

Cross-Party Group on Renewable Energy and Energy Efficiency

27 March 2024, 6pm

Minute

Present

MSPs

Brian Whittle MSP
Sarah Boyack MSP
Audrey Nicoll MSP
Mark Ruskell MSP
Beatrice Wishart MSP

Invited Guests

Morag Watson, Scottish Renewables (guest speaker)
James Barry, Renewables Parts (guest speaker)
Ailsa Nicol, Ørsted (guest speaker)

Non-MSP Group Members

Jack Norquoy
Elaine Waterson
Iona Yule
Catherine Wales
Ross McArthur
Stephen Freeland
Zaki Hasan
Phoebe Cochrane
Jack Barrie
Ben Moverley Smith
Catherine Gemmell
Colin Pritchard
Ed Heather-Hayes
Kirstin Gray
John Ferguson
Jonquil Hackenberg
Matthew Crighton
Melaine Pope
Maximilian Munch
Richard Crossick
Roderick Galbraith

Apologies

Michelle Thomson MSP
Ivan McKee MSP
Liam McArthur MSP

Agenda item 1 – Introduction by chair

Brian Whittle MSP welcomed everyone to the joint meeting between the Cross-Party Group on Renewable Energy and Energy Efficiency and the Cross-Party Group on Circular Economy to focus on wind industry circularity.

Brian went on to apologise for the meeting starting later than originally envisaged noting that this was because the meeting could not start until Parliamentary business had finished.

Agenda item 2 – Approval of minutes from the last meeting

Brian Whittle MSP noted that the minutes of the last meeting could not be approved due to no one being present at both the meeting on March 27 and February 27.

Brian secured agreement from those in attendance to move the approval of the minutes for February 27 onto the next meeting of the Cross-Party Group on June 5.

Agenda item 3 – Presentation from Ailsa Nicol, Ørsted

Ailsa Nicol, Head of Public Affairs (Scotland) at Ørsted, delivered the first presentation of the meeting on Ørsted's approach to sustainability in their supply chain.

Ailsa began by confirming that Ørsted are the biggest developer of offshore wind assets in the world with 1,400 employees in the UK. In Scotland, Ørsted are developing two offshore windfarms and two onshore wind farms with one onshore windfarm currently in operation.

Ailsa also confirmed that Ørsted have a target to reduce their carbon emissions by at least 98% by 2025 and to become carbon neutral across all their operations, including their entire supply chain, by 2040. In addition, Ørsted have a commitment to put zero turbine blades and solar panels to landfill.

Ailsa argued that circularity is a key enabler of the broader journey to net-zero, with increased scrutiny from investors, shareholders and the public on the sustainability of the assets and resources needed to achieve our net-zero targets.

Ailsa went onto outline that that approximately 80% of the entire carbon footprint for windfarms comes from activities before it is operational, in particular from steel manufacturing processes which can pose a risk to biodiversity. Whilst approximately 90% of a wind turbine can be recycled, Ailsa highlighted that there are key challenges

around blades, cables and plastics which require innovation. Ailsa also highlighted the 'R' ladder which demonstrates that recycling is the last option amongst many measures to deliver circularity at the end of the value chain for assets.

In that context, Ørsted have three pillars to circularity in their operations: 1) Designing the reduction of use of virgin materials in new assets. 2) Optimizing the use of materials throughout the operational lifespan of assets through repair, refurbish and reuse of major and minor components. 3) Recycling materials from assets at the end of their lifespan back to renewables supply chain when feasible.

Ailsa concluded her presentation by highlighting Ørsted's commercial agreements with various companies, including with Vestas who have agreed to procure, where possible, towers made from scrap steel and blades made with recycled materials in all future joint offshore projects with Ørsted. Ailsa believes that collaborations such as these will be crucial to overcoming the challenges industry will face in the years ahead.

Agenda item 4 – Presentation from James Barry, Renewables Parts

James Barry, Chief Executive of Renewable Parts, delivered the second presentation of the meeting on circularity in action.

James began with an introduction to Renewable Parts, based in Lochgilphead and Glasgow, which is a supply chain and refurbishment specialist in the wind energy industry founded in 2011. Renewable Parts has saved around 350 tonnes from landfill, which equals to a 1,000 tonnes of carbon dioxide which is the equivalent of 230 Olympic sized swimming pools. Renewable Parts has recently established operations in Houston, Texas to support global exports.

James went onto to outline that we must decarbonise the supply chain on our journey to net-zero which means the wind energy industry must scale-up the re-use of components, supporting high-value jobs for local supply chains. To illustrate this, James highlighted that the components to a gas turbine engine on an airplane is around 80% re-used.

Renewables Parts focus on the 47% of minor components to a wind turbine which can be refurbished during the lifespan of an asset, such as gearboxes which can be 4-6 times during an operational lifespan of a turbine. Blades represent 22% of a turbine and the tower, hub and frame represents 31% of a turbine (approximately).

James highlighted Renewable Part's brake caliper programme with Ørsted which will remanufacture 588 calipers this year saving 100 tonnes of scrap and 300 tonnes of CO₂ during year one of a multi-year programme representing 15% of Ørsted's fleet. Additionally, Renewable Part's yaw gear programme has prevented 290 tonnes of scrap and almost 900 tonnes of CO₂.

