

# Caledonia Offshore Wind Farm Supply Chain Outlook

April 2023

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## Caledonia Year 1 Supply Chain Key Achievements

### GREEN GROWTH

Green Growth is about efficient and competitive supply chains that contribute to the growth of net zero industries



Doubled capacity of Caledonia site to 2,000MW, delivering a corresponding increased opportunity for the local supply chain



Engagement with potential supply chain companies to remove barriers to the offshore wind market

### NEXT STEPS

Finalise procurement strategy to improve visibility of available commercial opportunities with a package of initiatives for supply chain engagement

### INNOVATION

Innovation drives growth, creates jobs and helps make our technology cleaner



Active member of the Offshore Wind Growth Partnership Reference Group, which supports innovation through nurturing and commercialising innovative technologies



Brought Ocean Winds' world-leading expertise to the ORE Catapult Centre for Excellence for Floating Offshore Wind

### NEXT STEPS

Continue work with industry, enterprise and academia to seek new and disruptive technologies which improve safety, reduce energy costs and maximise economic impact

### SKILLS

A skilled workforce will be crucial to delivering our Green Growth ambitions



Developed a new Young STEM Leader Programme award at Scottish Credit and Qualification Framework (SCQF) Level 7



Audited Ocean Winds' UK diversity, equality and inclusion practices and currently readdressing workplace barriers in line with OWIC's best practice principles<sup>1</sup>

### NEXT STEPS

An inclusive end-to-end learning and development approach, which aligns with Sector Deal ambitions for offshore wind as a career of choice which is inclusive, accessible and representative of society

### INFRASTRUCTURE

Activities to support and invest in the infrastructure necessary to decarbonise supply chains, minimise local impacts and increase supply chain capacity



Direct engagement with global OEMs to attempt to bring manufacturing facilities for wind farm components to new Green Freeports in Scotland



Steering group member of the successful bid which won Inverness and Cromarty Firth Green Freeport status

### NEXT STEPS

Continue engagement with Memorandum of Understanding (MOU) partners listed at bid stage, enterprise agencies, government and the Strategic Investment Model to develop proposals for infrastructure investments

<sup>1</sup> Offshore Wind Industry Council (OWIC) 2020 Best Practice Guide, Diversity & Inclusion: Focusing on Gender and Ethnicity in the Offshore Wind Sector.

# 1 Outlook

## 1.1 Caledonia Year 1

Ocean Winds will build Caledonia to an installed generation capacity of 2GW, consisting of 1,500MW fixed and 500MW floating foundations<sup>2</sup>, with supply chain commitments made to be reflective of the planned target capacity.

As one of the few predominantly fixed ScotWind sites, it has optimum conditions to construct a high-quality, low-risk wind farm by 2030 which will contribute towards achieving net zero emissions of all greenhouse gases in Scotland by 2045.

Ocean Winds is a long-term investor in the Scottish offshore wind sector with a 6.1GW portfolio consisting of five projects. As Ocean Winds' third site in the Moray Firth, Caledonia Offshore Wind Farm will benefit from over a decade of prior investment and legacy infrastructure provided by Moray East and Moray West.

Local supply chain companies are in a greater state of readiness because of previous Ocean Winds' projects which engaged widely to raise market awareness, promoted competitiveness and inspired innovation.

Caledonia intends to build upon Ocean Winds' experience in Scotland, and recognises that sustainable development requires both in-kind and financial support. Therefore, **Caledonia has pledged £46m of funding available for investment prior to its Financial Investment Decision (FID).**

The project remains committed to creating local opportunities and strengthening the local economy close to the project. It will build critical supply chain competencies that are globally competitive, invest in infrastructure, and provide opportunities for skills development.

**Since signing the Option Agreement (OA) in April 2022, Caledonia:**



Invested over £250,000 in workforce skills including sponsorship of the Grampian First Lego League which is introducing children to science at an early age, creation of a new STEM Leadership Programme Award and an internal evaluation of diversity, inclusion and equality practices of Ocean Winds' UK.



Pursued inward investment opportunities to enhance the Scottish Supply Chain for blade manufacturing and fabrication of components of floating and fixed jacket substructures.



Is developing plans for the expansion of Ocean Winds' Operational and Maintenance (O&M) bases in Scotland.



Allocated a new dedicated resource to contribute to the Strategic Investment Model and to work with other ScotWind developers, Scottish Government, enterprise agencies and industry to maximise the opportunity ScotWind can provide for the Scottish economy.



Launched a scholarship programme to support students from Moray and north Aberdeenshire through their undergraduate degrees.



