WIND ENERGY IRELAND

Wind Energy TRADE SHOW 2024

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WIND ENERGY IRELAND

Wind Energy TRADE SHOW 2024

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FOREWORD

Noel Cunniffe
CEO

At some point in the next few months we are going to reach a major new milestone in the story of the Irish wind energy industry.

One of the wind farms under construction as I write this is going to be the one to push us beyond 5,000 MW of installed capacity in the Republic of Ireland. We have come a long way since our first wind farm, Bellacorick in Mayo, connected all of 6.5 MW in 1992. Today, we can do that with a single turbine.

At our second annual Wind Energy Trade Show we are proud to celebrate and to showcase the companies and the people who built this industry into a world leader in the development of onshore renewables and who will soon unlock Ireland's enormous offshore wind energy potential.

Four of our offshore projects have entered the planning system with two more expected before the end of the year. All to be followed quickly by the next offshore auction for a 900 MW project off our southern coast.

Huge opportunity

In recent months the Government has published a new national industrial strategy for offshore wind that will put Ireland at the forefront of Europe's energy transformation and a Future Framework setting out a policy vision for offshore wind post-2030. Last month the Oireachtas approved the first ever designated maritime area plan for offshore renewable energy.

This is what makes Ireland a huge opportunity for investors and the supply-chain, arguably the best untapped offshore wind resource in the world, with a skilled workforce, decades of experience in onshore energy and an increasingly supportive policy framework.

There are challenges. Too many good projects are being blocked in the planning system. Too much power is being lost as the electricity grid struggles to accommodate the volumes of energy our wind farms can produce.

At a time when everything must accelerate it can sometimes feel as if things are happening too slowly, frustrations grow, the difficulties seem insurmountable.

We will

But ours is an industry with nearly four decades of experience in doing the impossible, that never says 'we can', only 'we will', that finds new ideas, that exploits every opportunity and that will not stop until it is done, until fossil fuel generation in Ireland, and in Europe, is a thing of the past.

We will do this by working together, not just with our colleagues here at home, but learning from leaders in other countries – many of whom we are delighted to welcome to the 2024 Trade Show – who are further along in their journey. And we will do so in partnership with a new Government, confident that whatever the outcome of the General Election, political support for energy independence, for the affordable and clean power we provide, is strong right across the political spectrum.

But while we look forward to working with the new Government it will be one in which our outgoing Minister for Environment, Climate and Communications Eamon Ryan TD will not feature following his decision not to contest the next election.

On behalf of our members, and the thousands of men and women employed in our industry, I would like to thank the Minister for his commitment, not just over the last four years, but throughout a political career where he has always advocated for renewable energy and shared our vision of a zero-carbon Irish energy system.

Meet some of our exhibitors

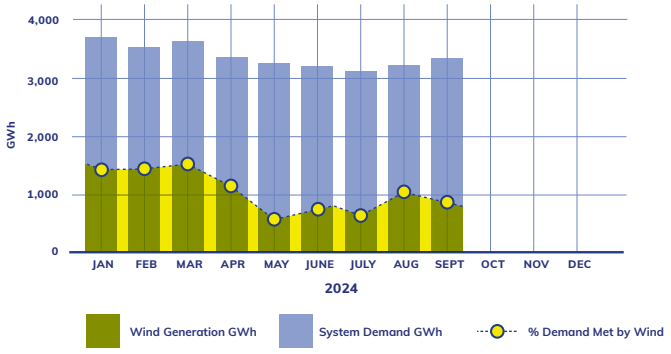
SEPTEMBER WIND ENERGY REPORT 2024

WIND ENERGY IRELAND

3% Solar & Other Renewables

WIND ENERGY PROVIDED 28% OF IRELAND'S ELECTRICITY IN SEPTEMBER 2024.

WIND GENERATION + DEMAND MET BY WIND 2024



WIND ENERGY CUTS THE PRICE OF WHOLESALE ELECTRICITY.

Average Price of Electricity in Ireland in Septemer 2024:

€112.73

PER MEGAWATT HOUR

In September 2024 the Average Price of Electricity on the days with:

MOST WIND ENERGY

€86.35

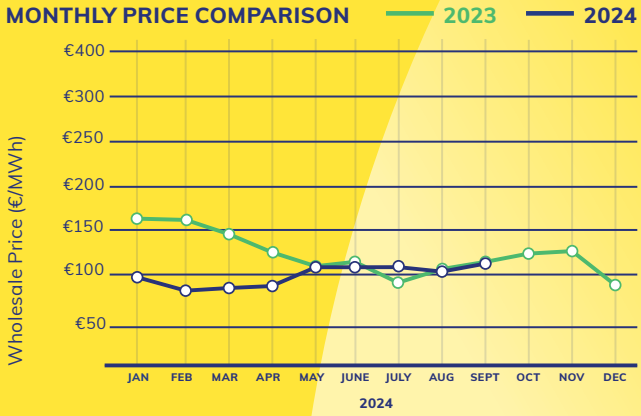
PER MEGAWATT HOUR

LEAST WIND ENERGY

€135.64

PER MEGAWATT HOUR

MONTHLY PRICE COMPARISON



Top 5 counties for wind power generation in September 2024

1	2	3	3	4
Kerry	Cork	Tipperary	Galway	Mayo
108 GWh of wind power generated	107 GWh of wind power generated	66 GWh of wind power generated	66 GWh of wind power generated	56 GWh of wind power generated
11.8% of Ireland's wind power	11.7% of Ireland's wind power	7% of Ireland's wind power	7% of Ireland's wind power	6% of Ireland's wind power

32% of Ireland's power came from wind farms in the first nine months of this year.

THIRD BEST ever September for wind energy in Ireland.

KERRY produced more wind energy than any other county.

909 gigawatt-hours (GWh) of wind energy generated last month.

References:

Generation provided by MullanGrid based on EirGrid's SCADA data which may change slightly as additional metred data is confirmed. Market data provided by ElectroRoute.

Solar, other renewable and county-level wind generation data provided by Green Collective.

A megawatt-hour (MWh) is a unit of electricity. A normal Irish household will use approximately 4.6 megawatt-hours of electricity in a single year. A 3 MW turbine producing electricity at maximum capacity for an hour will produce 3 megawatt-hours. A gigawatt-hour (GWh) is 1,000 MWh.

WIND ENERGY IRELAND

www.windenergyireland.com

K2 Management

YOUR GLOBAL TECHNICAL PARTNER FOR RENEWABLE ENERGY PROJECTS

Sharing our global expertise to **power Ireland's renewable future**

Success for Irish Renewables in RESS 4

By Marcos Byrne, Policy Manager, Wind Energy Ireland

The Renewable Energy Support Scheme (RESS) 4 results have recently been announced in Ireland, marking a significant milestone in the country's efforts to enhance its renewable energy capacity. **Marcos Byrne, Policy Manager at Wind Energy Ireland,** looks at the results and how future auctions might improve.

