC's recent identification of the need for urgent action to increase the pace of decarbonisation in the GB electricity sector.

Decarbonisation

5.2.4 A Climate Assessment Chapter has been prepared for the Array (volume 2, chapter 17). The report assesses the effects of the Array on climate through GHG emissions, and also examines the vulnerability and resilience of the wind farm to climate change.

5.2.5 As set out in Chapter 3 of this Planning & Need Statement, the UK Government is legally bound to achieve net zero carbon emissions by 2050 and the Scottish Government has a statutory target to achieve this by 2045. 'Net zero' means that the total GHG emissions produced would be equal to or less than the amount removed from the atmosphere, through a combination of GHG emission reduction and removal. The UK Government has introduced a series of carbon 'budgets' for five-year periods, which act as stepping-stones to achieve the overall reduction in GHG emissions by 2050. The five-year budgets are currently set up to 2037 and the UK is 'off track' with later budgets within this range.

5.2.6 The assessment estimates that the Project will produce approximately 337,457,750 MWh of low carbon electricity during its 35-year operational phase. Over its lifecycle the Project will produce an emission intensity of 4.4 gCO₂e/kWh. The electricity generated by the Project will save up to 143,082,086 tCO₂e from being emitted into the atmosphere that would otherwise have been emitted from conventional, higher carbon emitting forms of energy generation (i.e. fossil fuels). When construction, operation and maintenance and decommissioning phase GHG emissions are included the Project will save up to **131,667,016 tCO₂e** from being emitted into the atmosphere over its lifecycle (net emissions).

5.2.7 It will take approximately 2 years to 'pay back' the GHG emissions relating to the construction phase from the start of operation. This 'payback' period is in line with both the UK and Scottish Governments' net zero ambitions. Due to the carbon savings that the operation and maintenance phase will produce from low carbon electricity generation, the Project is assessed in the EIA Report as having a **significant beneficial effect on the climate**.

- 5.2.8 It should also be noted that the projected carbon savings are likely to be greater than estimated in the assessment since the assessment is based on a worst-case scenario in particular, using a publicly available load factor from RenewableUK, which is based on performance of existing offshore wind turbines; however this load factor is expected to increase in the future due to improvements in wind turbine technology and associated operation and maintenance activities that are included in the load factor.

Grid Balancing Benefits & Security of Supply

- 5.2.9 Ossian's connection to the National Electricity Transmission System (NETS) means that it will be required to play its part in helping National Grid Electricity System Operator (ESO) manage the national electricity system. This includes participating in mandatory balancing markets (to help balance supply and demand on a minute-by-minute basis and provide essential ancillary services) as well as providing visibility to the GB power market of its expected generation. This means that the low marginal cost wind power it will produce, can be forecast and priced into future contracts for power delivery by all participants, thus allowing all consumers to benefit from the market-price reducing effect of low-marginal cost offshore wind generation.
- 5.2.10 Reducing Scotland and the wider UK's dependency on hydrocarbons has important security of supply, electricity cost and fuel poverty avoidance benefits. Those actions already urgently required in the fight against climate change are now required more urgently for global political stability and insulation against dependencies on rogue nation states.
- 5.2.11 By maximising the capacity installed at Ossian, the Array delivers the greatest possible hydrocarbon usage reductions, and the greatest possible opportunity to reduce dependency on foreign imports.

Conclusions

- 5.2.12 The Need case for Ossian is a key consideration. It demonstrates that the deployment of offshore wind, and specifically Ossian, is needed to make a significant contribution to the following UK Government's national policy aims in relation to decarbonisation:
- > Net-zero and the importance of deploying zero-carbon generation assets at scale, such as with the Project;
 - > The significant carbon savings that would result;
 - > Security of supply (geographically and technologically diverse supplies); and
 - > Benefits in relation to affordability of energy i.e. ultimate cost to the consumer due to efficiencies from 'kick starting' floating offshore wind.
- 5.2.13 Ossian can make a single, large, meaningful, and timely contribution to decarbonisation and security of supply, while helping lower bills for consumers throughout its operational life, thereby addressing all important aspects of Scotland and the UK's legal obligations and existing and emerging Government policy.