James outlined the three key enablers to circularity for wind energy components: 1) Technology needs to be developed, including by the University of Strathclyde. 2)

Remanufacturing skills and courses need to be developed, which are distinct from traditional manufacturing skills. 3) Infrastructure needs to be created to support integrated domestic supply chains.

James concluded with a plea to inspire the next generation to realise the UK's capabilities to refurbish our wind energy fleet by delivering the technology, skills and infrastructure we need today.

Agenda item 5 – Presentation from Morag Watson, Coalition for Wind Industry Circularity

Morag Watson, Director of Onshore at Scottish Renewables and a member of the Coalition for Wind Industry Circularity steering group, delivered the third presentation of the meeting on the opportunities of circularity for Scotland.

Morag opened with an explanation that as part of our transition to a renewables-based energy system, which wind energy will provide the backbone, then we will move from a situation dependent on security of energy fuel supply to a situation dependent on the security of supply chains.

Morag went onto outline the Coalition for Wind Industry Circularity (CWIC) which was founded in 2023 by SSE Renewables, Renewable Parts, the University of Strathclyde and Scottish Renewables. CWIC now has 45 members, including Ørsted, Statkraft, EDF Renewables, Scottish Power Renewables, ReBlade, RES, Natural Power, ZeroWaste Scotland, Vestas, Banks Group, The Crown Estate and Total Energies.

The ambition of CWIC is to transition the wind energy industry from linear to circular to support the transition to net-zero and to make Scotland and the UK a world-leader in wind energy circularity, delivering jobs and economic opportunities.

CWIC will seek to do this by developing parts remanufacture solutions that enhance turbine operational performance, reduce failure downtime and accelerate the adoption of net-zero practices; establishing collaborative partnerships to achieve investment in and deployment of circular economy technology; working with government to influence policy; and developing people and skills, including development of remanufacture higher educational courses that combine academic and industry applied learning opportunities.

CWIC is seeking to increase the proportion of minor components that regularly need replaced which are reused/remanufactured/refurbished to minimise embodied emissions and maximise value retention; deliver a circular strategy and business model to minimise waste and carbon emissions from turbine decommissioning; and deliver sector-wide strategy/solutions through a Sector Deal or other mechanisms which establishes Scotland and the UK as the global leader in delivering circular solutions for windfarms.

Morag went onto highlight some of Scotland's strengths for wind energy circularity, including the Scottish Onshore Wind Sector Deal and National Planning Framework 4

which both support wind energy circularity. Morag also highlighted that every onshore windfarm in Scotland has a decommissioning bond to deal with the end-of-life of assets which will support circularity. Morag also highlighted some of Scotland's current weaknesses in this area, including a lack of a strong business case and circularity services, infrastructure and skills. Morag further highlighted that not all wind turbine manufacturers and the Scottish Environment Protection Agency yet have policies to support circularity and waste management of wind turbine components.

Morag concluded by outlining a report by BVG Associates on behalf of CWIC which revealed that building the capabilities to refurbish wind turbine parts in the UK could also generate more than 20,000 full-time equivalent jobs by 2035 and prevent more than 800,000 tonnes of parts from being scrapped.

The analysis also found around 120,000 wind turbines (584GW of capacity) are forecast to be operational across the UK, Belgium, Denmark, France, Germany, the Netherlands, Poland, Portugal, Spain and Sweden by 2035. By enabling a UK supply chain capable of refurbishing just ten out of the thousands of parts which make up a single wind turbine means the UK could access a European-wide market worth almost £10bn to UK GDP between 2025 and 2035.

Agenda item – Q&A on presentations

A range of questions were directed at the panel and included:

Mark Ruskell MSP asked whether the circular economy approach will cost businesses more at first and what impact the carbon border adjustment will have.

Morag Watson replied by outlining that procurement managers are interested in speed of component delivery, confidence in quality of components and cost efficiencies which will determine the establishment of a strong business case. Morag added that if the UK viewed as higher carbon, this would compromise our ability to trade back and forward to European markets.

James Barry also added that Renewable Parts will only re-manufacture a part if they can conduct a full root cause analysis which enables a full warranty and guarantees a cost reduction by 30%. James also highlighted the perception challenge that re-manufactured parts are of poorer quality when they can often represent enhanced quality.

Audrey Nicoll MSP asked about the circularity of cables in future. Morag Watson highlighted that European Metal Recycling is investigating this as part of CWIC, including the high value of materials such as copper.

John Ferguson asked how quickly we can internationalise collaborations such as CWIC to accelerate deployment of circularity and how can we share lessons across sectors, such as with the decommissioning of oil and gas, to support re-manufacturing.

Morag highlighted that many of the members in CWIC have global operations, such as Iberdrola who own ScottishPower Renewables, Ørsted and Vestas as well as the

National Manufacturing Institute who support cross-sector collaboration in Scotland. James Barry added we need to apply a centre of excellence mindset to cluster businesses and knowledge in one place we can create an exportable service. James further added that we should do more to learn lessons from the aviation and automation industries.

Agenda item 7 – AOB and date of next meeting

Brian Whittle MSP thanked the speakers and attendees. Maurice Golden MSP added thanks to Invicta Public Affairs for sponsoring the catering at the meeting.

Brian Whittle MSP noted that the date of the next meeting, which will include the Cross-Party Group's AGM, will be circulated by the secretariat in due course.

Brian Whittle MSP and Maurice Golden MSP then closed the joint meeting.