STROMAR

Welcome to the consultation for Stromar Offshore Wind Farm

Thank you for joining us at today's event which is part of the first phase of statutory public consultation on our plans for Stromar Floating Offshore Wind Farm.

We were very encouraged by the turnout and the feedback received at our first series of information days in March 2024, when the project was at the early stages of development.

We look forward to sharing details of how your valuable feedback has helped shape our plans so far and how it will continue to be considered in Stromar's design and development.

Generating energy in greener and more sustainable ways is critical to securing our own energy needs and reducing the impacts of climate change. In addition to addressing these important issues, Stromar could bring further benefits.

Stromar could:

- **Be one of the world's largest commercial floating offshore wind farms**
- **Make a significant contribution towards the Scottish and UK Governments' Net Zero targets**
- **Underpin Scotland's opportunity to be a world leader in floating offshore wind**
- **Provide greater energy security and maximise economic opportunities - creating new jobs and bolstering the local supply chain**

Nicholas Ritchie
Stromar Project Director

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Who we are

Stromar is a joint venture combining three companies at the forefront of global floating offshore wind development: Ørsted, BlueFloat Energy, and Nadara.

Ørsted

Ørsted has an unparalleled track record in offshore wind, having developed, built and operated more offshore wind projects globally than any other company in the world. Ørsted has rich experience in working with local communities to realise the benefits that onshore and offshore wind projects can bring. Ørsted has 12 operational offshore wind farms in the UK with a combined capacity of 5.6GW, powering over 6 million UK homes a year.

BlueFloat ENERGY

BlueFloat Energy brings its team's knowledge and experience in developing, financing and building floating wind projects around the world, including Scotland. BlueFloat Energy is supported by 547 Energy, the Quantum Energy Partners' platform dedicated to clean energy investments.

nadara

Nadara (formerly Renantis) is known for its pioneering approach and experience with community ownership and engagement, particularly in Scotland. As one of Europe's largest renewable independent power producers, Nadara has an installed capacity of 4.2 GW on projects worldwide with an 18 GW pipeline. Sustainability is part of Nadara's DNA, creating shared value for all stakeholders, safeguarding and enhancing the environment in which they operate and building relationships with communities.

"The joint venture project team developing Stromar brings together multiple disciplines spanning engineering, planning, land surveying, community and stakeholder engagement, and health, safety and the environment.

We have been working diligently to balance key considerations across engineering, environmental, economic and social aspects of Stromar as part of our proposals for consultation."

Kirsty Godwin, Stromar Consents Manager

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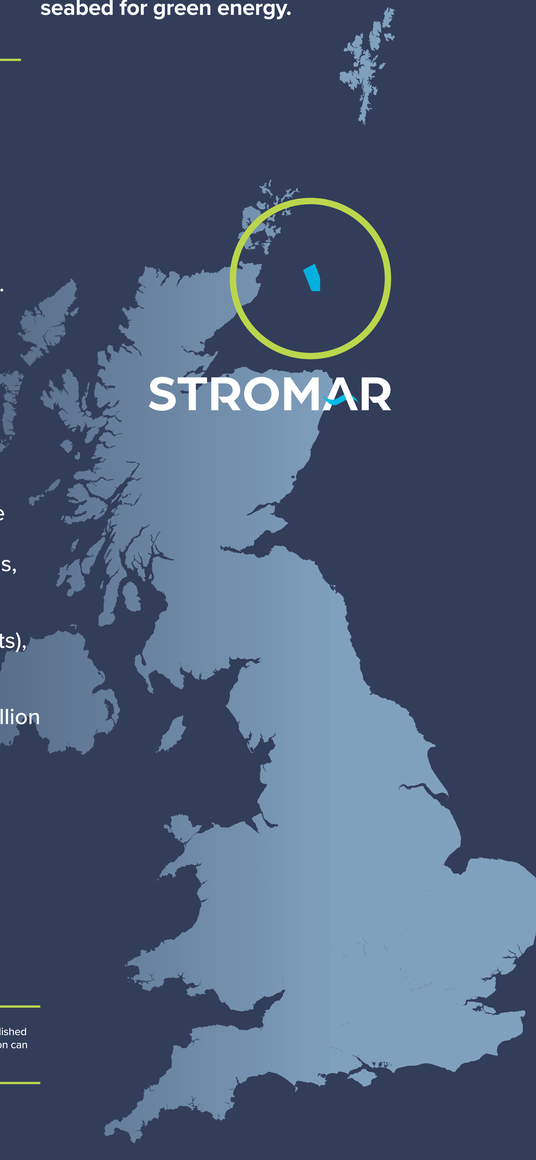
Project overview

We are developing one of the world's largest commercial-scale floating offshore wind farms and working to underpin Scotland's opportunity to be a world leader in floating offshore wind.