This round of the scheme has attracted substantial interest from developers and will deliver 374 MW of the 4,200 MW of new onshore wind energy required by the Climate Action Plan to be in place by 2030.

The auction results show that 1,146 GWh of wind energy were successful alongside 925 GWh of solar energy indicating a strong pipeline for new wind farms, reflecting the commitment of industry to meeting the 2030 targets.

What is the Renewable Electricity Support Scheme?

The Renewable Electricity Support Scheme (RESS) is a key Government policy to deliver the Climate Action Plan. RESS 4 was the fourth onshore auction under the scheme and was open to onshore wind and solar energy projects. Under the RESS wind and solar energy projects compete against each other to win contracts to provide electricity at a guaranteed price for up to 16.5 years.

What went right in the auction?

There were several changes introduced for RESS 4 to increase the volume of projects entering the auction. These changes were all positively received by industry.

1. Relief Events: The introduction of Relief Events for Operator and Judicial Review delays in RESS 4 is a positive development. This provision mitigates risks from the System Operator's failure to deliver necessary grid reinforcements or grant outages for connection work within the contracted delivery period. It also addresses delays from third-party Judicial Review proceedings. These measures help lower auction prices by enabling more projects to participate, increasing competition and driving down costs.

2. Indexation: RESS 1 and RESS 2 auctions had no index-linking, while RESS 3 introduced partial indexation, which, despite being less favourable than for offshore auctions, helped keep prices from rising further. It is encouraging that this provision was maintained for RESS 4.

3. Extended Longstop Date: The RESS 4 Longstop date for project completion is set for the end of 2029, about 18 months longer than previous auctions. This extension allows around five years from the Letter of Offer to the Longstop date, providing valuable certainty for projects, especially given current supply chain challenges in the energy sector.

4. Curtailment: The Government's introduction of Unrealised Available Energy Compensation in RESS 3 mitigates the revenue loss risk for wind and solar farms due to grid curtailments. This significant move allows projects to bid lower. Expanding this provision to cover network constraints would further help reduce bids amid increasing dispatch down levels.

What should improve for future auctions?

While RESS 4 saw some positive changes made, WEI still believes more can be done to further improve conditions for future auctions, and thus attract more volume into the auctions.

1. Duration of the contract: The RESS 4 contract is for a maximum of 16.5 years, compared to the 20-year contract offered to offshore projects in ORESS 1. A longer contract duration significantly lowers the risk for investors and allows developers to secure financing at better rates. By not offering 20-year contracts in RESS 4, projects are compelled to submit higher bids.

2. Apply full indexation: The current provision should be expanded in future onshore RESS auctions to include 100% protection during the operational phase.

3.Constraints and Lack of Grid Capacity:

The Unrealised Available Energy Compensation provision does not currently address the high grid constraint risks due to limited network capacity. Many eligible wind farm projects opted out of the auction because they were uncertain about connecting by the end of 2029. Others refrained from bidding below the price cap due to constraint risks. To optimise renewable generation development at the lowest cost to consumers, this risk should be managed by the System Operator. Properly mitigating network constraint risks in future RESS terms could lead to additional savings.

4. Price cap: The Government set the price cap at €93.50 for wind energy (€110 for solar), preventing many wind projects from competing unless they bid below the cap. Some projects withdrew from the RESS process upon the cap's announcement, reducing the available renewable energy in the auction.

RESS Auction	Successful Wind Projects	Successful Solar Projects
RESS 1	480 MW	800 MW
RESS 2	414 MW	1,530 MW
RESS 3	148 MW	498 MW
RESS 4	374 MW	960 MW

Port of Cork
investment a big boost for offshore wind

The recent partnership announcement between the Port of Cork and the Ireland Strategic Investment Fund (ISIF) will accelerate the deployment of Ireland's first offshore wind projects.

It will support the development of new port infrastructure in Cork Harbour which will accelerate ORE development on the east and south coast for 2030 and beyond.

It commits to €88.5 million in funding by ISIF and brings certainty to the construction of additional facilities at the Cork Container Terminal. It means Cork will become the first port in the state capable of hosting the large-scale storage and assembly requirements of offshore wind projects.

In addition, the investment will also help realise the ambitious plans of the Port of Cork's MasterPlan 2050 to develop multi-purpose berths in Ringaskiddy to accommodate a larger volume of vessels, while increasing throughput efficiency and ability to serve a broader range of international customers.

Donal Crowley, Interim CEO Port of Cork Company, warmly welcomed the investment.

"At the Port of Cork we have a proud centuries old heritage of connecting Cork to global markets and through this partnership, we can secure our position as a leading global multi-purpose port into the next century, he said.

"We now have the vital funding required to accelerate the build out of further quay infrastructure to support offshore renewable energy and in turn help Ireland reach imminent 2030 climate targets and beyond."

Donal Murphy, Senior Investment Specialist, ISIF, highlighted the role the investment will play in supporting the fund's key strategic objectives.

"Climate action is one of ISIF's four key investment themes and this is further proof of our commitment to renewable energy and our capacity to deploy significant capital in this way," he said.

"It will bring us closer to our stated ambition of deploying €1 billion in climate action projects over a five-year period and we are well placed to exceed this figure some two years ahead of schedule.

"We're delighted to partner once again with Port of Cork, building on our previous €18 million investment and deepening our relationship with a strong business that provides a critical piece of national infrastructure."

The total investment required is in excess of €100 million and the project will be co-funded by the European Union as part of the Connecting Europe Facility (CEF) Transport programme. ISIF's investment includes a construction working capital facility and the Port of Cork Company itself is also investing in the project.

"This agreement marks a significant step forward in our commitment to sustainable energy and economic growth," concluded **Minister for Environment, Climate and Communications Eamon Ryan TD**, "and it is the first step in positioning Ireland as a leader in the renewable energy sector as we work towards our 2030 renewable energy targets."

Skillnet Offshore Wind Academy

Creating a strong offshore skills network for Ireland

Earlier this year we launched *Building our Potential: Ireland's Offshore Wind Skills and Talent Needs* report (produced for Green Tech Skillnet by BVG Associates). It highlighted the significant economic potential of the offshore wind energy industry to Ireland. It also pointed out the critical need for skills development now to maximise the benefits from this substantial investment.

It reinforced the importance of a Focused Skills Development Fund to ensure that Irish workers and businesses can capitalise on the opportunities around achieving Ireland's 2050 offshore wind energy targets - estimated to be worth at least €38 billion to the Irish economy.

The report emphasises the need for a larger workforce in the offshore wind energy industry to achieve the targets set by the Government. It also highlights the potential for employment opportunities through targeted investment in upskilling and retraining, particularly in parallel industries with transferable skills to wind energy development, such as marine and engineering.

Taoiseach Simon Harris and Minister Eamon Ryan expressed strong support for the findings of the report, the considerable economic and social benefits and the importance of developing green skills and green jobs as a top priority.

