Irish **Magazine** EDITION

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Tánaiste Leo Varadkar TD

Maritime Area Planning Bill

Endgame for Fossil Fuels



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Welcome to the Autumn 2021 Edition of Irish Wind

WEI is the national association for the wind industry in Ireland. This magazine provides updates on news and events in the wind industry in Ireland and is a resource for WEI members in the interests of the promotion of wind energy.

Please contact Lisa-Anne Crookes with comments / suggestions for future editions on lisa-anne@windenergyireland.com



FOREWORD

It is September 2022

Our Phase One offshore wind energy projects have long had their Maritime Area Consents (MACs) under the Maritime Area Planning Act. Phase Two projects have been identified. All of them have applied for MACs and some have already been successful, enabling them to move ahead to the next phase of development.

Harbours have been identified for operations and maintenance bases. Work has started on the reinforcements needed for the port identified by the Government for offshore wind construction.

Surveys are under way outside the 12 nautical mile limit as we look ahead to the projects that will be aiming for the late 2020s and into the 2030s. The Maritime Area Regulatory Authority is getting ready to formally open its doors.

The Wind Energy Development Guidelines have been long published, enabling our onshore projects to move ahead with confidence, and our planning system is functioning much more efficiently supported by a properly resourced An Bord Pleanála and National Parks & Wildlife Service.

Galvanised into action by growing security of supply issues and the record high prices for electricity in the wholesale market seen in late 2021, onshore and offshore auctions were accelerated and brought forward.

Contracts are being signed that will enable thousands of MW of wind and solar projects to start construction. More and more successful RESS 1 projects are connecting to the grid every month.

Strengthen electricity grid

And, perhaps most importantly, EirGrid has not only published an ambitious plan to reinforce and strengthen our electricity grid over the next nine years but it is getting the support it needs from every single person in Ireland whose commitment to fighting climate change is honest and genuine.

Engagement between Government departments, the System Operators, the CRU, the planning authorities, and the renewable industry has never been stronger. All parties have reaped the benefits of wide-ranging recruitment campaigns which have delivered enough resources to accurately plan a clear path to 2030 delivery.

The public debate is over. We have collectively agreed that climate change is the existential threat of our time and we are determined to play our part, as a generation which both inherited and helped to create the climate crisis, in rising to the challenge before us and overcoming it.

It all sounds a bit too-good-to-be-true, an unlikely prospect for those of us who have seen how frustratingly slow progress has been over the last number of years.

And yet, as unlikely as it might be, this is also the bare minimum. We – industry, Government, and policymakers more generally –



need to make that vision a reality or we need to be honest with ourselves and accept that the 2030 targets will be out of reach.

The next 12 months are absolutely make-or-break and we cannot allow progress to stagnate. We cannot afford another lost year of renewable energy development.

Already, right across the supply chain for offshore wind energy, there is a sense that some companies are turning away from Ireland.

Too much uncertainty, too many missed deadlines, too many half-measures, too many opportunities in other markets which are ready and willing to develop projects as quickly as possible.

Supply chain concerns

In recent weeks, numerous developers have told me that they approached supply chain companies who told them they were not interested in the Irish market any longer or have added an Ireland-specific mark-up to prices to cover off timeline uncertainty - they simply do not believe it is going to move ahead anytime soon.

We do need to acknowledge there has been progress. The NMPF is finalised, and the Maritime Area Planning Bill has been published and it on its way to the Oireachtas. There is a sense, as the Covid crisis – while not over – appears increasingly under control that focus can move back to climate change.

But we must do a better job of working together. Barriers to the development of renewable energy must be identified and removed. If the resources are not there, they must be found, if they cannot be found in Government, then industry is ready to provide the support that is needed.

At its heart, developing wind energy, and offshore in particular, is about ensuring a secure – and cheap – domestic supply of electricity for our homes, businesses and communities. We have some of the world's greatest on and offshore wind energy resources and yet, for much of this year, the slow pace of renewable energy development forced us to rely on coal and expensive gas to keep the lights on. This must change.

Ireland stepped up when we were called upon to deal with a dangerous pandemic. We must now do so to confront the existential challenge of our time, and we must do it together.

We are ready to play our part.

windenergyireland.com

MEMBERSHIP **NEWS**



Kevin Morris Senior Account Manager Kevin.morris@se.com +353 87 764 2534 www.se.com/ie

rps

Olivier Gaillot

Director of Environment, Energy and Resource Management Olivier.gaillot@rpsgroup.com +353 86 048 2956 www.rpsgroup.com



FOR A SMARTER FUTURE

Saadat Ullah Sullah@foresightgroup.eu 00 44 20 366 78100



Peter Davies Peter.davies@eu.jll.com 00 44 756 886 07853



Tim Bills Project Director tbills@mercuryrenewables.ie +353 87 166 8131 www.mercuryrenewables.ie chneider's purpose is to empower all to make the most of our energy and resources, bridging progress and ustainability for all. We call this Life Is On.

Dur mission is to be your digital partner for Sustainability and Efficiency

We drive digital transformation by integrating world-leading process and energy technologies, end-point to cloud connecting products, controls, software and services, across the entire lifecycle, enabling integrated company management, for homes, buildings, data centres, infrastructure and industries.

We are the most local of global companies. We are advocates of open standards and partnership ecosystems that are passionate about our shared Meaningful Purpose, Inclusive and Empowered values.

With pressures increasing on our environment, RPS through its vast portfolio of experience can assist you to navigate the complexity of renewable energy projects both on and offshore.

Our scale and diversity of in-house resources enables projects and their impacts on the environment to be fully understood. Our collaborative approach, coupled with a need to find practical solutions, gives RPS the ability to deal with sensitive issues as early as possible in the project process. We offer clients an integrated service that places stakeholders and the principle of renewable energy at the core of our work.

Our energy services include:

- Wind resource measurement and
- metocean sciences
- Planning, environment and consents
- · Site investigation and survey
- Port infrastructure and logistics
- Marine Assurance and QHSSE
- Unexploded ordnance (UXO)
 Data management and visualisation
 Stakeholder Management and Project Communications
 Multidisciplinary Engineering Design
 Project and Risk Management

Gruig is an operational wind farm located in Antrim, Northern Ireland. Gruig wind farm began commercial operations in 2009. Gruig is owned by Foresight managed investment fund.

We are a boutique corporate finance advisory team specialising in renewable energy and sustainable infrastructure. We comprise 14 professionals with energy and financial market backgrounds, based in London and Madrid.

We have worked with numerous developers and investors since inception in 2012 with our main business activities involving development capital-raise processes, sellside and buyside advisory on development and operational projects, strategic consulting and asset valuations.

Our Directors include a former Partner in EY's renewables advisory, former SolarCentury and Lightsource executives and former Cornwall Insight analyst, bringing renewable-specific knowledge to our work. We look forward to engaging with more of Ireland's key wind industry outfits and continuing our role in the market for the coming years.

Mercury Renewables is a developer of utility scale renewable energy projects with a focus on the West of Ireland.



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Ambroise Wattez

Director of Project Development Ambroise.wattez@sbmoffshore.com +377 9805 1500 www.sbmoffshore.com



Mark McNamara Markmcnamara@mincon.com +353 86 864 0386 www.mincon.com



Louise O'Boyle Project Manager Louise.oboyle@bluewisemarine.ie +353 91 394 251 www.bluewisemarine.ie



Scott Constantine Renewables Manager Scott.constantine@presserv.com 00 44 7341 885 583 www.presserv.co.uk



Thomas Frank franks@energiequelle.de +49 151 237 2463 www.energiequelle.de/en SBM Offshore is market-leader in providing floating solutions over the full product life cycle for the energy industry. A recognised pioneer, the company has been proactive over the last thirteen years in its in-house development for offshore renewable energy technologies. In addition, SBM Offshore collaborates with IFP Energies Nouvelles (IFPEN), a leading researcher and pioneer in the wind domain, to further develop its floating wind system and its engineering capabilities.

SBM Offshore has supplied more than 500 floating systems to numerous clients worldwide over 60 years. Leveraging its offshore experience and technological know-how for mooring and floating systems the company has developed an optimum floating solution to meet the technical and economic challenges inherent in the development of floating wind farms.

With its global presence and French-based R&D Testing Centre in Carros, SBM Offshore is well-positioned to contribute to the evolution of the Offshore Renewables industry. Please visit our website at www.sbmoffshore. com for more information.

Mincon is an international engineering group that was founded in Shannon, Ireland in 1977. Mincon specialises in the design, manufacture, and service of rock drilling solutions used in surface mining and exploration; geotechnical and horizontal directional drilling; geothermal and water-well drilling; and renewable energy installations. Its patents and innovations include pneumatic and hydraulic drilling solutions, rotary drill bits, drill masts, and associated ancillary tooling.

Mincon operates manufacturing, engineering, and R&D facilities round the world, with products delivered to key global markets through its network of more than 200 customer service centres and distribution partners.

BlueWise Marine Limited provides a comprehensive approach to the development, management and promotion of marine renewable and offshore renewable energy projects. We work with industry, government and academic clients operating within the blue economy.

Our established reputation and experience in specialised marine services and communications, coupled with our extensive network connections allows us to deliver our clients' concepts or projects into commercial realities. Our end-to-end approach to service delivery allows our clients to focus on their core business, safe in the knowledge that our team will manage their assets and projects to the highest standards, in a safe, efficient, social and environmentally conscious manner.

BlueWise Marine operates under an accredited Integrated Management System certified to the ISO 45001:2018; ISO 9001:2015 and ISO 14001:2015 standards.

Presserv are uniquely placed to offer our corrosion protection systems to both owners & operators. With years of experience in extending the life of Assets, our teams are able to deploy systems to farms around the world. Whether working in Wind, Tidal, Solar, or other Presserv can offer bespoke cross sector corrosion solutions.

We provide total corrosion solutions to the Renewables industry, offering our clients the ability to extend the life of their assets by utilising technologies in surface preparation, coatings, and preservation of the asset and equipment in shutdown, storage, and transit.

Since 1997, we have been planning and realising projects in the field of renewable energies. Our special focus is on wind turbines and wind farms. In addition, we offer a broad range of services, in particular commercial and technical management for biomass and photovoltaic systems. With over 300 expert staff in Germany, France, and Finland, we rank among our industry's leaders.