Floating offshore wind farms enable us to place turbines in much deeper waters with stronger and more consistent winds - unlocking a significant opportunity in Scotland's seabed for green energy.

Name:	Stromar Floating Offshore Wind Farm
Location:	Approximately 80km north of Fraserburgh, Aberdeenshire, in the outer Moray Firth, off the coast of Caithness. The seabed area is about 265km^2. The green energy generated is planned to be exported via an underground cable link coming onshore between Fraserburgh and Rosehearty before connecting to the National Grid at Greens, Aberdeenshire.
Capacity:	Up to 1.5 GW (gigawatts), enough to power the equivalent electricity needs of almost 1.5 million homes each year[1].
Number of turbines:	Up to 100
Water depths:	60-100m
Anticipated start date:	Early to mid-2030s

[1]Calculations are based on the average load factor for offshore wind data published within the Digest of United Kingdom Energy Statistics, BEIS. Further information can be found on our website www.stromarwind.co.uk



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About our consultation

This is the first phase of statutory public consultation for Stromar that forms part of the pre-application process ahead of:

- A planning application being submitted to Aberdeenshire Council for the onshore works
- A Section 36 and Marine Licence applications being submitted to the Marine Directorate for the offshore works

In addition to sharing updates on the project's progress, we are seeking feedback on the latest advancements for Stromar. These include:

- A refined onshore cable route corridor
- A selection of preferred landfall sites
- A selection of preferred sites for the onshore substation
- Refinements to the proposed site for supporting offshore infrastructure known as a reactive compensation station
- A refined cable route connecting the offshore substations to the north Aberdeenshire coast

Anyone wishing to comment / provide feedback on the current proposals should do so by 23 December 2024. This can be done by various means:

- Filling out a feedback form provided at today's event
- Visiting our virtual exhibition where today's event material can be viewed, including an online feedback form – **www.stromarwind.co.uk**
- Sending a feedback form or comments to our free postal address: **Freepost STROMAR**
- Contacting the free Stromar project phone line on **0333 888 0611**

Please note that at this stage, any comments or feedback received about the project are not formally represented to Aberdeenshire Council or the Marine Directorate. Formal representation can be made following submission of the planning and marine licence applications to the respective bodies.

An indicative timeline for the consultation process is outlined below.

MARCH 2024

Public information days held to introduce communities to Stromar

NOVEMBER 2024

First phase of statutory pre-application consultation (PAC)

23RD DECEMBER 2024

Closing date for comments on first PAC consultation phase

SPRING 2025

Second PAC phase of consultation

Closing date for comments on second phase of statutory consultation

AUTUMN 2025

Project partners aim to submit Onshore Planning in Principle application

- Opportunity for public and stakeholders to send comments on the proposed onshore works to Aberdeenshire Council

WINTER 2025

Project partners aim to submit Marine Licence application

- Opportunity for public and stakeholders to send comments on the proposed offshore works to the Marine Directorate

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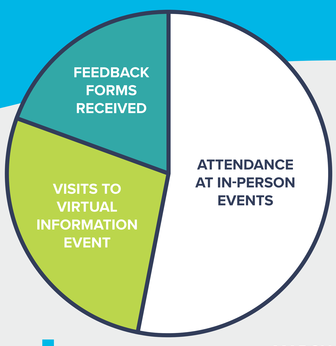

MARCH INFORMATION EVENTS

You said, we actioned

Considerable progress has been made since our information days in March 2024 such as refinements to our project parameters which have incorporated feedback received.

Below we set out recurring themes where requests for information and interests were raised, and how we are addressing them.