The report sets out several key recommendations, these include:

- Establishing a Focussed Skills Development Fund for targeted investment in training partnerships and third-level education.
- Attracting workers from abroad to plug short-term skills shortages.
- Building expert knowledge in transmission systems to address the severe skills shortage in electrical system expertise.

Wind Energy Ireland and Skillnet Ireland have secured dedicated funding for developing skills in the offshore wind sector.

We are proud to announce the launch of our new initiative, the Skillnet Offshore Wind Academy, which will offer micro-credentials in response to the skills needs identified in the Offshore Wind Skills Action Plan 2024.

The programmes available include:

1. **Environmental Impact Assessment for Marine Renewable Energy Developments in partnership with University of Galway.**

2. **Certificate in Metocean for Offshore Wind Energy in collaboration with University College Cork.**

The talent development initiatives play a crucial role in meeting the targets outlined in Ireland's 2030 Climate Action Plan. By addressing the skills challenges and workforce capacity requirements in the offshore wind energy sector, this scheme directly aligns with the country's goals to increase renewable energy capacity, reduce greenhouse gas emissions, and transition to a low-carbon economy.

As part of the 2030 climate action plan Ireland has committed to significantly increasing its renewable energy capacity, with a particular focus on offshore wind. The talent bridging scheme will contribute to this goal by ensuring that the industry has a skilled and qualified workforce to support the development, construction, and operation of offshore wind farms. By targeting mid-career professionals and providing them with the necessary skills and knowledge to transition into the offshore wind sector, the scheme will help meet the demand for skilled workers in this rapidly growing industry.

If you are interested in learning more about the initiative and our upcoming programmes, visit our stand at the Wind Energy Ireland Trade Show or email mark.ruane@windenergyireland.com.

Build our Grid

A Reinforced Grid = more available clean electricity

More and more, Irish wind farms are being forced to turn off because the country's electricity grid is increasingly **constrained.**

Ireland's electricity grid is under pressure, a lot of it. It was built for a twentieth century system using a handful of fossil fuel generators. Now, thanks to wind and solar energy, we have hundreds of clean sources of electricity feeding onto the grid. On a windy day, there might be no problem producing lots of electricity, there's just no way to transport it to where it can be used. Without a reliable way to transport that electricity, some of it – an increasingly large amount of it – will be wasted.

These bottlenecks are particularly severe in areas with high renewable energy production, such as the west, south-west and north-west of the country. As our result, we are losing energy, producing higher than necessary carbon emissions and importing more and more gas to replace the lost renewable energy.

We believe there are several hundred MW of onshore wind energy with full planning permission which are simply financially unviable when local constraint levels are so high.

Wind Energy Ireland has worked with MullanGrid to track annual constraint levels in Ireland since 2016 and we found that constraint levels in the north-west, for example, have risen from 2.3 per cent in 2016 to 11.4 per cent in 2023. In the west, it has risen from 0.3 per cent to 8.8 per cent while in the North we are seeing the highest levels of constraints going from 2.3 per cent to 14.6 per cent.

On the other hand, the south-west of Ireland is seeing a success story. The region, which generates some of the highest wind power in the country, faced significant constraints, peaking at 7.3% in 2020. However, after reinforcing the electricity grid, the constraints have fallen to 2.3%. Through the variety of efforts to upgrade and construct the power grid, the south-west now has one of the strongest electricity grids in Ireland.

Similar upgrades are urgently needed across the country, particularly in counties such as Mayo and Donegal. Key projects such as the proposed North Connacht 110 kV cable and the North-South Interconnector are essential to strengthen Ireland's grid.

Strengthening the grid is crucial, and we must do everything we can to see it happen.

Visit buildourgrid.ie to read more and support the campaign.

Welcome for Ireland's First Designated Maritime Area Plan (DMAP)

By Caoimhe McCarthy, Policy Manager, WEI

Adoption of the DMAP

The South Coast Designated Maritime Area Plan (SC-DMAP) is the first sub-national marine spatial plan for Ireland. It passed through both houses of the Oireachtas without opposition in October, in a landmark moment for the State and for the future development of Offshore Renewable Energy (ORE).

The South Coast DMAP represents the first State prepared spatial plan for renewable energy on land or sea and was developed following multiple rounds of intensive public consultation and engagement by the Department of Environment, Climate and Communications. This brought a wide range of stakeholders, including local communities, environmental groups and the fishing industry across the south and south-east, into the process.

This plan includes a suite of associated policy objectives (consistent with the National Marine Planning Framework and Maritime Area Planning Act). It will help ensure the benefits from our offshore wind revolution stay in Ireland, creating Irish jobs and supporting local businesses and communities around the country - while also supporting Ireland in delivering on our ambitious climate targets out beyond 2030.

What this means for ORE development

This first DMAP off Ireland's south coast has identified 4 development sites within the wider geographical area (Sites A-D as set out in the finalised Plan) with a total potential capacity for over 5 GW of future ORE, including Tonn Nua (Site A), the site for Ireland's second offshore auction (ORESS 2.1) through the Renewable Electricity Support Scheme.

This auction is due to take place in early 2025 and will award the auction winner a contract to develop and build a 900 MW offshore wind farm, to be completed in the early 2030s.

The Tonn Nua project will follow Ireland's six Phase 1 offshore wind projects which entered the first offshore auction (ORESS 1) in 2023, 4 of whom were successful, 3 on the east, and 1 off the west coast.

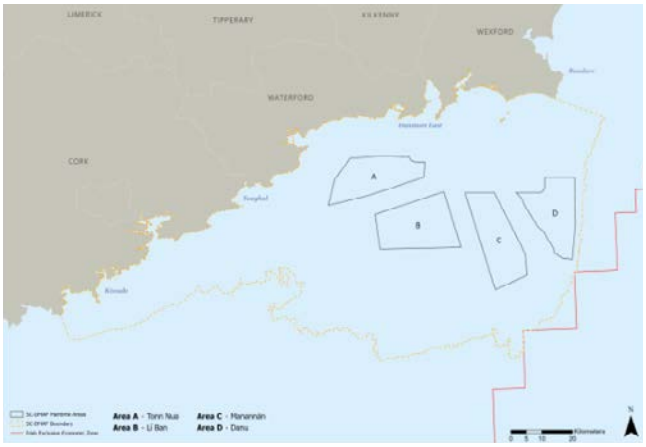
The remaining 2 projects, both located on the east coast, are progressing with alternative routes to market, with all 6 projects entering the planning system this year, seeking to build out by the end of the decade. Ensuring their delivery will be critical to building the supply chain and paving the way for future projects as well as laying the foundations for Irish energy independence.

What next?

With the plans currently being finalised for the Tonn Nua auction to take place in 2025, Government and the ORE industry must continue to work together and turn our attention towards maximising the potential of the wider geographic area of the SC-DMAP.