Our goal is to help all those involved in renewable energy benefit from a project. Joining our strengths, we are in a position to make a meaningful contribution to the energy transition, which holds great promise for the future.

We are eager to put our many years of experience to work in everyone's interest, internationally and without boundaries. Just like the wind's natural energy.



Conor O'Brien conor@gobriencranes.ie +353 85 738 8887 www.gobriencranes.ie



Amy Duke Country Communications Manager marketing@ie.abb.com +353 1 405 7300 www.new.abb.com/ie



Yvonne Owens yowens@orsted.com +353 86 412 4964 Orsted.ie



Caroline Donnelly Caroline.donnelly@international.gc.ca +353 86 805 8258 Gabriel O'Brien Crane Hire Ltd is one of Ireland's largest and longest established family run crane hire companies, with over 35 years of history. Our knowledge spans across the generations, bringing together the expertise of modern engineering with the wealth of experience we have built up over the decades.

The company was founded in 1989 by Gabriel O'Brien with one 15-tonne mobile crane to his name. Today he runs the company alongside his son Conor, and they proudly boast a fleet of 48 cranes.

The entire fleet of cranes are in pristine condition. We offer machinery, full lift and shift solutions, and personnel to a variety of industries throughout Ireland and the UK. Our range of cranes go from a 1350 crawler crane and 800 tonne mobile crane down to a 3.5-tonne spider crane.

These are used in a wide variety of both onshore and offshore industries, including the construction, oil, and wind energy sectors.

Gabriel O'Brien Crane Hire are available 24 hours a day and offer a comprehensive service, from our free site inspection right through to the execution of a lift; including detailed pre-planning, fully qualified operatives, and an unrivalled attention to detail.

Across the process of each lift our engineering expertise shines through. After our site inspection we will go about putting a plan in place to carry out a lift both safely and efficiently. This plan includes RAMS (Risk Assessment Method Statement), lift plans, 3D CAD drawings and the delegation of qualified personnel to carry out even the most difficult of lifts.

Our staff are certified in both Ireland and the UK and equipped for manual handling and working at heights.

ABB (ABBN: SIX Swiss Ex) is a leading global technology company that energizes the transformation of society and industry to achieve a more productive, sustainable future. By connecting software to its electrification, robotics, automation and motion portfolio, ABB pushes the boundaries of technology to drive performance to new levels.

With a history of excellence stretching back more than 130 years, ABB's success is driven by about 105,000 talented employees in over 100 countries.

Ørsted develops, constructs, and operates offshore and onshore wind farms, solar farms, energy storage facilities, and bioenergy plants, and provides energy products to its customers.

Ørsted ranks as the world's most sustainable energy company in Corporate Knights' 2021 index of the Global 100 most sustainable corporations in the world and is recognised on the CDP Climate Change A List as a global leader on climate action.

With headquarters in Denmark, Ørsted employs more than 6,000 people around the world. In Ireland, Ørsted owns and operates a portfolio of onshore wind farms with a combined capacity of more than 300 MW. Our ambition is to increase this by more than 600 MW in the coming decade.

The Canadian Embassy works to promote Canadian cultural and commercial interests in Ireland. The Trade Commissioner Service (TCS) at the Embassy helps Canadian companies promote products and services by connecting them to international opportunities, key networks and support programmes.



World class offshore energy sector vital to our ambitious climate action

Leo Varadkar TD

Tánaiste and Minister for Enterprise, Trade and Employment

Climate change is a threat to all of us and transitioning to a low-carbon economy is a major priority for the Government.

With our new Climate Law, Ireland is now one of the most ambitious countries in the world on climate. Our targets will require a huge shift in the energy we use, how we manage our waste, our housing stock and transport systems.

Our renewable energy sector is crucial to how we plan to achieve those targets.

Under the first Climate Action Plan in 2019, we committed to 70% of our electricity being created from renewable resources by 2030. As well as contributing to the decarbonisation of the electricity sector, this increased generation of renewable energy will facilitate the wider decarbonisation of our economy, as we electrify transport and industry.

Ireland is going to see a huge increase in demand for electricity in the coming years. Electric cars, electric heating systems and big industries shifting away from oil and gas are going to require a huge amount of extra electricity supply as we ramp up climate action.

The solution is a huge expansion of renewable energy production, especially offshore wind, as well as interconnection with France. I believe this can be a win-win-win scenario. Industry and households will be buying Irish generated electricity often from Irish semi-states rather than importing oil and gas from abroad from companies owned by other states. We'll reduce carbon emissions through a shift to electric and make Ireland the sustainable place to invest for major corporations which can be a real selling point for the IDA.

As Minister for Enterprise, Trade and Employment I am especially conscious there are significant supply chain opportunities from the development of offshore wind in Ireland, as we see projects developed on the East coast in the coming years – such as the Phase 1 projects already in train – and later, on the Southern and Western coasts. Irish employment opportunities will be in the surveying, construction and commissioning of projects, but also in the operation and maintenance of infrastructure for years to come.

In this context, the Government is committed to implementing the recommendations of the Expert Group on Future Skills Needs to ensure we have the skills required to deliver on our ambitious wind energy targets.

The Department of Enterprise, Trade and Employment and its Agencies are working hard to ensure the wind energy sector has the confidence to invest in our low carbon transition. The development of our grid infrastructure is of course, crucial and I will continue to engage with EirGrid, the CRU and Government colleagues to ensure this is prioritised. I know that officials in the Department of Environment, Climate and Communications are progressing an offshore specific auction under the



Renewable Electricity Support Scheme (RESS) that will provide a route to market for competitive projects.

As the State Agency with responsibility for helping Irish businesses achieve their export potential, Enterprise Ireland has been working on developing Irish SME capability in the Offshore Wind sector. It has helped Irish companies engage with the industry by organising sector events and leading the development of an Irish Offshore Wind Industry Cluster with 60+ Irish companies that provide a range of products, services and skillsets appropriate to the sector.

While El is primarily focused on helping Irish SMEs bring this capability to export markets, this expertise will also be important to building a domestic supply chain for many aspects of these projects. To date the largest and easiest to access market has been in the UK, the world leaders in offshore wind. El's London office has been building connections between Irish SMEs and the UK offshore wind project developers, original equipment manufacturers and Tier 1 contractors to ensure the greatest possible penetration in the UK market.

This Irish capability will also be relevant for fixed-bottom projects in the Celtic Sea and for the emerging technology of floating offshore wind. This technology, rapidly approaching full scale commercialisation, will be vital for the harnessing of the wind resource off the South and West coast in waters deeper than 60m.

The economic potential of floating offshore wind, from the late 2020s onwards is enormous and potentially transformative. The Government is also keen to enable the production of Green Hydrogen.

As the world emerges from Covid-19, we need to understand that there will be no return to the old normal. We will need to build back better and prioritise the sustainable investments that underpin a global green recovery and the transition to low-carbon economies.

If the past 18 months has taught us anything, it's that no challenge is insurmountable in the face of our collective spirit and ingenuity. We can employ those same traits to respond to the climate crisis.

I look forward to working with the wind energy sector as we implement Climate Action Plan 2021 when it is published in the coming weeks, and embrace the opportunities presented to us to build a prosperous and competitive offshore wind sector as we move towards a zero-carbon future.

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Energy for generations

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SPRING CONFERENCE 2022









Working towards 70 by 30

by Seán Manley country director, Ireland

> Based in Dublin, Natural Power Ireland is an independent consultancy and service provider that supports a local and global client base in the effective delivery of a wide range of renewable projects including offshore and onshore wind, solar, energy storage and renewable heat. Employing more than 400 staff across its 14 international offices, Natural Power's experience extends across all phases of the project lifecycle from initial feasibility, through construction to operations and throughout all stages of the transaction cycle.

Natural Power Ireland's Country Director, Sean Manley provides an outlook on the industry.

Driven by the 2019 Climate Action Plan (CAP) and 2020 Programme for Government (PfG), the past 18 months has seen Ireland's renewable energy industry experience a surge in activity as developers, investors, asset owner's and the supply chain gear up to deliver ambitious targets for onshore and offshore renewable energy generation that will be required to achieve at least **70%** renewable electricity by **2030**.

Natural Power Ireland's Country Director, Sean Manley provides an outlook on the industry.

The first Renewable Electricity Support Scheme (RESS-1) in 2020 undoubtedly signalled a new dawn for a more diverse renewable industry in Ireland, and whilst the delay to RESS-2 is



disappointing, the outlook for the industry for the decade ahead remains positive, albeit not without challenges.

The PfG committed to a RESS-1 auction by end of 2020, with annual auctions thereafter, including a first auction for offshore wind in 2021. And whilst the RESS-1 auction in 2020 was received very positively by the industry and signalled a new dawn for a more diverse renewable industry in Ireland, the delays to RESS-2 (now scheduled for Q3 2022), the uncertainty posed by the recent Derryadd High Court ruling, and the slow rate of policy development for planning and grid for offshore projects has resulted in growing frustration for developers and investors alike. The renewable energy industry in Ireland succeeded in delivering 40% renewable electricity by 2020, however stronger leadership, action and investment will be required from government and associated stakeholders to enable the industry to achieve 70% by 2030.