YOU SAID	WE ACTIONED
Provide further detail in plans	• Considerable reduction in size of onshore cable corridor • Preferred sites identified for onshore substation and supporting infrastructure • Preferred offshore cable route selected and narrowed
Developers should be collaborating more	• Engaging with developers in the New Deer and Greens area to address common themes of feedback and complete robust cumulative assessment
Avoidance of known peatland and ancient woodland	• Refined onshore cable corridor to avoid peatland including Middlemuir Local Nature Conservation Site • Commitment to avoid designated nature conservation sites including all ancient woodland
Acknowledge number of private water supplies	• Site surveys and landowner questionnaires • Consultation with Aberdeenshire Council and Scottish Environment Protection Agency • Commitment to mitigate any impacts identified
Minimise any noise from construction of cable route and substation	• Commitment to not build permanent high voltage above ground infrastructure within 200m of residential properties • Noise surveys and assessments completed in consultation with Aberdeenshire Council with any limits secured by planning condition • Noise and Vibration Management Plan to be developed
Acknowledge Rosehearty to Fraserburgh Site of Special Scientific Interest (SSSI)	• Geological walkover survey, and consultation with NatureScot and Aberdeenshire Council geology specialists • Commitment to avoid both open cut installation and works in the intertidal area • Engineering feasibility studies ongoing to identify options to avoid impacts to the geological SSSI
Potential impact on local fishing communities	• Dedicated team engaging with the commercial fishing sector and a specialist fisheries consultancy with a local outreach office in Fraserburgh engaged to ensure accessibility for people • Regular meetings with the Scottish Fishermen's Federation, Scottish White Fish Producers Association and North and East Coast Regional Inshore Fisheries Group to continuously gather feedback
Safeguard local cultural heritage along the coastline	• An Environmental Impact Assessment (EIA) is required to assess any potential impacts on the maritime cultural heritage including historical features and wrecks, and mitigate any likely significant effects • Engaged with local scuba diving clubs to better understand the location of maritime heritage assets
Protect local ecology including marine mammals at landfall and a seal colony	• An Environmental Impact Assessment (EIA) is required to assess any potential impacts on the environment, including marine life, and mitigate any likely significant effects • Engaging with Shark & Skate Scotland scientists and Macduff Marine Aquarium to better understand the local ecology • Sandhaven seals considered in the marine cable route planning, surveys and will be part of the EIA 'marine mammal' chapter
Safeguard flat fish breeding ground from potential landfall location	• The Fluke Peel location and a possible flat fish breeding site considered in the marine cable route planning process, surveys and will be assessed in the EIA 'Fish and Shellfish Ecology' chapter • Engaging with Shark & Skate Scotland scientists and Macduff Marine Aquarium to better understand the local ecology • Considering and assessing all potential impacts on breeding fish species • The exact location of cable landfall is still unknown and subject to further surveys and consultation with NatureScot and other regulatory bodies as required

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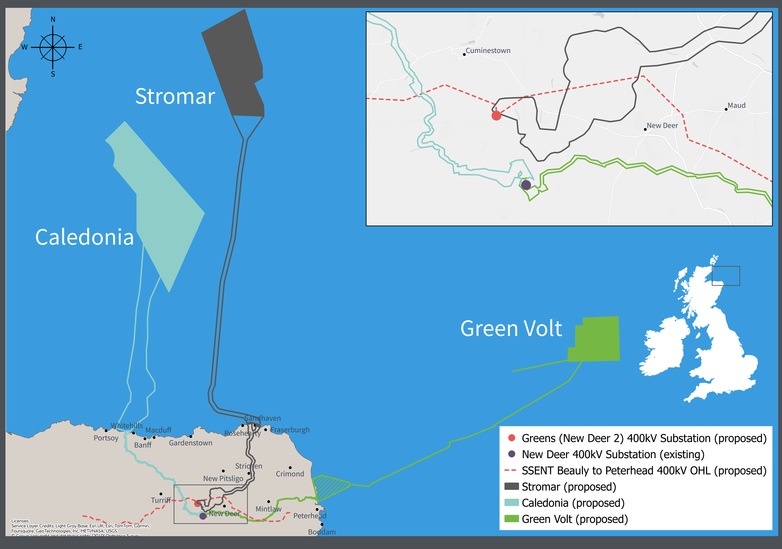
Projects in the Greens vicinity

In response to feedback received at our information days in March, we have worked with other developers in the area - Caledonia, Green Volt & SSEN Transmission - to produce a map showing current known electricity infrastructure projects in the Greens area.

We are working with the developers to better understand how we plan and design the Stromar project as well as address areas of collaboration and ensure robust cumulative assessment.