Also needed, and urgently, is a detailed roadmap for the identification and development of future DMAPs around the coast of Ireland.

This is essential to create a transparent and robust pipeline of future development opportunities for both fixed and floating wind which will be needed to enable Ireland to deliver 20 GW of offshore wind for 2040 and, ultimately, building to at least 37 GW by 2050.



Green Tech Skillnet

Micro-credentials

Unlocking Innovation with Green Tech Skillnet Micro-credentials

In 2024, Green Tech Skillnet received funding from Skillnet Ireland's Future Dynamics Co-Creation Stream to foster innovation and business transformation. Partnering with universities and industry through our Skills Advisory Groups, we develop accredited, cutting-edge programmes tailored to modern workforce needs across sectors like marine, environmental, HV/Energy Storage, and Wind Turbine Technology.

The Power of Micro Credentials

Our micro-credentials offer accredited upskilling and reskilling in high-demand areas. These stand-alone stackable qualifications, recognised internationally through ECTS credits, allow you to learn at your own pace and progress towards larger qualifications like diplomas or master's degrees in related fields. We've partnered with leading institutions—SETU, Atlantic Technological University, University of Limerick, and University College Dublin—to deliver practical, industry-focused programmes.

Ollscoil Teicneolaíochta an Atlantaigh
Atlantic Technological University

University of Limerick
Ollscoil Luimnigh

SETU
Ollscoil Teicneolaíochta an Oirdheiscirt
South East Technological University

UCD Dublin

Current FD – Co-Creation Programmes Include:

October '24	Environmental Impact Assessments for Onshore Wind Farms
October '24	Electrical Grid Engineering, Analysis and Modelling
January '25	Diploma in Renewable Energy Systems
January '25	Transformative Energy Production and the Path to Decarbonisation
January '25	Fundamentals of Modern Energy Storage Solutions
January '25	Power Systems Dynamics and Control
January '25	Energy Economics and Policy

Get Involved

Help shape the future of renewable energy and sustainability.
Join our **Skills Advisory Groups** or propose new initiatives.
Contact **jeanette.gill@windenergyireland.com** to learn more.

Universities are also encouraged to propose courses addressing industry skill gaps.

Green Tech Skillnet is co-funded by Skillnet Ireland and network companies. Skillnet Ireland is funded from the National Training Fund and the European Union through the Department of Further and Higher Education, Research, Innovation and Science.

Skillnet Ireland

Rialtas na hÉireann
Government of Ireland

Co-funded by the European Union

Green Tech Skillnet

Skills CONNECT
Reskilling Through Enterprise

A New Career in Renewable Energy Awaits

In 2021, Green Tech Skillnet developed the innovative Skills Connect training and work placement programmes aimed at helping jobseekers transition into the energy sector. These programmes earned the Learning and Development Institute award for Best Talent Development Initiative in 2022.

Work in Renewables

The **Work in Renewables** programme delivers a wide array of training covering the lifecycle of a wind farm, an overview of onshore and offshore wind; renewable energy grid, policy, planning, markets; community engagement, and environmental impact management. The graduates of the Work in Renewables programme also obtain certification in the fundamentals of asset management for wind farms for ISO 55001 standards.

Programme Outline

Personal Development Coaching
CV Development and Competency Interviews
Workplace Resilience
Communication and Interpersonal Effectiveness
Introduction to Terminology & Foundational Understanding
Industry Introduction to Onshore and Offshore Wind
Lifecycle of a Wind Farm
Introduction to Asset Management
Workshop with Industry Experts
Bespoke and In-depth Industry Overview Modules
Electricity Grid Policy for Renewables
Electricity Market Policy for Renewables
Planning Systems for Renewable Energy
Offshore Wind
Communications and Public Affairs in Ireland
Biodiversity and Environmental Management

Wind Turbine Technician

The **Wind Turbine Technician** programme delivers a suite of Global Wind Organisation (GWO) safety and technical certified training, wind sector overview and personal development skills workshops. Technicians obtain the GWO certificates required to go out on site after training.

Programme Outline

Personal Development Coaching
CV and Interview Skills
Effective Communication and Resilience in the Workplace
Introduction to Terminology & Foundational Understanding
Turbine Awareness Training
Workshop with Technicians Working in the Industry and Industry Experts
Globally Recognised Certified Health & Safety and Technical Training
GWO Basic Safety Training (BST)
GWO Basic Technical Training (BTT)
GWO Advanced Rescue, Hub, Spinner, and Inside Blade Rescue (ART-H)
Wind Turbine Safety Rules (WTSR)
Slinger Signaller
Enhanced First Aid

Solar PV Installer

The Irish solar industry is booming, and the demand for skilled **Solar PV Installers** is rapidly growing. Employers are struggling to fill these roles due to a lack of available skilled candidates. This programme is aimed at addressing this acute skills shortage, while providing learners with the opportunity to build a meaningful and durable career. The bootcamp is a 6-week programme, completed in person and online.

Programme Outline

Personal Development Coaching
Teamwork Skills and Personal Responsibility
Adaptability and Proactiveness
CV Development and Mock Interviews
Support with Job Search and Application
Solar PV Installation
Solar PV Technology and System Components
Performance Factors and Efficiency
Installation Planning and Regulations
Installation Techniques and Maintenance
System Design, Testing, and Feasibility Studies
Health and Safety
Working at Heights
Manual Handling

Interested in hosting an intern or a technician?

CVs are available on request. We can also facilitate an introductory meeting or interview with candidates in advance of the work placement starting to ensure best fit. Please contact **skillnetconnect@windenergyireland.com**

Best Talent Development Initiative Winner 2022

Green Tech Skillnet is co-funded by Skillnet Ireland and network companies. Skillnet Ireland is funded from the National Training Fund and the European Union through the Department of Further and Higher Education, Research, Innovation and Science.

Skillnet IRELAND

Rialtas na hÉireann
Government of Ireland

Co-funded by the European Union

Government Publishes Electricity Storage Policy for Ireland

By Bobby Smith,
Head of Energy Storage Ireland

In July the Government launched the first ever national policy for energy storage in Ireland. As called out by Eamon Ryan TD, Minister for the Environment, Climate and Communications - "it is vital that Ireland exploits the full potential of electricity storage, and the publication of this policy framework is an important step to achieving this goal."

The policy makes a strong push for immediately investing in electricity storage to help meet 2030 targets while also starting to develop future 2030-2040 storage needs and achieving a zero-carbon power system.

Here are our main takeaways:

- The policy rightly takes a technology neutral approach to energy storage technologies. The Government supports the potential for a portfolio of electricity storage technologies to be incorporated into the grid system based on system needs and the capacity to meet established minimal grid requirements, technical standard thresholds, and lower emission targets.