On the onshore front, there is no doubt that annual auctions would have provided an unprecedented turbo boost for the industry and the extent of the delay to RESS-2 was very disappointing. However, in search of a silver lining, an auction in 2021 could potentially have posed resource and supply chain challenges for contractor's in the midst of the Covid pandemic. The onshore wind industry has proven track record of delivering MW to the grid, with an average build-out rate of 460MW+ per year in the period 2017 -2019, however the delay to RESS-2 will enable contractors to gear up for significant activity up to 2030. In addition, the delay to RESS-2 will provide some developers with a window of opportunity to get additional projects consented in advance of ECP 2.2, to bolster the volume of projects eligible for the





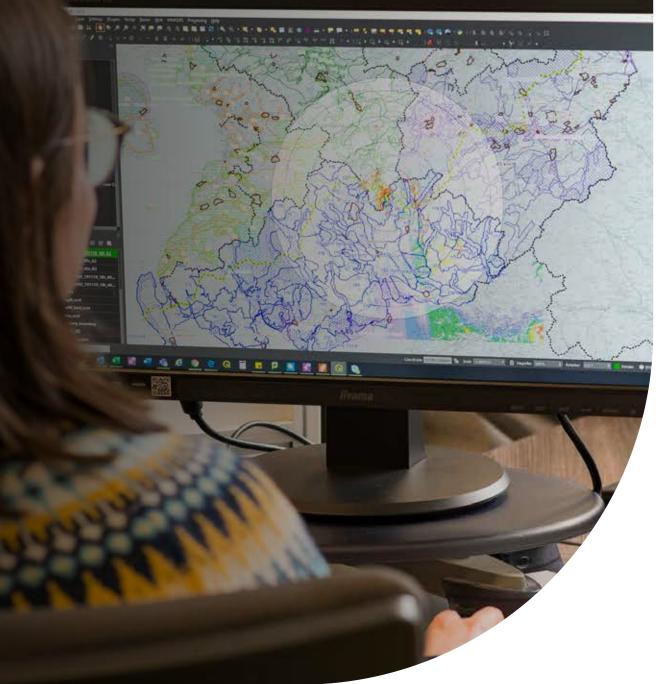
auction, as well as providing time to grapple with and solve the challenges posed by the Derryadd ruling.

With a close eye on global market trends, boosted by the positive ambition in the CAP and PfG, Natural Power has pursued a diversification strategy over the past couple of years. Our aim was to provide a wider range of services across all technologies in Ireland, including offshore and onshore wind, solar PV and storage. We have built a team in Ireland to deliver upon this strategy by recruiting experienced personnel in these emerging technologies and leveraging expertise and applying best practice from our international colleagues to ensure our business is ready to support the development, construction and operation of all forms of renewable energy and storage projects.

Our diversification strategy has proven very successful to date and we are currently providing planning & environmental services to multiple offshore wind projects in Irish waters, we are providing owner's engineer services to wind, solar PV and energy storage projects and have provided due diligence and M&A advisory services to circa 100 projects in Ireland in the past 18 months alone. We expect our growth to continue apace in the coming years and we will certainly not be found wanting in supporting our clients and the industry in meeting the demands and overcoming the challenges to deliver 70 by 30. Exciting times ahead!



Supporting your renewable energy and storage projects at every stage





naturalpower.com



Ireland can be a renewable energy superpower

Val Cummins Chairperson of Wind Energy's Ireland Floating Offshore, Supergrids and Hydrogen Committee

Floating wind energy can transform Ireland into a European renewable energy superpower if the Government acts now to put the right policies in place to enable the industry to start building floating wind energy this decade, writes Val Cummins.

A lot of us are familiar with the first generation of fixed-bottom wind farms on our east coast where the base of the turbine is fixed to the seabed. But a turbine can also be mounted on a floating platform which is then secured to the seabed by mooring cables and anchors.

These floating wind turbines can be deployed at much greater depths than fixed-bottom turbines and as a result significantly increasing the scale of the opportunity for Ireland.

The potential of floating offshore wind (FLOW) energy off the western and southern coasts of Ireland is huge. If enabled in the proper manner, offshore wind energy in Ireland would not only contribute to our own renewable goals but such is the scale of the potential that Ireland could export enormous amounts of clean energy to Europe.

As it stands the Programme for Government contains a target for 5,000 MW of offshore wind energy by 2030 and, in the long-term, 30,000 MW off our western coast.

New industrial sector

While most of the 2030 target will be delivered through existing fixed-bottom turbine technology, a proactive approach from Government is needed to ensure floating wind turbines are in the water before the end of the decade. This would unlock our floating wind potential and kick-start an entirely new industrial sector for Ireland.

Floating wind energy for Ireland is not theoretical. A strong pipeline of projects is under development, ready to seek consenting and to be built once the proper policy and regulatory framework is put in place. The fact is our neighbours are forging ahead of us. We only have to look across the water to see ambition and action.

The UK, France and Norway have so far shown the greatest ambition. The UK has set a 2030 target of 1 GW of FLOW – enough to power circa 800,000 homes – and announced plans to design new leasing opportunities for early commercial-scale projects in the Celtic Sea.

France has launched its first commercial-scale tender for a floating wind project of between 230 and 270 MW to begin operation this decade, with further tenders planned for the coming years. And Norway has recently opened three areas of up to 500 MW each for FLOW. So when

governments act – the industry responds and clean sources of energy get built.

There are a number of specific actions which can help transform Ireland's energy outlook when it comes to floating wind energy. Firstly, floating wind energy projects must be allowed to carry out essential environmental surveys outside the 12 nautical mile limit. To do this the Government must amend the Maritime Area Planning Bill. This is a simple step which must be prioritised.

Stronger grid

We must also plan our electricity grid to deal with an influx of floating wind energy. To do this EirGrid must ensure that their new strategy for grid development, due out later this year, strengthens the grid on the western and southern coasts where most floating wind projects are located and will be further developed.

Another area the Government must anticipate and support to realise a renewable energy future is the infrastructure required to build and maintain offshore energy. Investments in our ports infrastructure must be identified and delivered in the coming years. The wind will blow but we need viable bases on land from which we can service the floating turbines.

It is vital that the offshore renewable energy auction planned for 2025 has a dedicated floating wind energy pot to support projects which are ready to go. This would not only be a strong signal to the sector but would be a big step in the journey towards making this country a renewable energy superpower.

We cannot overstate the floating wind's industrial potential off the coast of Europe's most westerly island. If we are to be truly global leaders we must put floating wind energy at the heart of a new industrial strategy for renewable energy backed by the strategic engagement of the IDA and Enterprise Ireland.

It will require the full might of the state, its expertise, resources and knowledge to help Ireland become a superpower of renewable energy, but the opportunity is immense.

This could be hugely positive for this country and we need to strike now to reap the benefits in the coming decades.

Floating wind energy is a resource waiting for Government action. It is part of the jigsaw that could help Ireland become a true climate action leader.

Val Cummins is Chairperson of Wind Energy Ireland's Floating Offshore, Supergrids and Hydrogen Committee.

windenergyireland.com

Maritime Area Planning Bill is a big step forward, but is it enough?

Author Tina Raleigh

The much anticipated and long-awaited Maritime Area Planning Bill 2021 was published in its final form on 16 August.

This Bill is the State's response to much-needed reform of marine governance in Ireland and it reshapes the consenting regime for the development of marine projects.

A major overhaul of marine planning was long overdue with the current legislation governing marine area development dating back almost nine decades ago to the Foreshore Act of 1933. It is fair to say a huge amount has changed in that time.

The Bill provides for two separate consents which will be required for the development of offshore renewable energy projects. One consent is needed to occupy the maritime area – namely a Maritime Area Consent (MAC) – and another to allow development of that area – a development permission. A MAC must be obtained first, following which the development permission can be sought.

The Bill also authorises the setup of the Maritime Area Regulatory Authority (MARA) which will be responsible for the granting of MACs, licences and the enforcement of the new regulatory regime. The Minister for Housing, Local Government and Heritage will decide on the establishment day for the MARA. An Bord Pleanála will be responsible for the grant of the development consent on the foreshore.

The rules pertaining to Special Maritime Area Consent will allow for the fast-tracking of the Relevant Projects through the planning system. Once the Bill is enacted, these projects will be invited by the Minister for Environment, Climate and Communications to submit an application for a MAC.

Subsequent projects will have to wait for the establishment of MARA in order to submit an application for a MAC.

While the publication of the Bill is to be welcomed, there are several areas which could slow down or impinge an application for consent under the Bill. Outlined below are the issues identified along with proposals for change:

Planning permission

Obtaining a MAC is not a guarantee of planning permission and a project might subsequently be turned down by An Bord Pleanála. As the Bill is currently drafted, the project would automatically lose its MAC, sending the project back to the beginning of the development process at an enormous cost in time and money.

Allowance should be given within the Bill to allow a fresh consent application be made within the MAC area. Long-stop dates can be used to prevent hoarding of a marine area with no intention of developing a project. This is much fairer and makes the 2030 target more achievable. Flexibility

Given the complexity, rapidly evolving technology and lengthy delivery timelines associated with offshore wind energy, there is a significant need for design and consent flexibility.

The EU Commission says that providing "flexibility during the design and pre-planning phase of offshore wind energy projects and...a degree of freedom to optimise wind turbine parameters prior to construction...is a proven and acceptable approach."

But this approach is missing from the Bill, preventing developers from using the most up-to-date technology, which ultimately affect the consumer by driving up electricity prices.

Delivering for 2030

We cannot reach the 5 GW target with the Relevant Projects alone. However, the Bill requires other projects to wait until MARA is established before they can apply for a Marine Area Consent (MAC).

But MARA will not, at the most optimistic estimate, be ready until 12-18 months after the Bill is enacted. We cannot connect 5 GW of offshore wind by 2030 if projects must wait two years for a MAC.

The Bill must give the Minister the power to grant MACs to projects that can be connected to the grid by the end of the decade.

Ireland faces growing security of supply challenges and is increasingly exposed to climate change. To tackle this head on, we must develop offshore wind farms as quickly as possible. If Ireland's renewable energy targets, which are binding, are to be met, it is critical that the Bill is enacted soon, and that MARA is established and adequately resourced.

To do this we must have a fair and transparent planning system and that is why the Maritime Area Planning Bill must be passed before the end of the year with the proposed changes incorporated.

It is really positive that the Bill is earmarked as priority legislation upon its return following the summer recess and the industry hopes to see it's speedy passage through the Houses. Ireland has committed to meeting 70% of its electricity demand by renewable sources by 2030 and the current Programme for Government has a welcome and ambitious target of 5GW of offshore wind by 2030.

If we are to meet these targets, time is of the essence and this piece of legislation must be treated with the urgency it deserves and needs.

Tina Raleigh is Senior Project Manager with Statkraft and chairperson of Wind Energy Ireland's Offshore Consenting Working Group.