5.3 Socio-Economic Considerations

- 5.3.1 The offshore socio-economic impact of the array is set out in chapter 18 of the EIA Report (volume 2). A summary of the key findings is set out below.
- 5.3.2 As part of the socio-economics assessment, the economic impacts on the Scottish and UK economies were considered, as well as economic and social impacts that will be localised to construction and operation and maintenance ports (though these are not known). The Array is also expected to contribute to increasing the supply of renewable electricity.
- 5.3.3 The Array is expected to generate the equivalent of 5% of current electricity consumption. Though the grid is very large and diverse, it is undergoing a period of transformation as the

electricity sector transitions to carbon neutral by 2035. As a result, the Array's contribution to a net zero economy was assessed as significant and beneficial.

- 5.3.4 In addition, the Array is expected to result in [REDACTED] worth of construction-related contracts in Scotland and [REDACTED] worth of contracts in the UK (including Scotland) out of a total of [REDACTED] in expenditure. These are expected to generate substantial economic activity and employment, particularly associated with the manufacture of floating foundations in Scotland. It was estimated that in the peak year this could support 6,340 jobs in Scotland and 11,210 jobs in the UK, (including Scotland). This was assessed as a significant, beneficial impact in Scotland.
- 5.3.5 There would also be port-specific impacts at the main construction and operation and maintenance ports. This includes an economic impact, supporting a peak direct employment of around 240 jobs at the main construction port and an annual direct employment impact of 70 jobs at the main operation and maintenance port. This is also expected to generate social impacts, such as population changes and increases in demand for housing.
- 5.3.6 In addition to the impact of the Array there is also expected to be a wider impact of the Ossian project as a whole, which is expected to represent expenditure of [REDACTED] (including the Array). This was assessed as significant and beneficial on the Scottish economy. The Array also has the potential to increase the critical mass of offshore wind projects in Scotland, attracting manufacturers to the area, for example blade and cable manufacturers. These would be expected to generate impacts for the Scottish and UK economy and the local areas where they are located.
- 5.3.7 Overall, the Array is expected to contribute to the strategic shift towards a net zero economy, while generating significant economic impacts in the Scottish economy and contributing to the overall economic opportunity represented by offshore wind development in the UK.

5.4 Supply Chain

- 5.4.1 The Applicant has developed a Supply Chain Development Statement (SCDS). The SCDS outlines an ambitious supply chain development strategy that will position the Scottish supply chain to secure orders at home and export opportunities abroad in the rapidly expanding floating offshore wind market. The following is a summary of the key commitments within the SCDS:
- > Aim to achieve a minimum 62% UK content in the vast majority located in Scotland.
 - > Manufacture and assemble floating foundations and Wind Turbine Generator towers in Scotland.
 - > Establish a [REDACTED] Supply Chain Fund to grow the Scottish supply chain.

5.5 Conclusions

- 5.5.1 Significant support for the Array can be drawn from understanding the extensive positive renewable energy generation, climate change mitigation and socio-economic effects arising from the Array. Support can be drawn from relevant legislation and policy including the MPS, wider national marine and energy policy and the Development Plans including NPF4. The benefits of the Ossian Array will considerably advance a number of UK and Scottish Government renewable energy, climate change, economic and marine policy objectives, and statutory target obligations.
- 5.5.2 The predicted benefits should be afforded substantial weight in the determination of the application for Section 36 consent and associated marine licences.

6. Conclusions

6.1 Introduction

6.1.1 This Chapter provides the overall conclusions on the general accordance of the Array with the relevant legislative and policy considerations to which the decision maker must have regard in determining the Applications for Section 36 Consent and the associated Marine Licences. Attention is also drawn to the substantial body of renewables and marine relative policy which have been identified as material to the determination and have a statutory footing.

6.2 Energy & Climate Change Policy & Legislative Requirements

6.2.1 The urgent need for offshore wind has been set out: a large increase in the deployment of this renewable energy technology is supported through a number of policy documents and by Scottish Government commitments – specifically within the Offshore Wind Policy Statement.

6.2.2 The declaration of a Climate Emergency needs to be viewed in the context in which it was declared and what followed from it as a result of the declaration. The declaration was a reflection both of the seriousness of climate change and its potential effects and the need for urgent action to cut carbon dioxide and other greenhouse gas emissions. It means action now and not next year or the year after that.

6.2.3 The drive to attain net zero emissions is now legally binding at the UK and Scottish Government levels by way of amendments to the Climate Change Act 2008 and in Scotland with the provisions of the Climate Change (Scotland) Act 2009 and the Climate Change (Emissions Reduction Targets) (Scotland) Act 2019. Scotland's 2030 interim emissions reduction target is highly challenging. The Project would be a major single step forward in ensuring that the target can be attained.