- The policy actions the immediate incorporation, through an initial procurement round with a guide volume of 500 MW, of long duration storage (4+ hours duration) onto the transmission system in order to address specific 2030 system needs identified by EirGrid. This is to be progressed in 2024/2025 with the potential for subsequent procurement rounds of up to 500 MW each, pending ongoing reviews by EirGrid and the Commission for Regulation of Utilities (CRU).

- This procurement is separate to the Demand Flexibility Product procurement process, which is expected to incorporate up to 500 MW of demand flexibility products onto the distribution system, including energy storage. The Government fully supports this procurement process and further updates from ESB Networks and the CRU are due on the procurement in the coming months.

- The policy kicks off work on electricity storage requirements for 2030-2040 with a 'quantity' analysis to be undertaken which will establish Ireland's optimal long-duration storage needs. Alongside this will be a 'financial' analysis to assess any revenue gaps and identify the necessary market mechanisms to support investment. A route to market for the identified optimum (long duration) electricity storage requirements for 2030-2040 is to be in place before the end of 2028.

- Introduces an emerging technology sandbox to support both system operators to identify and pilot emerging electricity storage technology and / or processes potentially capable of incorporation onto the grid network. The details of this mechanism are still to be decided but we expect it will be in the form of funding support to enable nascent storage technologies to connect to the system and demonstrate their capability.

Overall, it is great to see the support from Government for energy storage in Ireland and the policy provides a strong foundation for us to build on in the coming years. **We are really excited about the new market mechanisms to support the development of long-duration energy storage, something which industry has been calling for, and this is an area where ESI will be heavily engaged in the next few months.** With these schemes underway the aim is to see long-duration storage technologies connected and operating on the Irish grid before the end of the decade. These technologies will play a key role in balancing our renewable energy supply, reducing carbon emissions and ensuring security of supply.

For more information on the work of Energy Storage Ireland contact info@energystorageireland.com **or visit** www.energystorageireland.com

Biodiversity and onshore wind farms – Nature+Energy

By Emma King, project manager for the Nature+Energy project, School of Natural Sciences, Trinity College Dublin.

1. What is the Nature+Energy project

The Nature+Energy project is a 4-year project which began in 2021. It is a collaboration between academia and industry, focused on developing the tools needed to optimise land management and the delivery of biodiversity benefits from onshore wind farms.

It uses a natural capital accounting approach. This is a method of measuring ecosystem services in a standardised and reportable format. Its application on wind farms allows us to report on the capacity of the habitat's surrounding turbines to support biodiversity and highlight areas that could benefit from management.

2. Why is it important for wind farms?

The goal of the project is to maximise the positive impact of wind farms while mitigating any negative effects. It is important that we learn more about the opportunities for wildlife in the land surrounding wind turbines.

3. How have the project's environmental monitoring system trials been progressing?

We have collected over 5,000 hours of acoustic data (up to 20kHz, human hearing range) and 1,000 hours of ultrasonic data (up to 256 kHz) so far. Using both existing machine learning models and custom-trained models on our own data and datasets sourced online, we classify bird species present in acoustic sound clips.

After exploring various methods to improve classifier accuracy, we have achieved 88% accuracy across 27 bird species. The final model will need to scale to around 200 species to cover most of the bird species found in Ireland.

We also recently deployed recorders at three different sites and collected a significant amount of ultrasonic (bat) data. We are building a machine learning classifier for this data, similar to the bird detector, though much fewer bat species (~9) are present in the country.

4. Tell me more about the Sectoral Biodiversity Action Plan – and what will it provide to the wind industry?

The Sectoral Biodiversity Action Plan, built on learnings from the project, will provide a comprehensive set of guidelines on feasible actions for biodiversity that can be implemented on wind farms. Actions will cover a range of habitats and showcase methods the industry can use to go beyond to benefit biodiversity.

5. What are the key takeaway messages from the Nature+Energy project?

Collaboration is key to delivering biodiversity benefits at windfarms, and taking advantage of a range of expertise is needed to develop win-win scenarios for biodiversity and wind energy. We must continue to work together to build on our knowledge of potential impacts and make sure we have plans in place to mitigate, protect, and enhance biodiversity, leading to win-win scenarios for both climate and biodiversity.

6. What changes do you hope to see taking place in Ireland as a result of your team's research?

Increased uptake of positive actions for biodiversity going beyond what is required. Providing tools to the industry, we hope to help them to find more targeted ways to benefit biodiversity on land under their management.

7. Why are wind farms good locations for nature projects in general?

Our surveys have demonstrated the vast variety of habitats, flora and fauna found across wind farms in Ireland, and we have been lucky to see and record the beauty of Ireland's wildlife, from bees, to mammals, soaring birds, and a host of plant species. Installation of the turbines can create heterogeneity and pockets of new habitats thriving with life. Wind farms support important research on surveying and monitoring their surroundings, developing a broader understanding of Ireland's ecosystems both within the direct vicinity of the turbines and also surrounding areas. They also can support the implementation of management and conservation actions, increasing habitats and resources available to our native flora and fauna.

Find out more about the project here: **https://www.marei.ie/project/natureenergy/**

Working through planning challenges on the road ahead

By Donal O'Sullivan, VP for Development & Offshore, Statkraft Ireland

Every day takes us a step closer to 2030 and the ambitious targets laid out in the Climate Action Plan. Companies like Statkraft are driving Ireland's energy transition, rolling out the renewable projects that will enable the country to achieve its goals.

Between the targets set out by the Government and our own plans to deliver 3 GW of renewable energy by the end of the decade, now is the time to harness every megawatt of green energy from Ireland's own natural resources.
Since 2018, when Statkraft first entered the Irish market, our onshore wind development has continued to grow. Once we have completed our 56 MW Cushaling Wind Project next year, we will have delivered 200 MW of onshore wind energy to the grid. We have already built two grid-scale batteries, while work on our third – Ireland's first four-hour battery – is underway.

We are also leading the way with solar, having built more than 320 MW of solar projects and with two more projects totalling 210 MW under construction.

Our ambitions for offshore are high too; earlier this year, our 500 MW NISA project – which is being developed in partnership with Copenhagen Infrastructure Partners – became Ireland's first offshore wind farm with a route to market to apply for planning permission.

Backbone

Yet onshore wind has always been the backbone of Ireland's energy transition. Today, there are nearly 400 wind farms across the island – a reflection of the expertise developed over the past three decades. Onshore wind remains the most cost-effective form of renewables in Ireland.

However, as the need for the speedier rollout of more onshore wind continues to rise, so too does the number of projects being rejected by the planning authority. The Government has set a 9 GW target of onshore wind for 2030. On that basis, 860 MW of onshore projects should have been granted planning permission in the first half of this year. Just one quarter of that target was approved.

These are the findings of a Wind Energy Ireland report published in July, which also revealed that 8 projects totalling 459 MW were also rejected. Moreover, thirty proposed wind farms with an estimated capacity of 1,766 MW were still awaiting decision from An Bord Pleanála in June.