Onshore RESS critical for renewables to deliver for Ireland

Author Tim Coffey

Let me begin by addressing how important the Renewable Electricity Support Scheme is for Ireland, writes Tim Coffey. Most renewable energy projects needed over the next decade will rely on RESS. Alongside the need to strengthen our electricity grid it is part of the foundation on which we can build at least 70 per cent renewable electricity by 2030.

For this reason alone, it is crucial that we keep the momentum and ensure that we are sending the needed positive signals to investors that Ireland is serious about the targets the Government set out in last year's Programme for Government.

Regular, annual auctions of sufficient capacity, as committed to by Government, are vital to reaching our ambition, and giving confidence to an international supply chain that Ireland is where they should focus and invest.

For this reason, from an industry perspective, and from that of an international company that is making a significant investment into renewable energy deployment in this country, the decision not to have a renewable energy auction in 2021 and to delay the next auction until the third quarter of 2022 is both surprising and extremely disappointing.

Questioning Ireland's commitment

It has raised questions right throughout the international supply-chain about Ireland's commitment to our targets. The global wind energy market is extremely competitive, uncertainty on auction timing runs the risk of Irish projects losing production capacity or paying more to secure capacity at the last minute; a cost that will ultimately be borne by the energy consumer.

At project level, this delay in the RESS 2 auction also has serious and specific implications for several developers with projects in the pipeline. As a result of the terms of their planning permissions and lease options, there is now a risk that certain projects may not be able to proceed.

With less than 10 years to deliver our 2030 target, we are now facing at least one, and more likely two years where few or no route to market options exist to enable new renewable energy projects to be connected to the electricity system despite a substantial – and growing – wind energy pipeline.

At a time when security of supply concerns are forcing the Government to consider developing new fossil fuel generation and infrastructure, it would appear to us to be a more sensible approach to focus on supporting the development of as much renewable energy as quickly as possible.

Ultimately, the most important impact of this decision is that it will unnecessarily prolong Ireland's dependency on imported fossil fuels.

This is at a time when the latest Intergovernmental Panel on Climate Change (IPCC) report highlights that unless there are immediate, rapid, and large-scale reductions in greenhouse gas emissions, limiting warming to close to 1.5°C or even 2°C will be beyond reach.

Ready to deliver

With a strong pipeline of wind projects ready and waiting to deliver, this is a delay that should be avoided, as it means more CO2 emissions and higher electricity prices for consumers.

Still, we keep going, and I was pleased, as chair of Wind Energy Ireland's RESS working group, to be able to lead our work in responding to the recent consultation on the RESS 2 Terms and Conditions run by the Department of Environment, Climate and Communications.

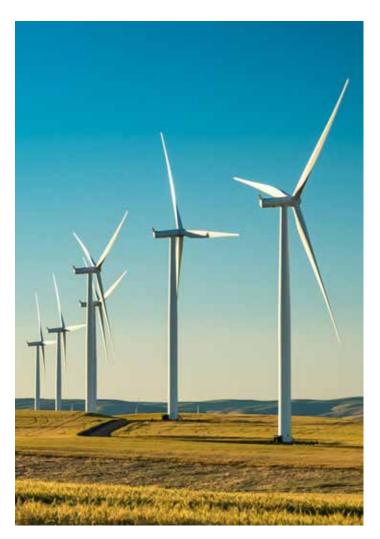
This is an important consultation as certain proposed changes from the first RESS auction could have serious consequences for the industry.

An example here is the department's proposal to introduce a new Evaluation Correction Factor, which is intended to reflect the relative value differences between different technologies, that are not reflected in a simple Strike Price comparison.

This, however, is a complex issue, and there will be a need for further assessment of a range of factors in addition to a simple comparison of PSO support costs, that contribute to ensuring this.

Wind generation, for example, places greater downward pressure on the wholesale electricity price than other technologies, and ultimately consumers pay less for electricity in a scenario in which there is a greater share of wind, as the benefit of wind on the wholesale electricity price substantially outweighs any increase any related increase in PSO costs.

We hope to be able to engage further with the department on this, as part of the wider renewable energy industry, to agree an appropriate way forward.



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Repowering

Another important aspect of RESS 2 is around repowering. Ireland has an ageing onshore fleet, with over 400 MW aged 15 years or older, and 1,400 MW aged 10 years or more. Repowering will very soon become a consideration for many of Ireland's wind farms.

However, the proposed requirement for 'new projects' to demonstrate a 50 per cent increase in installed capacity to qualify for RESS is far too restrictive and will not be feasible for many wind farms in Ireland. Ireland needs to urgently put in place a strategy for repowering, whereas on the contrary, provisions such as these would seem to actively discourage it.

The co-location of renewable projects with low-carbon flexible assets is critical for a low-cost adoption of variable renewables. A welcome change this term is the expansion of the list of Eligible Technologies to allow for hybrid wind, solar and energy storage projects. However, the proposed metering arrangements need to be amended for the business cases of these assets to work.

WEI has proposed metering options which need to be available in the RESS scheme. The department should also ensure that the RESS eligibility criteria do not represent a barrier to developers adding separately metered Eligible Technologies (or extensions) to successful RESS projects in the future. The addition of these new elements should not prohibit a projects' continued participation in the scheme.

Wider key policy areas which also need updating are polices on dynamic sharing of MEC between technology types, allowing multiple legal entities behind a connection point and oversizing levels relative to a connection points MEC.

Clean Energy Package

Finally, there is a need for the department and the SEM Committee to work to reduce the level of risk that developers are being forced to factor into the RESS 2 auction next year. A good example is found in the implementation, or lack thereof, of the EU Clean Energy Package. Ireland must become compliant with this Regulation as swiftly as possible.

It is now more than two years since the publication of the Electricity Regulation in the Official Journal of the European Union. Recent suggestions that clarity on Articles 12 and 13 of this Regulation may not be provided until mid-2022 is not acceptable and adds a significant level of uncertainty to the auction and the electricity market as a whole.

Any further uncertainty on a live regulation in a live market creates material commercial uncertainty and risk for all parties involved and presents significant challenges to Ireland in achieving our climate and energy targets.

Coming back to the key issue – timing. Ireland has the renewable energy, the technology and the investment needed to reach our targets, but this needs to be backed up by effective policy implementation, including regular and timely auctions. For this reason, we would strongly urge the department to do all that it can to bring forward the RESS 2 auction date.

Our industry is willing and available to work alongside the department and to provide whatever support we can to deliver the Programme for Government commitments.

Tim Coffey is Senior Project Manager with Statkraft Ireland and Chairperson of the Wind Energy Ireland Onshore RESS Working Group.





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Michael Hayes Global Head of Renewables, KPMG +353 87 744 1656 michael.hayes@kpmg.ie



Russell Smyth Partner, KPMG Sustainable Futures +44 773 860 3869 russell.smyth@kpmg.ie



James Delahunt Associate Director, KPMG Sustainable Futures +353 87 050 4375 james.delahunt@kpmg.ie



Fisheries Liaison Officer (FLO) talks to *Irish Wind*

Brendan Dillion is a Fisheries Liaison Officer (FLO) for the proposed new Arklow Bank Wind Park under development by SSE Renewables – his role is to work with the local community and, in particular, the fishing community.

An Arklow native, who lives a few hundred metres from the shoreline, a former fisherman, an RNLI volunteer and the skipper of a wind farm service vessel, it's hard to imagine someone better-placed.

But how did this new role come about and what does it involve? "A Fisheries Liaison Officer is basically an intermediary, between the wind farm developer and all of the fishing interests," he explained. "I was a fisherman from my teens until my late 30s and then later the skipper for a service vessel on the first phase of the Arklow Bank Wind Farm in 2003.

"I think my role now as an FLO works because people know that I am straight, that I am genuine and that I only deal in facts.

"It is a challenging role but for me it is important to be involved with this new phase of life at sea as a local person and as someone who wants to have a role at sea. I have local knowledge, so I can help with any concerns people have and they know I will be fair to all and do my best." Brendan still runs the service boats out to the existing wind turbines in the bay, regularly bringing service technicians out for maintenance work. This is a role he retrained for when the initial wind farm development 17 years ago threw up new opportunities for fishermen in the area.

"Back in 2003 I had to retrain and upskill a bit," he said. "I had some certs and knowledge from my volunteer work with the RNLI (Royal National Lifeboat Institution), but I needed more. I saw it as an opportunity to be honest, to stay at sea which I love, but to have a better, more secure, quality of life.

"I was in my late 30s then and 45 is considered an old fisherman. I wanted more regular hours and more regular pay for me and my family which this offered me.

Brendan believes other fishers in Arklow and around Ireland should also grasp the training and upskilling opportunities that the offshore wind industry will bring to their area.

"I've spent my whole life here and the sea has given me my livelihood – first as a fisherman, then as a skipper for the service vessel, which I still do and love, and now as an FLO for the community." As part of his FLO role Brendan works as part of the Arklow Bank Wind Park project team at SSE Renewables to engage with fishermen who have questions, suggestions or concerns. Since Covid struck, the meetings now take place outside on the quayside, with careful social distancing, and are often one-to-one.

"When a big project is going in, people have concerns – that's normal and understandable," he acknowledged. "My job is to bring back those concerns and to make sure they are heard. We want to involve the local fishing community as much as possible and as early as possible.

Part of this early engagement involved talking to them about possible ports and berth space years in advance of any construction.

"The new base will be in Arklow," he said, "this is a win-win – it means practically zero impact on fishing berth space. It is using a derelict area that that will now be revamped. Fishermen had concerns initially about whether their fishing berths would be needed or disturbed, so it was great to be able to take this into account and come back with a solution." Brendan also believes that the local community in Arklow and wider Wicklow can see the benefits the new wind farm will bring.

"The public in general are very supportive and can see the benefits of it," he said. "There will be a huge economic boost to the area with direct jobs but also the knock-on effect for the supply chain down to local cafés and hotels and services," he said.

Brendan's three daughters haven't followed him out to sea, but he is grateful that renewable energy projects like Arklow Bank are creating jobs of the future for another generation in his town.

"The wind farm will bring a community benefit fund of approximately €4m for the area each year – that will help local clubs, voluntary organisations and amenities," he pointed out. "But separate to that SSE Renewables has introduced an annual €50,000 Fisheries Fund which will run throughout the development phase of the project.