6.2.4 The climate emergency is not just a consideration, it is a factor of considerable importance. It adds significantly to the weight of positive support in the balance in this case. The need for the Array should be afforded substantial weight in the planning balance. The way that decision makers can do that is by properly recognising the seriousness and importance of energy policy related considerations in the planning balance. It is the cumulative effect of a large number of individual renewable projects which will move Scotland towards where it needs to be. The size and scale of Ossian means that it moves Scotland significantly closer to that in a single step.

6.2.5 This Statement also explains the important energy security and affordability benefits associated with developing electricity supplies which are not dependent on volatile international markets and are located within the UK's national boundaries. The urgency for an electricity system which is self-reliant and not reliant on fossil fuels is enormous in order to protect consumers from high and volatile energy prices, and to reduce opportunities for destructive geopolitical intrusion into national electricity supplies and economics. The Array would make a significant contribution towards the UK attaining this security of supply and socio-economic objectives.

6.3 Policy Assessment

6.3.1 From consideration of all the predicted environmental likely significant effects of the Array and, where relevant, mitigation measures proposed, residual likely significant environmental effects are considered to be very limited. When considered in the context of the relevant policy and legislative considerations, it is clear that the Array, on the whole, meets the relevant policy requirements which in summary are aimed at, increasing renewable energy capacity, whilst minimising effects on human health, minimising wider environmental harm and ensuring that conflicts with other users of the marine environment are kept to a minimum.

6.4 Overall Conclusions

- 6.4.1 A detailed and robust EIA has been undertaken, based on a worst case scenario approach and which concludes that the Array alone will not result in likely significant effects. Some likely significant cumulative effects are predicted, in combination with other projects, but these are limited and can be mitigated so that the residual effects are not significant.
- 6.4.2 The climate and socio-economic assessments have shown that the Array could provide significant beneficial effects.
- 6.4.3 In respect to the Habitat Regulations, a report has been provided to inform an Appropriate Assessment. This concludes that there isn't a potential adverse effect on integrity (AEOI) in respect of seabirds from Array alone but that there is AEOI in combination with other projects.
- 6.4.4 Given this position, it is deemed necessary for the Applicant to provide a Derogation Case to satisfy the Habitats Regulations in respect of the species for which an AEOI has been identified.
- 6.4.5 The assessment set out by the Applicant concludes that there is an imperative overriding public interest in authorising the Array to further the fundamental policy objectives it will serve, which it is considered demonstrably outweighs the AEOI which is predicted in respect of the identified SPAs.
- 6.4.6 Overall, it is considered that there is accordance with legislation and policy in terms of increasing renewable generation and capacity and minimising conflict with users of marine environment, human health and environment.
- 6.4.7 A worst-case scenario approach has been assessed and appropriate mitigation has been proposed and can be secured to reduce the residual effects. The MPS makes it clear that there is a balance to be struck between benefits and reported likely significant adverse effects.
- 6.4.8 It is considered that the overall policy appraisal presented in this submission demonstrates a compelling case that the Array would deliver significant benefits in the wider public interest. The Array has been designed and assessed in full accordance with relevant legislative requirements and the underlying aims and objectives of policy framework.
- 6.4.9 This Planning & Need Statement demonstrates that the deployment of offshore wind, and specifically the Ossian Project is needed to make a significant contribution to the Scottish and UK Governments' targets and energy policy aims as follows:
- > Net-zero and the importance of deploying zero-carbon generation assets at scale;
 - > Security of supply (geographically and technologically diverse supplies);
 - > Affordability of energy; and
 - > Development of supply chains and creation of socio-economic opportunities.
- 6.4.10 The Array can substantially contribute to both the Scotland and the UK's legally binding climate change targets by helping to decarbonise energy supply, whilst also contributing to the essential tasks of ensuring security of supply and providing low-cost energy for consumers in line with the Scotland and UK Government's national policies.
- 6.4.11 The Array will also contribute materially to the economic and social landscape in Scotland and the UK as it can provide substantial employment opportunities and skills development, particularly in coastal communities, whilst also playing a major role in supporting Scotland and the UK's supply chains.
- 6.4.12 It must follow from the above that the benefits that would arise from the Project should be afforded substantial weight in the planning balance. The delivery of this renewable generating infrastructure will substantially assist in the delivery of the Net Zero policy imperative.

- 6.4.13 Consideration of the application will involve striking a balance between the need for the Project, its benefits, and the mitigation of and compensation for predicted environmental effects. The benefits of the Ossian Array significantly outweighed its adverse effects.
- 6.4.14 For the above reasons it is recommended that Section 36 consent and Marine Licenses should be granted.

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Ossian



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