The same report also revealed that efforts by county councils to zone land to prevent the development of wind energy are fuelling the rising number of projects rejected. This includes cases where councils changed the zoning of the land to prevent a wind farm from being built either after it was announced, or a planning application had been submitted.

Overcoming challenges

This is a challenge – but it is one that can be overcome. To maintain our current pace of development and meet our targets, we need timely permissions and a strong commitment to climate action from local authorities and An Bord Pleanála. For this, it is important that the planning authorities, including An Bord Pleanála, use their discretion to overrule County Development Plans where it is clear that a scientific plan-led approach to zoning areas has not been used.

We are hopeful that the recently passed Planning and Development Act will deal with some of these challenges head on. Robust and transparent planning decision-making is vital, and there must be a more courageous approach taken to building renewable energy projects.

We have the technologies, policies, expertise and natural resources – but it will take collaboration and cooperation between the renewable energy sector, the Government and State bodies to reach our 2030 goals.

Working together to accelerate the deployment of renewable energy projects, therefore, is the only way we will reach our destination with time to spare. The end of the decade is closer than we realise.

We brought a fresh breeze to a sunny Ploughing Championship

Wind Energy Ireland was at the Ploughing Championship event in Rathineska County Laois in September for the second year running. Attracting almost quarter of a million attendees over the three days, it was an excellent opportunity to talk to thousands of people who live and work in rural Ireland. People were keen to take away our #windenergy branded merchandise and learn more about wind energy.

The most common questions across the three days included the topics of domestic wind turbines and micro generation. There was also keen interest from landowners looking to engage with developers around leasing land for larger wind turbines.

Where people see a way to moderate their electricity costs or bring in an income from wind energy they were very open to embracing wind.

WIND ENERGY IRELAND

Wind Energy
TRADE SHOW 2024

NORDEX

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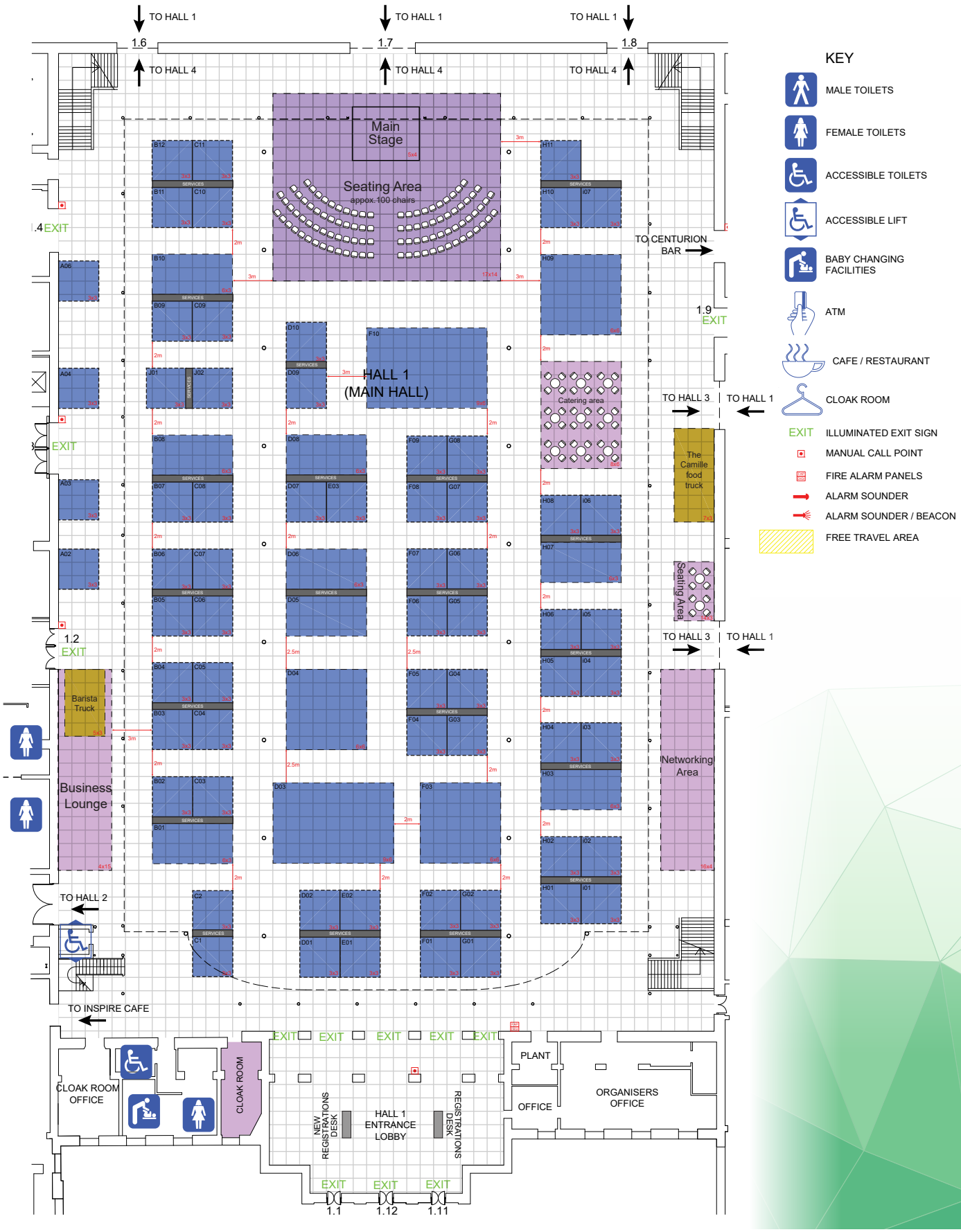
Full Floor Plan Overleaf


TO HALL 1
TO HALL 1
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1.6
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1.8
TO HALL 4
TO HALL 4
TO HALL 4
Main Stage
Seating Area
appox 100 chairs
HALL 1
(MAIN HALL)
Catering area
TO CENTURION BAR
1.9
EXIT
TO HALL 3
TO HALL 1
The Camille food truck
Seating Area
TO HALL 3
TO HALL 1
1.4 EXIT
EXIT
1.2
EXIT
Barista Truck
Business Lounge
Networking Area
TO HALL 2
TO INSPIRE CAFE
EXIT
EXIT
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EXIT
CLOAK ROOM OFFICE
CLOAK ROOM
NEW REGISTRATIONS DESK
HALL 1 ENTRANCE LOBBY
REGISTRATIONS DESK
PLANT
OFFICE
ORGANISERS OFFICE
EXIT
EXIT
EXIT
1.1
1.12
1.11
KEY
MALE TOILETS
FEMALE TOILETS
ACCESSIBLE TOILETS
ACCESSIBLE LIFT
BABY CHANGING FACILITIES
ATM
CAFE / RESTAURANT
CLOAK ROOM
EXIT ILLUMINATED EXIT SIGN
MANUAL CALL POINT
FIRE ALARM PANELS
ALARM SOUNDER
ALARM SOUNDER / BEACON
FREE TRAVEL AREA