"This is money specifically to make life easier for fishermen working there and again we ask them what they need. Is it a new crane facility or an ice plant? Or the opportunity to retrain and upskill for other sea and renewable jobs like I did? There are great supports there not only to buy things but to improve life quality and life opportunities."



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Bord na Móna



Dr Aoibheann Gaughran Ecologist, Trinity College Dublin

What If Onshore Wind Farms Were Also Nature Reserves?

Nature+Energy:

Ireland's Climate Action Plan includes an increase in renewables to 70 per cent of our energy needs by 2030. While it is critical to solve our energy challenges, we are also faced with a biodiversity emergency

What is biodiversity and why should we care?

Biodiversity encompasses all life on earth - plants, animals, fungi, bacteria, and other microorganisms, as well as the ecosystems in which they live. Biodiversity (or nature) is not just beautiful; it is our life-support system. We eat plants and animals. Insects, and even some mammals and birds, pollinate many of the foods we rely on. Soil microbes provide nutrients that plants need to grow. Vegetation and healthy soils reduce flooding and filter our water. Plants provide us with clean air. Detritivores and scavengers break down waste (imagine a world without dung beetles!). Peat bog and woodlands draw down and store atmospheric CO2. These natural goods and services are known as "ecosystem services". We utterly depend on these services, but nature needs to be in good condition to supply them.

Human population growth, industrial and agricultural intensification , , and accelerating land-use change , mean that around 1 million animal and plant species are threatened with extinction globally, many within decades . In Ireland, 85% of our protected habitats are in inadequate or poor condition , one-fifth of our breeding bird species are in decline , and 43 per cent of our rivers are in unsatisfactory biological quality . Climate change puts further pressure on our already creaking biodiversity. Nature does not have the capacity to absorb more negative impacts. As our biodiversity declines, so does its capacity to supply essential ecosystem services.

Wind farms are crucial to achieving our green energy targets, but can have some adverse environmental impacts. Good planning, appropriate siting, ongoing monitoring and site management can mitigate many of these impacts. Current legal requirements and the planning process ensure attention is paid to specially protected habitats and species including mitigation of any potential negative effects. But what if wind farms could actually enhance biodiversity on a larger scale?

Nature+Energy

There are over 300 onshore wind farms in the Republic of Ireland. These wind farms have the potential to provide so much more than renewable energy. If managed properly for biodiversity, our network of wind farms could act like mini-nature reserves, creating space for nature, connecting habitats, improving the resilience of ecosystems to climate change, and enhancing the provision of ecosystem services. The Nature+Energy project will develop methods for recognising and enhancing the biodiversity that exists on our wind farms.

Natural Capital Accounts (NCAs) will be developed for focal sites. Natural Capital Accounting frames natural ecosystems as stocks of assets that provide a flow of benefits to people. It is a tool that enables the integration of nature into business decision-making, to reduce and reverse trends in environmental degradation and biodiversity loss. Accounts will be developed using existing data, as well as data from site surveys. The extent and condition of habitats within wind farms will be quantified, as will the services and benefits that they provide. The NCAs will support a natural capital asset and risk register, and a decisionsupport tool for land-use planning and biodiversity enhancement on wind farms.

A state-of-the-art environmental monitoring system (EMS) will be developed to revolutionise how we measure and monitor biodiversity on and around wind farms. High-resolution monitoring could identify the presence of at-risk species, or risky times of the day or season where temporary curtailment of turbine operation could protect at-risk species without compromising energy production.

Companies are increasingly incorporating biodiversity into their strategies. Some WEI members have already signed up to the All-Ireland Pollinator Plan, which recently launched sector-specific guidelines. However, a lack of site-specific scientific knowledge can often frustrate well-intentioned plans.

The data generated by Nature+Energy will be used to develop evidence-based Biodiversity Action Plans and outline priority actions for investment in biodiversity across the sector, actions that go beyond what is required in planning conditions, to provide benefits to local communities, nationally, and even internationally.

Climate change and the erosion of biodiversity are the twin environmental crises facing humanity. Nature+Energy aims to develop genuine win-win scenarios for climate and biodiversity action that will benefit society, the economy and the environment.

Nature+Energy is a four-year project co-funded by Wind Energy Ireland, The NTR Foundation, ESB, SSE Renewables, Energia Renewables, Ørsted, EnergyPro, Ecopower, Greencoat Renewables Plc, and MaREI, the Science Foundation Ireland Research Centre for Energy, Climate and Marine, and is led by teams at Trinity College Dublin and Maynooth University.



POLICYUPDATE

Introduction

The policy team currently manages nine committees – Markets, Grid, Planning, 70by30, Offshore, Community Engagement, Health & Safety, Asset Management and Floating Offshore Wind, Supergrid and Hydrogen (FLOSH). WEI also collaborates on storage policy issues with our colleagues in Energy Storage Ireland, and on all-island matters with Renewable NI.

Each committee contains several working groups in which cross-committee subject matter experts participate and actively contribute to a range of industry-related issues. These range from responding to public consultations, to commissioning economic analyses and reports, to identifying policy changes which will deliver renewables at lower costs to the consumer. The working groups provide members with an opportunity to influence key stakeholders and policy decision-makers, via the WEI platform, and therefore help to shape the direction of energy policy in Ireland. Described below are several key workstreams currently active across various WEI policy working groups and committees.

Any WEI Member can apply to join a committee by emailing Éabhín Byrne at: eabhin@windenergyireland.com

2030 Ambition

In May WEI responded to the Department of the Environment, Climate and Communications (DECC) Call for Expert Evidence for the update to the Climate Action Plan. As part of WEI's work to prepare a response to the Climate Action Plan Call for Evidence, we commissioned Baringa Partners to analyse a pathway to deliver a zero-carbon power system for Ireland utilising the Programme for Government and 2019 Climate Action Plan capacity targets for onshore and offshore wind energy.

The analysis concluded that Government should maintain the Climate Action Plan 2019 and Programme for Government renewable capacity targets for onshore wind (8.2 GW) and offshore wind (5 GW) for 2030, along with 5 GW of solar PV. Additionally, the Climate Action Plan 2021 should set a 2030 power sector emissions target of less than 2 million tonnes of CO2 which we found to be very achievable by 2030 and would not require a significant change to the approach that is currently underway to achieve 70% renewable electricity. This target could be met by implementing more of the existing technologies that are proven today. Crucially, it could be achieved at a lower cost to the end consumer (saving approximately €150m per annum).

WEI looks forward to the publication of the final version of the 2021 Climate Action Plan in the coming months.

RESS 2

In June, DECC published the draft Terms and Conditions for the section Second Onshore Renewable Electricity Support Scheme (RESS 2). WEI responded to the consultation, noting our disappointment with the proposed timeline for RESS 2, and the decision not to hold any auction in 2021. Unfortunately, with less than 10 years to deliver our 2030 target, we are now facing at least one, and more likely two, years where little or no renewable energy will be connected to the electricity system despite a substantial – and growing – wind energy pipeline.

In its response to the consultation, WEI highlighted need to provide certainty to investors. This includes delivering annual RESS auctions as committed to in the Programme for Government, but also ensuring the scheme is designed to minimise the level of risk developers are bringing into the auction, which is ultimately paid for by the end consumer.

WEI also noted the strong Government commitment to delivering a

citizen investment model for renewable energy projects and committed to working with DECC to help ensure that the terms and conditions of RESS 2 align with Government priorities and that individuals and communities living in the vicinity of renewable energy projects supported under the scheme have an opportunity to invest in the projects our members are developing. However, further delays will make achieving the 2030 renewable electricity target very difficult.

Shaping our Electricity Future

Grid development is the single most significant challenge to achieving our 2030 ambitions, and beyond. In June WEI responded to EirGrid and SONI's important Shaping our Electricity Future consultation, which sets out the TSO's vision for a pathway to achieve a target of 70% RES-E by 2030. WEI set out our view that EirGrid need to focus on the capacity targets in the Climate Action Plan and Programme for Government (8.2 GW of onshore wind and 5 GW of offshore wind by 2030) rather than just achieving 70% RES-E by 2030. 2030 should be seen as a point in the road in terms of the net-zero 2050 target.

Additionally, we believe the focus should be on removing grid development costs as a barrier and that this should be seen instead as an investment which reduces the overall cost of renewable deployment. A key point that needs to be addressed is the capability of the system to operate and any one time with zero-carbon system services. Ultimately, the electricity market needs to be designed for a 2030 context in which there is 70%+ RES-E and a system capable of operating at 100% SNSP for multiple hours of the year while providing enough investment certainty for renewable developers and flexible technologies needed going forward.

Clean Energy Package Implementation

In August, WEI and Renewables NI (RNI) jointly responded to the SEM Committee's Consultation Papers on the Implementation of Articles 12 and 13 of the EU electricity regulation. These provisions create the binding legislative framework for facilitating the necessary levels of investment at least cost to consumers. However, WEI and RNI outlined strongly in our response that the proposals set out by the SEMC allocate risk to generators that is impossible for our members to manage, meaning that the cost to consumers of developing further renewable capacity will be significantly greater than is necessary.

We strongly argued for compensation for dispatch down as required by law under the Clean Energy Package (CEP). Additionally, the legal requirements of the CEP need to be implemented in full, specifically the right of all qualifying generation to compensation at the level of financial support for downwards redispatch. When the provisions of Article 13(3) are considered, constraints (in addition to curtailment) should be considered as non-market based redispatch. To ensure fair and even burden sharing, constraints should continue to be applied on a pro-rata basis.

We believe the existing Bidding Code of Practice should be amended to allow non-priority dispatch plant to bid into the market. The Balancing Market Principles Code of Practice was developed in a scenario that did not anticipate dispatchable wind, and in our view, it is not suitable for wind generation in its current form. Risks and incentives, primarily around network constraints, curtailment, and firm access to the grid, need to be allocated to the parties best able to manage those risks.

WEI believes that clarity must be provided to the industry as early as possible, as not doing so would mean developers would be forced to factor additional risk into the upcoming RESS 2 auction, at a cost to the energy consumer.

Delivering Offshore

Recent months have been particularly busy ones for WEI members involved in offshore wind, as the Government seeks to put in place the frameworks to enable Ireland to deliver on the 5 GW offshore ambition set out in the Programme for Government.