Established a leadership team made up of 50% women.



Provided a supply chain portal to grow and expand the companies Ocean Winds' works with which are: based in Scotland; with significant operations in Scotland; or that have plans to relocate their base or operations to Scotland. Registration is available at <https://www.caledoniaoffshorewind.com>

<sup>2</sup> Subject to detailed surveys and offshore consenting process.

Caledonia's approach to the SCDS aims to maximise deliverable project expenditure primarily in Scotland, and subsequently in the rest of the UK (rUK), and to provide tangible support to the supply chain to address the present limited capability in Scotland.

**The Commitments and Ambition tables have been updated to align with the planned target capacity of 2GW as a hybrid site. The project remains committed to achieving a minimum 30% supply chain content in Scotland and 60% in the UK.**

The full extent of the macroeconomic conditions faced by offshore wind have not been appraised as part of this update. Increased competition in offshore wind in Scotland and the wider world will likely increase pressure on the economic and efficient delivery of offshore wind, with the impact of economic policies from US and Europe yet to be known. In 2023 Caledonia will undertake an Economic Assessment to understand the health of the offshore wind supply chain in Scotland.



## 1.2 Enablers for ScotWind

Offshore wind is one of the lowest cost means of producing electricity today, and independence from ongoing high fossil fuel prices is obtained through initial investment in infrastructure. Although industry has dramatically reduced the cost of offshore wind infrastructure, it is, by nature, highly capital-intensive. Finance requires to be raised through borrowing on international markets.

The ability to access low cost capital is dependent on risk, and how attractive the Scottish offshore wind market is in comparison with global competitors. As a consequence of its history, the UK has traditionally been seen as a stable, low risk market, where there is a predictable and dependable demand for electricity.

Intensive investment in new generation in recent years, together with active government policies (for example to achieve net zero) have an impact both on supply and demand for electricity, while regulatory flaws have an impact on confidence in market stability.

As global economic conditions make competition for capital more intensive, it is vital that government provides assurance to markets that Scotland remains an attractive, low risk investment environment, with clear, secure long-term market prospects for the power generated by new facilities.

### **Ocean Winds recommend adoption of the following policy levers to enable offshore wind success for Scotland:**

- To increase investor confidence in Scottish projects, policy should be updated to increase Offshore Wind Ambitions for 2030 from the existing 10GW to minimum of 16GW. This would represent buildout completion of the pre-ScotWind sites, plus at least three early mover ScotWind sites. If the ambition is retained at 10GW this could infer delivery of no ScotWind sites by 2030.
- Within the revised Ambition there should be a floating offshore wind target of 1GW by 2030 to support the movement of pre-commercial floating offshore wind in the short-medium term. This would promote transition opportunities and a sustainable upward trajectory for the supply chain to prepare for GW scale floating offshore wind in the mid 2030s.
- To provide further confidence, a rolling five year target up to 2045 should be established, with a clear focus for 2035 given that transmission network design and development decisions in the near term will be required to realise Scotland's Ambitions.
- Without a volume of operational projects in Scotland we will not be able to maximise the economic opportunities for those companies and people looking to transition into offshore wind.
- The Scottish Government should begin to quantify its net zero policies for domestic and industrial electricity consumption: quantify its interconnector and export ambitions to provide a credible foundation for its generation infrastructure targets, and to use the policy resources already at its disposal to make Scotland an attractive investment prospect.
- The UK Government and electricity market regulatory Ofgem must act with a renewed urgency to address the long-standing and now alarming situation with transmission charging which is presenting amplified and volatile locational signals that are incompatible with net zero targets and will be highly damaging to the consumer.
- It is important that Scottish Government ensures there is a level playing field with the rUK offshore wind projects so that Scottish projects are not disadvantaged to a point where they are not able to be taken forward. In particular, Scottish Government should be protecting Scottish projects against unsustainable transmission charges as well as Energy Market reform, that are damaging to the delivery of the Scottish Energy Strategy.
- There remains a lot of uncertainty due to the current energy crisis and the geo-political impact of that. Other geographies are positioning through their economic policies, creating complex competition within offshore wind supply chains impacting the efficient and economic delivery of projects. Scottish Government and its agencies should look to use all the levers within it controls to encourage inward investment into the areas within the supply chain where Scotland can competitively excel.
- UK Government to provide global economic policies which deliver stability and sustainable growth against challenging market conditions.
- Scottish Government to make targeted interventions to ensure the opportunities of the ScotWind are realised by ensuring local enterprises are globally competitive.