EXHIBITORS 2024

Stand No.	Company
A02	HSI Skillko
A03	Erova Energy Ltd
A04	RSK Ireland Ltd
A06	EirGrid
B01	Nordex Energy Ireland
B02	Kerry Education and Training Board
B03	Corio Generation
B04	SECAD
B05	Brandon Agencies
B06	KytePower Tech
B07	Turner & Townsend
B08	Wind Energy Ireland
B09	Jambo
B10	Ganz Transformers and Electric Rotating Machines Ltd
B11	ERM
B12	H&MV Engineering
Business Lounge	IDA Ireland
C01	Ocean Crest Marine
C02	ASL Safety
C03	Renewable UK
C04	British Embassy Dublin
C05	AFRY
C06	Kavanagh Crane Hire Ltd
C07	University of Limerick
C08	RS Ireland
C09	Gabriel O'Brien Crane Hire LTD
C10	MKO
C11	Wind Turbine Engineering
D01	Kudo Software
D02	Centre for Robotics & Intelligent Systems (CRIS - UL)
D03	RWE
D04	Government of Ireland
D04	Department of Transport
D04	Department of Further and Higher Education
D04	Department of Further and Higher Education, Research, Innovation and Science
D04	Department of Enterprise, Trade and Employment
D04	Maritime Area Regulatory Authority
D04	Marine Institute
D05	RPS, A Tetra Tech Company
D06	Statkraft
D07	ARCH Safety
D08	ESB Networks
D09	Global Maritime
D10	Munster Drone Services
E01	Skillnet Offshore Wind Academy
E02	Atlantas Marine
E03	Suir Engineering
F01	GreenTech Skillnet
F02	Sustainable Energy Authority of Ireland
F03	Blåkläder Workwear
F04	EnergyPro Asset Management
F05	Green Rebel

Stand No.	Company
F06	Ayesa
F07	DigiWind
F08	Cornwall Insight
F09	TLI Group
F10	Netherlands Lounge by Holland Home of Wind
F10	GustoMSC
F10	HSM Offshore Energy B.V.
F10	INGEO2
F10	IQIP
F10	Lobster Robotics
F10	Mammoet Europe B.V.
F10	N-Sea
F10	TNO, the Netherlands Organisation for applied scientific research
G01	GreenTech Skillnet
G02	Amplitude Acoustics Limited
G03	Anecto
G04	BrightWind Ltd
G05	DH Renewables
G06	ARMSA Academy
G07	Jones Engineering
G08	Tranemo Advanced Workwear
H01	Energy Storage Ireland
H02	NeoDyne
H03	Gas Networks Ireland
H04	AlphaMarine/UltraBeam
H05	AiBridges
H06	SafetyOn
H07	National Maritime College of Ireland
H08	Adman Civil Projects Limited
H09	Belgium (Flanders Investment and Trade) Pavilion
H09	24SEA
H09	BLUE CLUSTER
H09	DEME
H09	E-BO ENTERPRISES
H09	GEO XYZ
H09	JAN DE NUL
H09	MARLINKS
H09	SARENS
H09	SMULDERS
H09	ZINGAMETALL
H10	Snickers Workwear
H11	Neo Environmental
i01	Obelisk
i02	Killybegs Marine Cluster
i03	Petzl
i04	University College Cork
i05	Naue Geosynthetics Ltd
i06	EMR Integrated Solutions
i07	La Tene Maps
J01	T-shore Centre of Vocational Excellence Ireland
J02	WEI Research Projects

Work in wind
Graduate Q&A

Your name, age and location?
My name Is Robert Murphy, I am 29 years old and I live in Co. Wexford.

What did you study in college / what was your route into your current job?
I studied Sustainable Energy Engineering at WIT. After graduating, I began my career as a project engineer in the construction industry. I then transitioned into the energy sector, working as a project engineer at SSE Thermal. This led to an opportunity to become a planning engineer for SSE Renewables, where I worked in Hydro in the Highlands of Scotland. Later, I moved to London to take on the role of Network Integrity Engineer with SSE. Finally, I returned to Ireland and was offered a position as an Asset Manager for EnergyPro.

What is your job now?
My responsibilities include carrying out wind turbine inspections, producing technical reports, analysing SCADA and other data to identify opportunities to increase energy output, monitoring and coordinating the operation of customers' wind farms for safe and efficient performance, and overseeing the introduction of DS3 and other additional services for wind farms.

Are there good job prospects / opportunities in your area of work?
Absolutely, there are excellent job prospects in my area of work. The renewable energy sector is rapidly growing, driven by the global shift towards sustainable energy sources. As an Asset Manager for EnergyPro, I see first hand the increasing demand for skilled professionals in various roles, from engineering and project management to data analysis and safety compliance.

What do you like about your job in wind?
What I love most about my job in the wind energy sector is the opportunity to make a positive impact on the environment. Every day, I get to contribute to the global transition to renewable energy, which is incredibly fulfilling. I also enjoy the challenges that come with optimising wind turbine performance and ensuring the safe and efficient operation of wind farms. Completing site inspections and being able to climb and inspect the turbines is particularly rewarding, as it gives me a hands-on connection to the technology.

Why did you pick this area?
I was always into engineering, as a child I would go to work with my father who was a plumber. From then I knew I wanted to get into engineering and when I was filling in my CAO form a saw the sustainable energy engineering course in WIT and I knew that's what I wanted to do and I am fortunate enough I has brought me to where I am today.

What were your interests when you were in school?
Like any kid in school my interests were playing hurling, football, soccer, going for runs, going to the beach, hanging out with friends.

What advice would you give to your 16 year old self career wise?
If I could give my 16-year-old self-career advice, I would say: Follow your passion for engineering, as it will lead you to a great career. Take every opportunity to learn, whether it's in school, playing sport, or by shadowing professionals like your father. Don't be afraid to explore different areas within engineering to find what truly excites you.

Networking is important, so build relationships with mentors, peers, and industry professionals. Stay curious and keep up with advancements in technology, especially in the renewable energy sector. Lastly, believe in yourself and your ability to make a difference.

Ireland's first wind energy job and education fair attracts 450+ students

Over 450 students from secondary schools across Wexford and Wicklow attended the first-ever wind energy job and education fair in September.

Work in Wind, Wexford showcased employers from across the industry as well as third level colleges and training providers. It was an excellent opportunity for local students to find out about the varied roles available in the industry.

Exhibitors at the event spoke to the secondary school students about the many skills gaps and offered advice for their next steps. The event was organised by Wind Energy Ireland, sponsored by SSE Renewables and promoted locally by County Wexford Chamber.

Employers exhibiting on the day included SSE, Siemens Gamesa, Enercon, Vestas, Nordex, WWETB, SETU, DKIT, DECC, ASL, Codling, Wave Dynamics, Ocean Winds, Future Energy Ireland, Energy Pro, H&MV Engineering and more.