On the 1st of July, the Government published the Maritime Area Planning (MAP) Bill along with the National Marine Planning Framework

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(NMPF). Both documents had been eagerly awaited by WEI members for several months and so their publication is very welcome. The MAP Bill establishes a new agency to regulate development in the Maritime Area, which is to be called the Maritime Area Regulatory Authority, or MARA, for short. The Bill will now proceed through the Houses of the Oireachtas and is expected to progress to second stage in in the Oireachtas in September, and then Committee stage in October, after which it will be enacted.

The development of the Offshore Grid is another crucial aspect in the delivery of 5 GW by 2030 and which WEI members are actively engaging on and drawing on their vast international experience in this area. The Government's Policy Statement on the Framework for Ireland's Offshore Transmission System provided important clarity by appointing EirGrid as both TSO and TAO of the offshore grid. It also confirms a developer-led approach in the first phase (2021-24), followed by a transition phase (2025-30) which can be either developer or EirGrid-led, with a move to a centralised model from 2030 onwards.

September will see the publication of the draft Terms and Conditions for the first Offshore RESS auction, set to be held in 2022. This is a crucial step towards meeting the 5 GW offshore target, beginning with the Phase 1 projects. WEI is engaging regularly with key policymakers to help ensure the needed steps are taken to launch this important new sector.

Revolution: A vision for Irish Floating Wind

In July, following months of work by WEI's FLOSH Committee, we launched our new report called Revolution: A Vision for Irish Floating Wind. This vision is to make floating offshore wind, a transformative new industrial sector, a commercial reality in Ireland this decade - to realise the long-term climate, jobs and economic benefits from our globally significant offshore wind and deep-water resources off the south, west and east coasts.

In this report, we identify several key policy actions required to ensure Floating Wind can contribute to our transition to a zero-carbon economy These include a call for an amendment to the MAP Bill to enable floating wind energy projects to carry out essential environmental surveys outside the 12 nautical mile limit. Additionally, we call on EirGrid to ensure that their new strategy for grid development, due out later this year, strengthens the grid on the western and southern coasts where most floating wind projects are located. Crucially, the offshore renewable energy auction planned for 2025 must have a dedicated floating wind energy pot to support projects ready to deliver.

Delivering the 30 GW ambition in the Programme for Government presents an enormous economic opportunity for Ireland. This necessitates the development of an industrial strategy for floating offshore wind, including the strategic engagement of the development agencies the IDA and Enterprise Ireland. Additionally, we call for strategic investment in our port infrastructure as soon as possible to enable our ports to be ready to build and maintain floating wind farms where temporary curtailment of turbine operation could protect at-risk species without compromising energy production.

Biodiversity

Companies are increasingly incorporating biodiversity into their strategies. Some WEI members have already signed up to the All-Ireland Pollinator Plan, which recently launched sector-specific guidelines. However, a lack of site-specific scientific knowledge can often frustrate well-intentioned plans.

The data generated by Nature+Energy will be used to develop evidence-based Biodiversity Action Plans and outline priority actions for investment in biodiversity across the sector, actions that go beyond what is required in planning conditions, to provide benefits to local communities, nationally, and even internationally.

Climate change and the erosion of biodiversity are the twin environmental crises facing humanity. Nature+Energy aims to develop genuine win-win scenarios for climate and biodiversity action that will benefit society, the economy and the environment.









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Wind Energy Ireland reveals the endgame for fossil fuels in our power system

Carbon emissions from Ireland's electricity sector could be cut from almost ten million tonnes annually to under two million tonnes by 2030, and even cut to zero, according to new research from energy specialists Baringa and recently published by Wind Energy Ireland.

The report, entitled Endgame - A zero-carbon electricity plan for Ireland sets out a pathway to a zero-carbon electricity system where a combination of fair carbon pricing, long-duration storage and green hydrogen will eliminate the need for fossil fuels in the Irish electricity system.

It follows the publication of a report from the International Energy Agency which called for countries like Ireland to have a net-zero electricity system by 2035 and the recent IPCC report which sounded a 'Code Red for Humanity'.

"We can choose to cut carbon emissions in our electricity system by almost 80 per cent by 2030," said Wind Energy Ireland CEO Noel Cunniffe. "The Baringa research makes clear that we can do this using proven, existing, technology and that it will save the Irish electricity consumer approximately €180 million annually.

"The report also goes further, setting out how the development of green hydrogen, long-duration storage and putting a fair carbon price for fossil fuels in the electricity market can deliver a net-zero electricity system.

"After more than 140 years we are finally in the endgame for fossil fuels in the production of electricity."

Three key conditions

Obtaining a MAC is not a guarantee of planning permission and a project might subsequently be turned down by An Bord Pleanála. As the Bill is currently drafted, the project would automatically lose its MAC, sending the project back to the beginning of the development process at an enormous cost in time and money.

The research sets out three key conditions that must be met if Ireland's carbon emissions in the electricity sector are to fall by 80 per cent between now and 2030.

- We must accelerate the drive towards the existing Government targets of 8,200 MW of onshore wind and 5,000 MW of offshore wind while introducing a more ambitious target for 5,000 MW of solar power.
- EirGrid must replace its current, fossil-fuel based, back-up system with one which uses zero-carbon technology like battery storage and demand response.
- The electricity grid must be strengthened over the next ten years with new grid infrastructure, the completion of critical projects like the North-South Interconnector and investment in EirGrid's DS3 programme which integrates renewables onto the system.

It then goes on to identify two further recommendations which, if fully implemented, would reduce carbon emissions from Ireland's electricity system to zero.

- A carbon price floor must be introduced to the Irish electricity market and it must rise to €100 per tonne of CO2 by 2030 to reflect the real cost to society of carbon-emitting fossil fuels.
- And we must switch to green hydrogen and long-duration storage technology to provide reliable, on-demand, electricity when wind and solar are unavailable. Existing gas generation plants must be retrofitted to run on green hydrogen and any new plants designed to make conversion easy.

Baringa Partners, an independent business and technology consultancy, which produced the report, previously wrote the seminal 70by30 analysis, which showed how Ireland could achieve a 70 per cent renewable electricity power system by 2030. This paved the way for the inclusion of this target in the Climate Action Plan.

Mark Turner, Director of Energy, Utilities and Resources at Baringa Partners was lead author of the report.

"Our analysis shows that Ireland has an extraordinary opportunity to double down on power sector decarbonisation," he said. "Getting to under 2 million tonnes of carbon by 2030 means going further and faster with the current plans but does not need anything radical or unproven.

"And we show it will cost consumers less than the current trajectory. A zero-carbon power sector is within reach for Ireland in the 2030s."

Resource warning

While the research shows Ireland has the renewable energy we need to decarbonise our electricity system, Wind Energy Ireland has repeatedly highlighted worries over a lack of resources within critical State agencies and Government departments as a growing concern.

"We have the renewable energy, the technology and the investment we need but there is a real question over whether the Government is investing enough in its own departments and the critical State agencies which will need to step up and deliver by 2030," warned Noel Cunniffe. "Additional resources and expertise are urgently needed in An Bord Pleanála to ensure a robust and fair planning system, in the NPWS to ensure projects are developed in a sustainable way and in bodies like EirGrid, ESB Networks and the Commission for the Regulation of Utilities to ensure the electricity system continues to operate safely and securely.

"We would urge Minister for Finance Paschal Donohoe TD, in the Budget this year, to ensure these State agencies, and the relevant Government departments, have the personnel, resources and expertise they need to work alongside industry and communities across Ireland to deliver the vision set out in the Climate Action Bill."

Download a copy of Endgame – A zero-carbon electricity plan for Ireland at https://windenergyireland.com/policy/reports-position-papers.



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Learning the value of community

If the COVID-19 pandemic has taught us anything, it is the value of community.

Across the globe, small local communities have shown their resilience in a time which has tested us all in so many ways, in Ireland it has been no different.

These communities have somehow found the strength and focus to keep going in the face of social isolation, overburdened health and community resources, diminished fundraising capacity and the uncertainty that the pandemic has inflicted on them.

SSE Renewables provides voluntary community funding from its wind farms in support of energy efficiency, safety and sustainability projects. Community groups within a 20km radius of each wind farm can apply annually for funding, with priority given to those groups operating within 5km of a wind farm.

Through our annual Community Fund programme, we have awarded €8.9 million so far to over 3,200 community projects in the communities closest to our wind farms.

This funding has helped support local groups, sports organisations and schools to develop their facilities with energy efficiency and sustainability upgrades as well as social and environmental projects that enable community development.

Pandemic response

Crucially, in this last year however, funding has been awarded to support community-response to the pandemic.

Focusing on the areas near our operational wind farms and where we're developing new renewable sites, as well as on the specific needs of the communities in these areas, means we can collaborate with local people to ensure a lasting legacy. It's about trusting local people who are best placed to know what is needed in their community.

Although much of 2020 was dominated by the pandemic, for Ireland it marked a significant step forward in terms of climate action with the first round of auctions in the new Renewable Electricity Support Scheme (RESS).

The publication of the RESS Good Practice Guidelines for community benefit funding is welcomed and will enhance our approach to work with local communities.

SSE Renewables is committed to being a leader in delivering impactful community benefit funds and the scope to do this will be broader with a mandatory community benefit fund set at $\leq 2/MWh$ for all generation projects.

Maria Ryan Director of Development at SSE Renewables

Already, close to \pounds 4 million per year is set to be delivered to sustainable community initiatives developed in areas close to the RESS 1 projects through the community funds under the first RESS auction.

COP26

On a wider scale, supporting communities to become greener and more sustainable is crucial in tackling the climate crisis and achieving the goals of COP26 which takes place later this year in Glasgow, of which SSE is principal partner.

This year also marks a change in the name of SSE's funding programme. Previously promoted under the SSE Airtricity brand, the programme is now known as the SSE Renewables Community Fund.

The change is designed to better link annual funding award payments from our wind farms across Ireland to SSE Renewables. Additionally, we administer annual community funding for Ireland's largest wind farm, Galway Wind Park in Connemara, which is a joint venture with Greencoat Renewables.