Project	Power Generation	Onshore Grid Connection Location	Consent Status	Further details can be found on the project website:
Caledonia Ocean Winds	2 GW	New Deer 400kV Substation	Onshore and Offshore submission expected by Q4 2024	Caledonia **www.caledoniaoffshorewind.com**
Green Volt Flotation Energy & Vårgrønn	Up to 560 MW	New Deer 400kV Substation	Onshore and Offshore awarded in April 2024	Green Volt **www.greenvoltoffshorewind.com**
Stromar Ørsted, BlueFloat Energy & Nadara	Up to 1.5 GW	Greens (New Deer 2) 400kV Substation	Onshore and Offshore submission expected by Q3 2025	Stromar **www.stromarwind.co.uk**
Greens (New Deer 2) 400kV Substation SSEN Transmission	-	-	Submission expected by Q4 2024	Greens (New Deer 2) 400kV Substation **www.ssen-transmission.co.uk**
Beauly to Blackhillock to New Deer to Peterhead 400kV OHL SSEN Transmission	-	-	Submission expected by Q4 2024	Beauly to Blackhillock to New Deer to Peterhead 400kV OHL **www.ssen-transmission.co.uk**

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Onshore cable corridor & landfall

Stromar has made a commitment to bury all onshore cables connecting the offshore cables to the onshore substation near the SSEN Greens substation.

At our information days, we presented a scoping area within which the buried cables will be located (Figure 1). This area has since been significantly refined through engagement with the local community, landowners and in consultation with Aberdeenshire Council and NatureScot (Figure 2).

We are committed to minimising the impact of our construction by undertaking thorough environmental assessments and working closely with the local community.

Key considerations so far have included avoiding as much as possible:

- **Known peatland and ancient woodland areas**
- **Waterbodies**
- **Urban areas**
- **Residential properties and existing businesses**
- **Environmental designations**
- **Heritage assets**
- **Private water supplies**

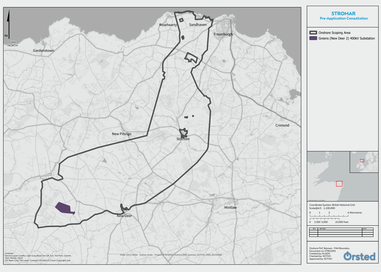

Figure 1

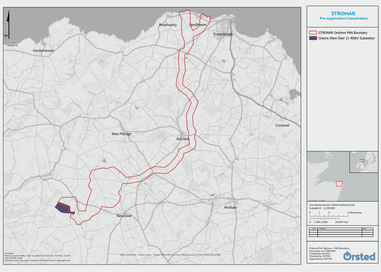

Figure 2

The onshore cable route will be located within the onshore cable corridor. The cable corridor will be refined further than shown currently as part of the ongoing design process. Feedback from consultation events, stakeholder engagement and outputs from environmental and engineering surveys will be taken into consideration.

The landfall site selection process is also ongoing, with two options currently under consideration (Figure 3). One of the techniques being considered to minimise impacts on the intertidal area during construction is the use of underground directional drilling. This technique is also proposed at several sensitive features such as watercourses along the onshore cable corridor.

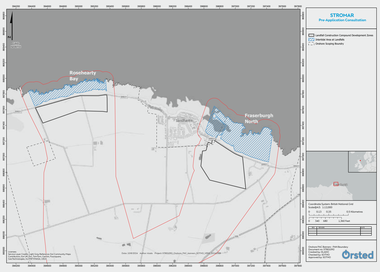

Figure 3

The Sandhaven harbour landfall option would consist of providing a safe conduit for the Stromar export cables utilising part of the existing sea wall. The details of how this could be done are still to be determined and will require close collaboration with the Sandhaven and Pitullie Harbour Trust as well as other local key stakeholders.

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Onshore substation

Since the events in March, we have undertaken further work in our route planning and site selection (RPSS) process for the onshore substation. The RPSS work has included:

- Identifying multiple sites using a Geographic Information System (GIS) and desktop study
- Site visits with specialists and surveyors
- Constraint mapping of the sites, resulting in a shortlist of potential sites
- Further assessments and workshops undertaken throughout 2024 by specialists in engineering, environment and consents and land and property to identify the preferred site

As a result, Stromar has selected a preferred site for the onshore substation from the shortlist of sites (Figure 1).

Stromar has also selected a preferred site for the onshore support infrastructure known as the Reactive Compensation Station (if needed) (Figure 2).