- Offshore wind is a rapidly developing sector, whose landscape and supply chain are highly dynamic. It is critical that the landscape and its changes are accurately assessed to understand, at any point in time through the ScotWind delivery period, what offshore wind components can be obtained from domestic enterprise, and what interventions require to be made when they cannot.

Although political accountability for offshore wind deployment is split between UK and Scottish Governments, clear visibility of market opportunities and prospects over a timeframe is vital to provide confidence for the investment necessary for Scotland's offshore wind sector to flourish. This applies to all levels in the supply chain, from investment to development to manufacture to installation.

## 2 SCDS Commitments and SCDS Ambition Tables

Caledonia is targeting a capacity of 2GW, consisting of 1,500MW fixed foundations and 500MW floating foundations, subject to the planning process.

### SCDS Commitments and SCDS Ambition Tables for 2GW site<sup>3</sup>

**Table 1: 2,000MW combined fixed and floating project Commitments**

Stage	Scottish Expenditure £m <sup>4</sup>	rUK Expenditure £m	EU Expenditure £m	Elsewhere Expenditure £m
Development	300 <sup>5</sup>	65	-	-
Manufacturing & Fabrication	677	1,348	-	-
Installation	429	292	-	-
Operations	423	49	-	-
<b>Total</b>	<b>1,829</b>	<b>1,754</b>	-	-

**Table 2: 2,000MW combined fixed and floating project Ambition<sup>6</sup>**

Stage	Scottish Expenditure £m <sup>4</sup>	rUK Expenditure £m	EU Expenditure £m	Elsewhere Expenditure £m
Development	332 <sup>5</sup>	42	-	-
Manufacturing & Fabrication	1,665	963	-	-
Installation	545	143	-	-
Operations	468	-	-	-
<b>Total</b>	<b>3,010</b>	<b>1,148</b>	-	-

<sup>3</sup> The expenditure levels set out in the Commitments and Ambition tables do not sum to the estimated total expenditure required for the proposed development. Levels are reflective of only the portion retained in Scotland, and rUK Expenditure in regions outside of the UK is excluded.

<sup>4</sup> Scottish Expenditure means any element of the expenditure incurred (i) by entities registered, resident or having their principal offices in Scotland and (ii) where the location of the service received or the product produced in exchange is in Scotland.

<sup>5</sup> Scottish Expenditure during the Development Stage includes the sum of both traditional development expenditure and enabling investments for the supply chain. Enabling investments have been incorporated in the Table of Commitments (as a lump sum within Scottish Expenditure during the Development Stage).

<sup>6</sup> Total expenditure required for the proposed development is equal across Commitments and Ambition tables. Expenditure put forward in the Ambition table is higher than the Commitments table, based primarily on a higher proportion of the expenditure retained in Scotland.

## Former 1GW Fixed Commitments and Ambition Tables

Table 3: Former 1GW fixed site Commitments table








Stage	Scottish Expenditure £m 	rUK Expenditure £m 	EU Expenditure £m 	Elsewhere Expenditure £m 
Development	176	34	-	-
Manufacturing & Fabrication	272	685	-	-
Installation	213	162	-	-
Operations	181	19	-	-
<b>Total</b>	<b>842</b>	<b>901</b>	-	-

Table 4: Former 1GW fixed site Ambition table

Stage	Scottish Expenditure £m 	rUK Expenditure £m 	EU Expenditure £m 	Elsewhere Expenditure £m 
Development	192	22	-	-
Manufacturing & Fabrication	774	408	-	-
Installation	227	77	-	-
Operations	200	-	-	-
<b>Total</b>	<b>1,393</b>	<b>507</b>	-	-



## Overall Caledonia Offshore Wind Farm Commits to...

### TOTAL EXPENDITURE



**£1,829m**

of total expenditure committed to Scotland across all project stages

### TOTAL EXPENDITURE



**+£1,181m**

of additional expenditure in Scotland subject to Ambition scenario

### LOCAL CONTENT



**30%/60%**

achieving a minimum 30% supply chain content in Scotland and 60% in the UK

### FABRICATION



Collaborating with industry and government to enable a globally competitive yard in Scotland for steel fabrication and assembly via the Strategic Investment Model

### SUPPLY CHAIN ENGAGEMENT

- ✓ Continuous active participation in Scottish supply chain fora
- ✓ Voluntarily increase frequency of SCDS reporting to optimise information flows
- ✓ Dedicated resources to facilitate coordinated response to the rapidly evolving supply chain landscape