The Galway Wind Park Community Fund was launched in 2018 and, at around €400,000 annually, is the largest community fund of its kind in Ireland incorporating a Major Projects Fund, Local Fund and Scholarship Programme.

While the parameters for community funding for offshore wind have yet to be set, SSE Renewables is proud to be leading the way and already supporting communities in the vicinity of the proposed Arklow Bank Wind Park Phase 2 through annual Sponsorship and Fisheries funds. We continue to be inspired by the time and effort local people contribute to supporting their local communities. This year in particular we are really pleased to have been able to provide financial assistance that has helped match that exceptional local effort during this difficult time.

You can find out more about the impacts of the SSE Renewables Community Fund in 2020/21 here: www.sserenewables.com/ poweringlocalchange.

windenergyireland.com

Making the future happen

Steven Agnew Head of Renewable NI.

As the world looks to the UK as COP26 host, those in Northern Ireland have been focusing on how we can finally catch up with the rest of Ireland and the UK, writes Steven Agnew.

Late Spring saw the first Climate Bill being brought to the Northern Ireland Assembly, aimed at establishing a target of net-zero carbon by 2045. The private members' bill is sponsored by Green Party leader Claire Bailey MLA, with cross-party support from Sinn Féin, SDLP, UUP, Alliance, PBP and independent MLAs.

This bill was closely followed by Agriculture Minister Edwin Poots' Climate Bill, which proposes less ambitious emission targets.

In July the consultation closed for the Northern Ireland Energy Strategy. RenewableNI submitted a comprehensive response on behalf of our members with five key objectives:

- 1. A zero-carbon power system by 2035
- 2. 80 per cent renewable electricity by 2030
- 3. NI inclusion in Contracts for Difference (CfD) Auction Round 5
- 4. Developer-led grid investment
- 5. NI inclusion in next Crown Estate leasing round

These priorities emerged following extensive consultation with our members, ensuring they reflect the needs of developers of largescale and smallscale, wind and solar, onshore and offshore technologies.

The new Energy Strategy promises the Earth and it must deliver. The latest IPCC report revealed the extent of the climate crisis and the necessity to change.

If the Department for the Economy matches our ambition it will unlock over £1 billion of private investment, save consumers more than £50 million and, vitally, reduce power sector emissions by 75 per cent by 2030.

Countdown to COP

As part of our Countdown to COP we are producing three critical reports in the lead-up to our Smart Energy Conference on 2nd November.

In September we launched Baringa's Achieving Zero study, which provides a pathway to a fully decarbonised electricity system.

'Phase One' of the report is a 'more of the same' approach to reducing our carbon emissions. It shows that RenewableNI's target of 80 by 30 (80 per cent renewable electricity generation by 2030) is achievable and would reduce power sector emissions by 75 per cent (from 2.8MtCO2 to 0.7MtCO2).

To get there we simply need to increase our renewable generation capacity as we have been doing over the last 15 years, albeit at a faster pace. Achieving 80 by 30 is estimated to save consumers an additional £50 million in 2030 when compared with the Department for the Economy's proposed 70 per cent target.

'Phase Two' shows how we bridge the gap to a fully decarbonised power system. Green hydrogen and long-duration storage play a key role in replacing fossil fuels in providing back-up services for renewables. An aligned carbon price will be necessary to ensure the commercial viability of these technologies.

We now know the technologies needed to produce a zero-carbon electricity system. While the report therefore concludes we could achieve this goal by 2030 it acknowledges that this would be challenging.

Setting a target

RenewableNI has called for a target date of 2035, in line with the Committee on Climate Change's recommendations and the International Energy Agency's assertion that all advanced economies must achieve zero-carbon power by this date.

In October, KPMG will outline the potential for the distributed wind sector in Northern Ireland. We are somewhat unique in that almost a quarter of our renewable generation is from projects of less than 5 MW.

The distributed wind sector has allowed many small businesses, farmers and land owners to invest in renewables and share in the benefits of the energy transition. Where we once had three power stations in Northern Ireland, we now have over 23,000!

This is a true democratisation of energy production and RenewableNI argues that we should continue to back this sector by both extending the Contracts for Difference (CfD) scheme to NI and remove the minimum 5 MW restriction.

Economic benefits

Finally, KPMG will lead a session at our conference outlining the economic benefits that will result from the achievement of our 80 by 30 target.

RenewableNI estimates that by setting such a target along with the necessary policies to achieve it, will result in over £1 billion of private investment. We have asked KPMG to provide indepth analysis detailing the contribution this can make to a green recovery including detailing the economic value and job creation

Northern Ireland's Economy Minister, Gordon Lyons, will provide the conference's keynote speech recognising our contribution to the Northern Ireland Energy Strategy.

The conference will also include two panel discussions where expert speakers will consider how, together, we can achieve the Strategy's ambitions. They will also address the unique position of Northern Ireland - the challenges and issues specific to the area.

These events are a chance for people in the industry to come together after the long period of covid restrictions and embrace a cleaner, greener, future. With the right policy in place the renewables industry can power a green economic recovery!

You can read RenewableNI's submission to the Northern Ireland Energy Strategy at www.RenewableNI.com/policy.





Replacing Volatility with Certainty

- Contract directly with supplier, supplying 7% of domestic demand
- Independent Irish owned, offering end to end market services

✓ Flexible PPA Durations

Recently signed a 5-year power purchase agreement with Greencoat Renewables

"PPA agreements are going to play a really important role in the future development of the renewable energy industry in Ireland. The PPA market is still growing in Ireland, but we're really pleased with how the sector is developing, showing an encouraging route for assets beyond government supports such as REFIT and RESS," Paul O'Donnell, Investment Manager at Greencoat Capital.

"We are delighted to enter this innovative long-term fixed price power purchase agreement with Greencoat Renewable. It provides the surety of a fixed price for both the renewable generator and a small portion of our retail supply business together with the satisfaction that as an Irish renewable source it is better for the environment too. We are targeting more deals in this area to remove price uncertainty for both our retail base and generators. PPAs of this duration also offer asset owners a source of financing for repowering of existing older assets." Maurice McGonagle, Chief Financial Officer of PrepayPower.

Get in touch







prepaypowerenergytrading.ie

+353(0)1 514 3427

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Offshore Energy Planning & Environmental **Solutions**

A single source solution for all planning, consenting and environmental – related services.

Fehily Timoney & Company and Intertek are teaming up to provide clients across the offshore renewables sector with a single source solution for all planning, consenting and environmental-related services. The companies are combining their respective skills, plus track records in Ireland, to provide unparalleled expertise from initial feasibility all the way through to planning consent, compliance and environmental monitoring. The partnership is perfectly matched to the complex needs of the offshore community.

Fehily Timoney has particular expertise in project managing the consent process for complex large scale renewable energy projects as well as an excellent understanding of the consenting regime in Ireland particularly the delivery of onshore infrastructure. One of Intertek's strengths lies in its Irish, UK and international experience in delivering offshore energy projects. Together Fehily Timoney and Intertek deliver the full planning and environmental package of offshore renewable energy. Building on their previous collaborative work experience, the team members will ensure international best practice approaches tailored to the Irish context.

For more information contact us at:



Core House, Pouladuff Road, Cork, T12 D773, Ireland T: +353 21 496 4133 • E: info@ftco.ie www.fehilytimoney.ie/ft-intertek



Intertek Energy & Water, Exchange House, 33 Station Road, Liphook, Hants GU30 7DW, UK T: +44 1428 727800 E: energy.water.info@intertek.com www.intertek.com/energy-water

Green Tech Skillnet

Excellence in Innovation, Training, Research and Work Force Development

The Green Tech Skillnet ("GTS") is a public private partnership between Wind Energy Ireland and Skillnet Ireland. The GTS is an enterprise led network with industry leaders sitting on our Steering Group. We identify, develop, and deliver training to bridge skill gaps for our current and future workforce.

Our goal is to facilitate the renewable energy industry training needs for the existing workforce, for those with complementary skills looking to transition to the sector and for those starting their career. This is delivered through impactful learning, development initiatives and networking events.

We develop leaders and specialists within the renewables sector whilst contributing to Ireland's deep decarbonisation and energy transition. We deliver a comprehensive selection of courses: Policy Developments, Markets, Grid, Health & Safety, Vocational Skills, Finance, Green Technologies, Management and Leadership Skills.

As Ireland implements its National Framework for living with COVID-19, the Skillnet is adjusting to facilitate for onsite and online blended learning. The Green Tech Skillnet have successfully delivered 80 courses in 2021 to date and we are excited about the stream of Grant-Aided, bespoke courses that will be available in the final third of the year.

GTS heavily discount the cost of courses for companies of all sizes through the grant funding we receive from Skillnet Ireland. Skillnet Ireland is funded through the Department of Education and Skills. With the support of our members, we continue to push the sector forward, equipping companies and people with the skills required for a green transition.

Developing Local Talent

The ambitious targets of 8.2 GW onshore wind energy and 5 GW offshore wind energy set by the Climate Action Plan and the Programme for Government will require a monumental effort, investment, and resources in the sector. This will demand a tripling of our workforce in this sector at a rapid pace to meet 2030 targets.

Ireland's greatest resource is our people. The sector must invest in the workforce now so that there will be skilled people available for building, operating, and maintaining our assets over the next 20+ years.

We constantly face new challenges, and we must act now to mitigate our dependence on importing talent. We can mitigate future challenges now by shifting our skill dependency on foreign specialists by upskilling local workers.

Supporting Career Transitions to the Renewable Energy Sector

Green Tech Skillnet has successfully completed the pilot courses for three unique training and work placement programmes: Wind Turbine Technicians; BER & Near Zero Energy Building Assessors; and Work in Wind (graduate-level professional development for the energy sector). We want you to be involved in the development of the next generation of skilled workers.

To finish the programme, trainees will complete a 4-week work placement or project with a host company. Ideally, they would be offered a permanent position after their work placement, but this is not a requirement.

We are actively looking for host companies to take work placements for all programmes. Contact mark@windenergyireland.com if you are interested in supporting the programme.



Our Wind Turbine Technician programme is delivering a suite of GWO safety and technical certified training, safe pass, wind sector overview and communication skills workshops. Technicians will have the required certs to go out on site after training. Backgrounds include mining, construction, oil, mechanics.