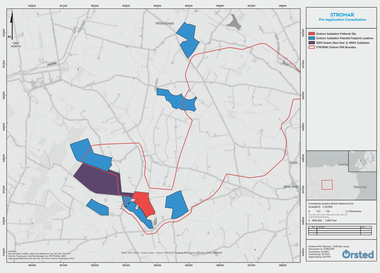

Figure 1

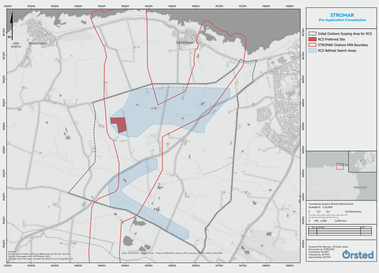

Figure 2

Why this substation site?

- Nearness to SSEN Greens substation
- Fewer environmental constraints compared to other options
- Sufficient size to accommodate all proposed infrastructure as well as landscaping and biodiversity enhancements
- Proximity to main access routes

Why this reactive compensation station site?

- Locality along the offshore and onshore export cable route
- Outside the North Aberdeenshire Coast Special Landscape Area
- Fewer environmental constraints compared to other options
- Existing access

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Offshore

The Environmental Impact Assessment for Stromar is based on a design envelope that allows for flexibility in the final project design. Currently, the envelope includes:

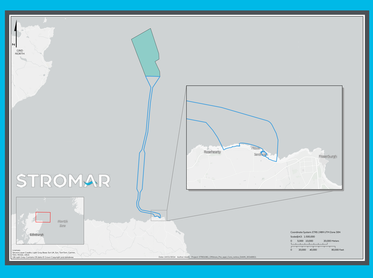
- Up to 100 wind turbines with floating foundations
- Up to three offshore substations in the offshore array area linked to the wind turbines via inter-array cables
- Up to one offshore platform known as the offshore Reactive Compensation Station (RCS) positioned between the offshore export cables
- A refined cable route connecting the offshore substations to the Aberdeenshire coast, north of Fraserburgh

As a result of further studies, there is potential to increase the amount of green energy Stromar could generate from 1GW to up to 1.5 GW (Gigawatt) by increasing the number of wind turbines from 70 to up to 100.

Since our information days, the offshore design has been refined as a result of offshore surveys, design development and consultation feedback.

The key refinements are:

- The selection of one preferred offshore export cable corridor
- Significantly reduced location area for Reactive Compensation Station (if required)
- Reducing offshore export cable corridor width from 3km to 1km
- Refinement to two landfall areas



The preferred offshore export cable corridor was selected based on:

- Avoiding the highest density static fishing and scallop dredging grounds off the coast of Fraserburgh
- Avoiding much of the marine traffic associated with Fraserburgh Harbour
- Avoiding the deepest waters of the Southern Trench, allowing for less challenging cable installation
- Reducing the number of potential third-party cable crossings
- Avoiding the majority of known potential marine archaeological features
- A 25km shorter cable length

The reduced Reactive Compensation Station location area is based on a review of the general shipping traffic data obtained from site surveys, known ferry routes, and fishing grounds data provided through consultation with fishery organisations and communities.

The project team will continue to refine the design based on environmental and geological survey works, and feedback from the local communities and affected stakeholders.

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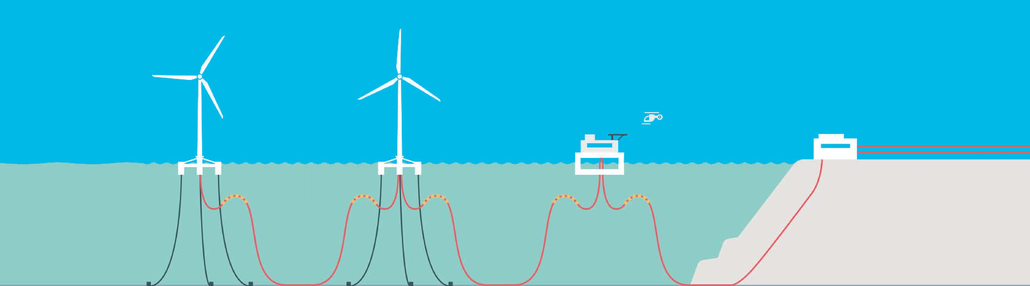

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Environmental focus

Stromar is committed to delivering a net positive biodiversity impact. This means we will leave the natural environment in a measurably better condition than it was before we built our project, against an environmental baseline.