### SUPPLY CHAIN ENABLING INVESTMENT

**£46m**

of financial support to the Scottish supply chain prior to FID, directed towards building critical supply chain competencies that are competitive globally



### PROJECT PIPELINE

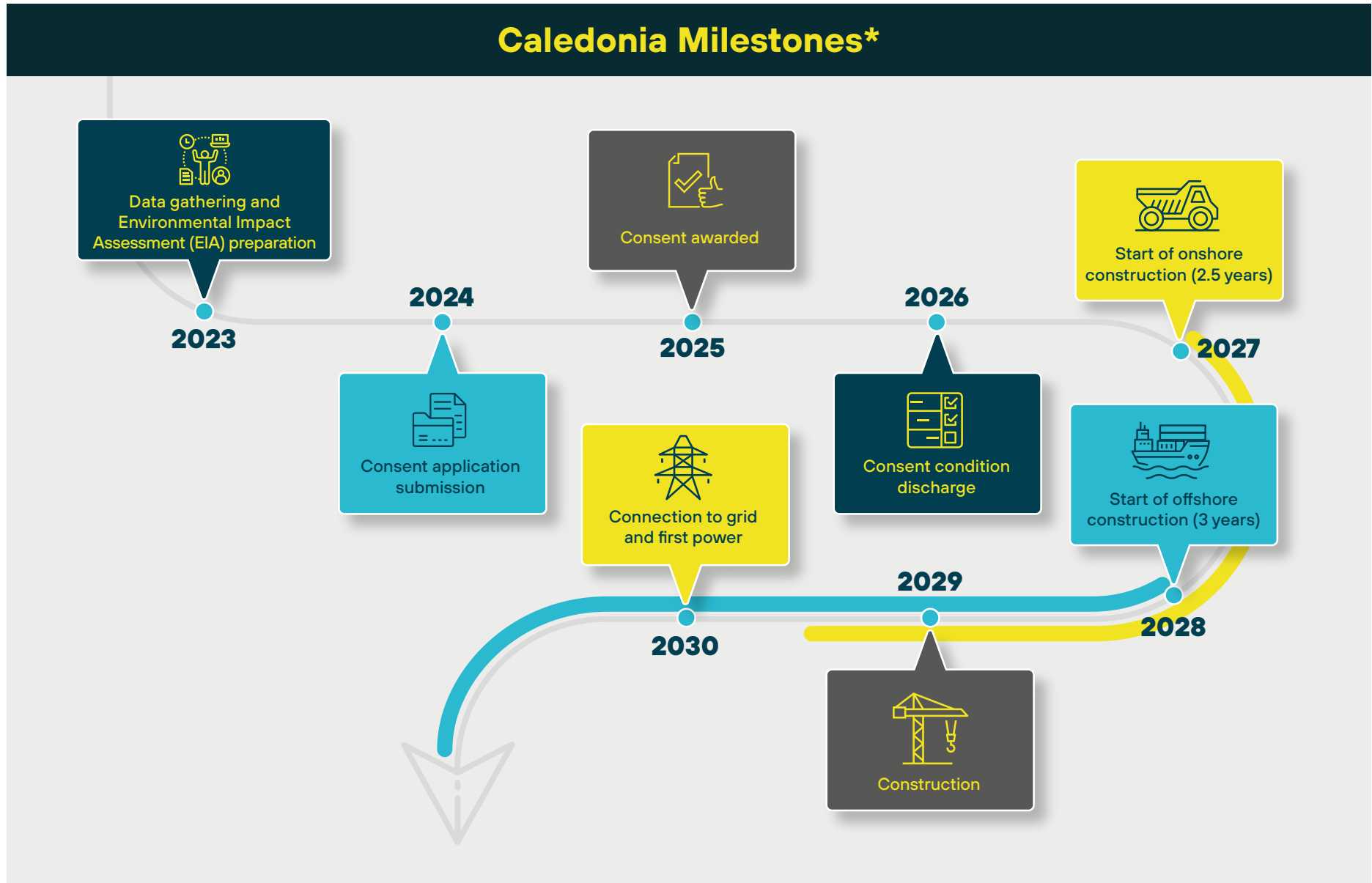


Pipeline of work to the facility through portfolio of offshore wind projects and successive seabed lease tenders for sites in Scotland

### SKILLS & DIVERSITY



Develop skills and improve diversity in the sector through funded apprenticeships and independent accreditation



\*At the current scoping stage, the timescales and durations are indicative. Precise information on the construction process will become available once the final design of the proposed development has been defined.



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