Work in Wind programme delivers a wide array of training covering the lifecycle of a wind farm, an overview of onshore and offshore wind, grid, policy, planning, markets, communications, foundation in asset management and community engagement.

Our BER Assessor programme gives BER certification and the knowledge requirements of planning energy renovations for homes in Ireland. It will cover all elements of upgrading the building fabric of an Irish building. It will cover wall, floor, and roof upgrades, required regulations, ventilation, airtightness, interstitial condensation and will also include an Introduction to NZEB programme.

At Green Tech we see this as an opportunity to address the skill gaps and shortages that exist today in the sector and to ensure that we do not face a shortage of skilled workers for Ireland's transition to a zero-carbon future. We also see this as an opportunity for the sector to be part of Ireland's recovery over the next couple of years. The standard of applicants was exceptional in the pilot programmes. We look forward to attracting more talent into the renewable energy sector.

Green Tech Skillnet Future Skills Programme

We were delighted to be successful for future skills funding calls with Skillnet Ireland. Investment was won to develop a research report analysing the cost of green hydrogen and develop a certified renewable energy finance course designed for accountants. We look forward to launching them towards the end of the year or early 2022.

The aim of the Future Skills Programme (FSP) is to facilitate the supply of the emerging and future skills required by industry by addressing Skillnet Ireland's three strategic pillars: strategic innovation, workforce design and people development.

The next call for funding will be early 2022. If you have ideas for future skills development projects or essential research requirement, please contact mark@windenergyireland.com.

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Skills Connect – powering our people! Rapid reskilling of workers most impacted by COVID-19.

Skills Connect offers jobseekers free training courses and industry led job placements to the recently unemployed transitioning to our sector. This valuable initiative offers individuals the opportunity to develop new skills or reskill, regain confidence, and build their professional experience.

80 participants took part in 3 bespoke programmes designed by Green Tech Skillnet and their members

- Work in Wind An Industry Overview
- BER Assessor and Introduction to NZEB
- Wind Turbine Technician

Huge thanks to the host companies involved in this initiative. We are actively looking for companies to host immediate work placements for all programmes.

Contact mark@windenergyireland.com for more information on participating as a host company.





An Roinn Breisoideachais agus Ardoideachais, Taighde, Nuálaíochta agus Eolaíochta Department of Further and Higher Education, Research, Innovation and Science

https://gtsskillsconnect.ie



Designing 'smart windmills' is child's play

Impressed by the County Laois school children who won this year's STEPS Young Engineers Award for their 'Smart Windmill' project (which aims to help livestock farmers harness clean wind energy to heat water and to make their daily work easier) Irish Wind Magazine decided to find out more. Speaking to their teacher Eve Holohan at Arles National School, we found out where their interest in wind, renewables and engineering came from.

What did you learn from your project?

Rían Murphy, age 10

We learnt that farmers can save a lot of time working on the farm if they put in a renewable energy system. This gives them more time to spend with their families.

What do you know about wind energy?

Rosie Rogers, age 10

The wind is used to make energy and electricity. The wind moves the propellers on the turbine, then the turbine turns the wind into electricity. It is also environmentally friendly.

What does renewable energy mean? Rían Murphy, age 10

Renewable energy is made from the world's natural resources and can be replaced. We learnt about solar energy, wind energy and hydroenergy. They are very good for the environment and don't run out like coal and oil.

Why is it important to use renewable energy? Patrick O'Neill, age 10

It is very important because it helps our environment and doesn't release dangerous gases into the air. We all have to help with global warming.

What would you like to do when you leave school?

Rían Murphy, age 10 I would like to become an engineer. Rosie Rogers, age 10 I want to work with horses or an engineer. Grace Kelly, age 10 I want to be a doctor. Beckie Kennedy, age 10 I would like to be a vet.

Infographic on wind energy for children released across the country

A new infographic aimed at primary school children that builds on our animated video – The Power of Wind- Ireland and Climate Change hit the printing presses of regional papers across the country this month.

The bi-lingual poster was distributed as an insert in newspapers in counties including; Cork, Kerry, Waterford, Kilkenny, Laois, Westmeath and Mayo. With more digital promotion of the poster planned. It was produced by WEI and sponsored by four member companies. The poster is downloadable from the education section on our website.



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Orsted - second



A look back on events so far in 2021

Despite the frantic start to the year as projects battled to meet testing and contracting deadlines in the face of Covid-19 delays, it is a fantastic achievement for the energy storage industry that five new battery projects are now operational.

While total BESS operational capacity on the island was around 21 MW just over a year ago, these new projects bring the total capacity to 256 MW, and this number is expected to continue to grow within the next 12 months as the industry goes from strength to strength.

The projects include Gore Street and Low Carbon's projects at Drumkee and Mullavilly in Northern Ireland, Statkraft's Kelwin 2 in Co. Kerry and RWE's Stephenstown project in Co. Dublin. Below are some images of the different projects in construction and on completion.

These projects are providing essential fast acting reserves and voltage support under the DS3 programme to help keep our electricity system stable and to increase the level of renewable generation that can be accommodated on the grid.

For instance, in May this year the Irish grid dropped below normal operating range (49.9Hz- 50.1Hz) for about 14 minutes. This was one of the longest under-frequency events seen in years. Reasons for events like this include large conventional power plants suddenly encountering an issue and having to shut down or pieces of transmission infrastructure failing. If the frequency drop is not stopped and brought back to a normal operating range than this can lead to blackouts on the system. Fortunately, in this instance battery storage projects immediately stepped up with responses measured in milliseconds to support the electricity grid and recover the frequency to normal ranges.

Most of the time batteries such as these sit in standby watching the frequency. But, as soon as it sees the frequency drop below the trigger level, it responds automatically. In the blink of an eye, it injects active power to support the grid and stabilise the system.

Solar and wind power plants provide clean renewable energy, but the electricity grid has historically relied on fossil fuel generators to provide stability in the grid. As renewables grow, displacing fossil fuels, we need to find new ways of providing the stability the grid requires. Batteries can provide these essential support services helping the delivery of our renewable targets and reducing our power system carbon emissions.

As the number of batteries and other system support technologies continues to grow we can eventually replace the need to use fossil fuel generators for these grid stability needs. This is a vital ingredient in achieving our ambitious renewable energy targets.





For more information on the work of Energy Storage Ireland or to get details on membership, please contact info@energystorageireland.com



Meet the Wind Energy Team



Noel Cunniffe CEO

087 343 8827 noel@windenergyireland.com



Justin Moran Head of Communications & Public Affair:

0877037770 justin@windenergyireland.com



Johanna Cafferkey Head of Commercial Development

087 627 1425 johanna@windenergyireland.com



Rosie Whelan CPA Head of Finance & Office Manage

087 977 9246 rosie@windenergyireland.com



Dave Linehan Head of Research

087 236 0697 dave@windenergyireland.com



Niall Goodwin Head of Policy

087 409 8239 niall@windenergyireland.com



Lorraine Killick Membership/Events Manager

lorraine@windenergyireland.com



Emira O'Neill Membership & Events Operational Specialist

087 282 3640 emira@windenergyireland.com



Lisa-Anne Crookes Communications Manager

087 294 2261 lisa-anne@windenergyireland.com



Yvonne O'Brien Public Affairs Specialist

087 177 2001 yvonne@windenergyireland.com



Denis Devane CE Policy and Data Analyst

087 176 9240 denis@windenergyireland.com



Bobby Smith Senior Policy Advisor

087 294 5958 bobby@windenergyireland.com



Greg Bohan Policy Analyst

087 282 4290 greg@windenergyireland.com



Éabhín Byrne Policy Specialist

087 135 7345 eabhin@windenergyireland.com



Mark Ruane Green Tech Skillnet Network Manage

087 194 2261 mark@windenergyireland.com



Jeanette Gill

)87 833 8344 eanette@windenergyireland.com



Ledi Hoxha Network Administrator

087 288 3098 ledi@windenergyireland.com



Steven Agnew Head of Renewable I

0044 7837 291 699 steven.agnew@RenewableNI.com



Day in the Life #WorkInWind

Windfarm Asset Manager

Name William Coughlan

Role

To monitor and co-ordinate the operation of customers' wind farms and other renewable energy installations to ensure that they are operating effectively, efficiently and safely.

Title

What is a typical day like for you? Describe the varied things your role involves.

Generally my day would involve a number of the following; checking my windfarm's operational status for faults or stoppages, contacting the OEM's, checking the site access logs for any scheduled maintenance by service teams or contractors (these might include reviewing RAMS (Risk Assessment Method Statement) organising high voltage maintenance, civil maintenance, met mast maintenance, statutory inspections, maintaining welfare services, windfarm inspections, turbine inspections, data analysis, health and safety documentation or issues that need to be addressed, generating operational reports, progressing ongoing projects, general office and administration duties).

What is the most challenging part of the job?

Sometimes getting the monthly operational reports out on time for our customers can be tight to the deadline, but we are constantly trying to improve this, and it is becoming a lot less challenging.

What is the best / most rewarding?

Out on the windfarms doing site Inspections. It's a great to get a break from the office chair and to get out in the open air in remote areas with spectacular views.

Judith Rance

Are there many opportunities in renewable energy and wind energy?

Yes. There is now a skills shortage for all types of engineers - from general mechanical, electrical, civil, turbine technicians, health and safety personnel. As well as design and environmental engineers to more specific wind energy engineers - and scientists such as ecologists, as well as those with design and technical skills. Data analytics is also becoming an essential tool for maximising wind farm performance.

How has Covid changed your working life?

As with most people it has meant working from home and spending a whole lot more time online.

What is EnergyPro? Describe your path to joining here.

EnergyPro is an Asset management company involved in the renewables sector who have been established for over 20 years in Ireland.

The main services we provide to our customers on our portfolio include, technical management, financial management, turbine analytics, operational control, site access control, health and safety and operational due diligence.

My path to joining EnergyPro followed on from working as a Wind turbine technician for over 13 years. As such it seemed a natural progression for me to move into the management side of the industry after 'hanging up the harness'.



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SPRING CONFERENCE 2022



WIN

ENERGY