Throughout 2022, 2023 and 2024, we carried out onshore and offshore environmental surveys to support our Environmental Impact Assessments. These have included:

- Offshore digital aerial surveys using a high resolution video camera system which provides accurate and scientifically robust abundance estimates of seabirds, marine mammals, sharks and turtles
- Offshore and intertidal benthic surveys involving seabed imagery, sediment samples and water samples to fully characterise the intertidal and subtidal environments
- Ecology surveys to provide a snapshot of the local onshore habitats and ecological features

For all projects like Stromar, strict protocols are in place through the planning system to ensure any potential environmental impacts are evaluated and, where required, mitigation measures put in place to minimise any potential impact.

Stromar's Commitment Registers for the onshore and offshore elements of the project detail our obligations to assessing and managing any impacts and, where possible, to enhance the environment.

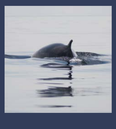
We will continue to update these registers throughout the development process based on consultation feedback. Examples include:

- Onshore - Avoidance of designated nature conservation sites of international, national and local importance through the RPSS process for the onshore transmission works
- Offshore - To micro-site offshore infrastructure (where possible) around sensitive seabed habitats and features to avoid detrimental impacts to these conservation features

Strategic partnerships

Scottish Marine Environmental Enhancement Fund

Stromar continues to support the Scottish Marine Environmental Enhancement Fund. Administrated by NatureScot, this provides grants to projects that recover, restore and enhance the health of marine and coastal habitats and species, from Shetland to the Borders.



Scottish Association of Marine Science (SAMS)

We are collaborating with the Scottish Association for Marine Science to further our understanding on a wide range of environmental factors. This includes a project which is studying seasonal occurrence patterns of minke whale populations in the Southern Trench Marine Protected Area off Aberdeenshire.

Minke Whale (Image Credit - SAMS, 2024)

RSPB and British Trust for Ornithology (BTO)

We are now into our second year of collaborative work with the RSPB, British Trust for Ornithology, and other developers to monitor and track seabird populations. This is a workstream funded by the North-East and East Ornithology Group (NEEOG) - comprising twelve ScotWind projects - which aims to better understand seabird population dynamics and behaviours.

A tagged kittiwake (Image Credit – BTO 2024)

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Project timeline

An indicative project timeline is outlined below.

* Project milestone dates are subject to the output from National Grid Holistic Network Design Follow-up Exercise (HNDFUE), and other key stakeholder timelines outwith the span of the Stromar project.

2022

Signed Option Agreement with Crown Estate Scotland

Onshore ornithology surveys commenced

Offshore aerial surveys for birds and marine mammals commenced

2023

Onshore ecology surveys started

Geophysical survey commenced along the offshore export cable corridor and array area

2024

First public information days (March)

Scoping Reports submitted and Scoping Opinions received

Onshore ecology, noise, archaeology, traffic, hydrology, ground conditions and geology surveys ongoing

Offshore benthic ecology, water and sediment, marine archaeology, and shipping traffic surveys complete

Offshore geophysical survey along the offshore export cable corridor and array area

Offshore aerial surveys for birds and marine mammals

Proposal of Application Notice submitted for onshore and offshore

First statutory consultation events

2025-2026

Second statutory consultation events

Geotechnical surveys carried out

Planning application submitted to Aberdeenshire Council

Offshore Section 36 and Marine Licence applications submitted

Mid-Late 2020s

Anticipated onshore Planning Permission in Principle and Section 36 consent

Anticipated approval of onshore application for matters specified in conditions submission

Start of procurement and key contract awards

Anticipated Final Investment Decision

Early 2030s

Earliest start date of offshore construction activities

Earliest start date of onshore construction activities

Mid-2030s

First power anticipated with Stromar having an operational lifetime of 35 years

Mid-2060s

Renewal or replacement of offshore infrastructure under existing agreement

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Supply chain & skills

Floating offshore wind represents a real opportunity for Scotland to build a globally competitive supply chain.

Stromar is committed to working with suppliers across the project scope to enable its delivery and to developing strong domestic supply chain partnerships. These will champion Scotland's position as a global hub for innovation, technology, manufacturing, and energy expertise.

We aim to invest in the Scottish supply chain over the lifetime of the project and to work with local schools, colleges and universities to train and reskill the workforce for green energy jobs.

- Scottish subsea specialist, Sulmara, was awarded a contract by Stromar in March 2024 for survey and analysis work which is pivotal to shaping the project's design
- Stromar is working closely with local companies and organisations such as Prosper, Highlands and Islands Enterprise and Scottish Enterprise to identify opportunities to build a sustainable supply chain
- The partners behind Stromar signed the Scottish Offshore Wind Energy Council's Collaborative Framework Charter. It brings together 24 signatories to jointly develop Scottish ports and other businesses, helping to build a pipeline of supply chain work
- Stromar is a participant in The PowerHouse - a global centre of excellence backed by Opportunity Cromarty Firth, aimed at developing innovative research and development in the fields of floating offshore wind and green hydrogen. It is also a specialist educational hub for training school pupils, students and workers on these technologies
- Stromar is actively engaging in the Strategic Investment Model (SIM) process which aims to develop skills and the local supply chain, as well as forming collaboration between developers to advance these areas in Scotland

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Stromar within the community

Sharing the benefits of the green energy transformation with the communities where we operate is of core importance to Stromar. Scotland's fast-emerging floating offshore wind sector also offers a significant opportunity for economic development.

In partnership with community ownership experts, Energy4All, we are working to identify options for how Scottish communities will benefit from Stromar. We welcome feedback on how this could be shaped.

Energy4All has a 15-year track record in establishing cooperatives at seven of Nadara's onshore wind farms in Scotland, and Ørsted has a successful history of working with local communities to ensure they benefit from renewable energy projects.

We are committed to meaningful community involvement and creating opportunities that benefit communities and businesses in Scotland. We are also proud to be supporting a number of local community initiatives.

With partners like those behind Stromar investing here, we are helping to ensure Scotland remains an attractive place to work, live and do business.

Stromar has supported Macduff Marine Aquarium with its vision to promote awareness, enjoyment and stewardship of the Moray Firth's marine environment. We recently funded new digital presentation equipment to support the aquarium's outreach programming for schools and public whilst it is undergoing refurbishment.

We also worked with the aquarium team to develop a learning programme on climate change and the oceans, including delivering a virtual workshop for school pupils.

As an ongoing sponsor of innovative Aberdeen-based TechFest, Stromar continues to look at ways to help the charity with its mission to provide science, technology, engineering and mathematics (STEM) learning opportunities for young people across Scotland.

At this year's annual TechFest, we worked with the charity to develop a new hands-on workshop for primary and secondary pupils to introduce them to wind energy and demonstrate how STEM subjects are applied to careers in renewable energy.

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What happens next...

Thank you for attending our event which represents the first phase of our statutory pre-application consultation (PAC) process for Stromar. All the information provided today is also available to view via the virtual exhibition on our website - www.stromarwind.co.uk

We are committed to delivering a meaningful consultation process that actively seeks the views of everyone affected by our plans and so we really value your feedback. All responses will be recorded and considered by our team.

There will be further opportunities to provide feedback on the project in the second phase public consultation round, and as part of the formal planning consultation process. The second phase of our formal consultation will be held in Spring 2025 and further details of this will be published in advance.

Your feedback and information about how we have taken your comments into account will also be included in a Consultation Report which will form part of our planning application. This report will be publicly available.

How to get in touch with us

There are many ways you can keep in touch with the team at Stromar. Sign up to the mailing list at our website for project updates.

Website:
www.stromarwind.co.uk

Email:
info@stromarwind.co.uk

Post:
FREEPOST Stromar (no stamp required)

Free dedicated phone line
0333 888 0611

OR SCAN THE QR CODE

We are committed to making sure all members of the community are able to respond to this consultation. Should you require any of our consultation materials in large print, audio or braille, please ask a member of our team.

Stromar Floating Offshore Wind Farm is committed to protecting personal data. For more about how we use your information, please see our Privacy Policy at www.stromarwind.co.uk/privacy-policy/

Personal data will be used by the project team and its consultants. We will not share your information with any third parties for direct marketing. We use third parties as data processors and we have contracts in place with them to ensure they can only use your personal data as instructed by us. We will not share your personal data with any other parties unless required to do so by law. We will not sell personal data.

The information Stromar is collecting will be used to gather and analyse views about the proposals and to keep you updated about the project. All information will be securely stored for consultation purposes, planning applications and the project, in compliance with GDPR regulations.

If at any point you no longer wish for your details to be stored, please email info@stromarwind.co.uk

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