The message to students was loud and clear - wherever you picture yourself, there's a job for you in wind.

Work in wind Graduate Q&A

Your name, age and location
My name is Órán O'Brien, I'm 25 and I'm from Castleknock, Co. Dublin.

What did you study in college / what was your route into your current job?
I studied Environmental Science & Technology for my BSc at DCU. I then went on to do a MSc in Energy Science at Trinity College Dublin. After taking some time out to travel, I joined Bord na Móna as a Graduate Engineer in May 2023.

What is your job now?
I am part of the Programme Team in the Development section of Renewable Energy. Once a project receives planning permission, my team are put in charge until it is ready to be built. We deal with diverse tasks including securing finance for the project and selecting the model of turbines that are used.

Are there good job prospects / opportunities in your area of work?
I think there is a misconception where people relate working in the wind industry to having engineering or scientific backgrounds. Although these roles are vital, there are opportunities in the wind industry for all backgrounds whether it be business, transportation or people management.

What do you like about your job in wind?
I enjoy the fact that the projects I contribute to have a positive impact on the environment and foster a more competitive and affordable electricity market for the public.

Why did you pick this area?
My decision to work in this area was driven by my belief that renewable energy sources, especially wind, are crucial for achieving climate stability and ensuring a sustainable future for us all to enjoy.

What were your interests when you were in school?
My interests in school were mainly sport related such as GAA, rugby and athletics. My favourite subjects were Geography and Irish, while I was also a member of my schools SVDP (Saint Vincent DePaul).

What advice would you give to your 16 year old self career wise?
I would advise my 16-year-old self to try and reach out to people who were studying courses taking internships or working in roles I was interested in. A lot of people would be happy to help you when making some of the tricky decisions you have coming up.

Renewable rewards for NI

By Steven Agnew, RenewableNI Director

As the voice of the renewable electricity industry in Northern Ireland, RenewableNI is driving policy changes and fostering collaboration within the industry to accelerate the transition to clean, sustainable energy.

RenewableNI members are business leaders, technology innovators and expert thinkers from right across the industry. Working with our members we engage, educate and stimulate debate to increase public, political and investor support for the delivery of the net zero infrastructure NI needs.

In September we published a report showing the economic and environmental benefits of Northern Ireland's investment in renewables. The report looked at data since 2000 and forecast ahead to the NI obligation of 80 per cent renewable electricity by 2030, set in the Climate Change Act.

Renewable Rewards: How you save from the switch to renewable electricity showed consumers have saved £200m to date and that achieving the target will unlock additional savings of £110 million per year.

There has been a lot of focus on the costs of the transition to renewable electricity, without a proper assessment of the savings made by technologies which have zero fuel costs. Every wind turbine and every solar panel installed reduces consumer bills.

The cost of delivering enough new projects to meet the NI Climate Act target is greatly outweighed by the rewards. Every individual and every business stands to benefit from the savings.

Renewable Rewards revealed that between 2020 and 2023 consumers in Northern Ireland saved an average of £160 off their bills. Conducted by Baringa, the report also found the transition to renewables has avoided more than 13 million tonnes of CO_2, equal to taking a quarter of all cars off the NI roads today.

At RenewableNI's Smart Energy Conference last month, we discussed the policy reforms we need to ensure the renewable potential is achieved.

With key policy makers on the stage and in the audience, we are speaking truth to power.

What we need to see now is action.

Lagging behind in Northern Ireland

Northern Ireland has gone from leading to lagging behind. This decade only four new wind farms have become operational – a combined total of only 108 MW. To put that in perspective 400 MW was connected in 2016 when there last was a support scheme.

Northern Ireland is now lacking a renewable support scheme that our neighbours in ROI and GB are benefitting from. The Department for the Economy (DfE) is working on the design of a scheme that is scheduled to commence in early 2016. RenewableNI is working constructively with them to get this right.

While in recent years, being unique in lacking market support meant investment has been diverted away from NI, it now is a positive opportunity to learn from what has and hasn't worked.

A well designed scheme will address key factors that will de-risk investment and result in lower prices, resulting in a boom of renewable developments.

From our regular survey of our members, we know there is a significant pipeline of renewable projects just waiting on the right policy signals to hit go.

The decisions made over the next year will determine the success or failure of the 2030 target. Market support is only the first step. We need to see progress on planning policy, consenting timelines, grid investment and procurement of enabling technologies.

As RenewableNI membership grows, so does the strength of our united voice. We have been calling for an Accelerating Renewables Taskforce to tackle the barriers to meeting the 2030 target and are starting to see signs of joined up action.

It will take many hands to decarbonise energy. We can do it if we are all pulling in the same direction.

RenewableNI's Smart Energy Conference took place in Belfast (24 October) setting out the economic and environmental benefits as NI transitions to a net zero electricity system. The morning session focused on the actions required over the next 60 months needed to achieve the Climate Act obligation of 80 per cent renewable electricity by 2030. Pictured (l-r) Richard Rodgers, Department for the Economy; Tamasin Fraser, RenewableNI Chair

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Codling Fisheries Fund and Sustainable Fisheries Charter

By Courtney French, Fisheries Engagement Manager, Codling Wind Park

Codling Wind Park is the only offshore wind project in Ireland to have a dedicated in-house resource to manage the relationship between fishing activities and the project. I believe that fishers and offshore wind developers have a lot in common. Both industries want to earn a living from the sea and come back home safely. Also, in the not-too-distant future, both industries will be offshore neighbours. I strongly believe coexistence between Codling Wind Park and the fishing industry is of the upmost importance. The project appreciates that the fishing industry is a key stakeholder and that is why they employ me as their Fisheries Engagement Manager.

Through ongoing liaison with the local fishing industry and leaning on my 15 years' experience in offshore wind and fisheries, the Codling Wind Park team has developed a robust strategy to maximise the potential for coexistence. I understand it is normal for the fishing industry to feel fearful about the development of offshore wind. As a developer we understand our role as a new neighbour and that in future things will look different. However, as well as being a new neighbour we are determined to be a good neighbour. That is why Codling Wind Park has committed to a number of mitigation and good will measures to facilitate a positive relationship, such as:

- Mitigating impacts to the fishermen directly impacted by the construction activities;
- Establishing a dedicated Fisheries Fund;
- Commitment to pre and post construction monitoring for whelk (the key species in our site area);
- Regular liaison with local fishermen through our Fisheries Liaison Officers; and
- Considering fisheries diversification by investigating the feasibility of a lobster hatchery.

While the Codling Fisheries Fund is a new initiative for Ireland, similar funds have proved incredibly effective in other jurisdictions, and it is hoped this fund will be equally as beneficial to the community. The intention of the Fisheries Fund is to support opportunities to:

1. Maximise safety offshore;
2. Maximise profit;
3. Minimise expenditure; and
4. Increase sustainability of the local fishery.

I also sit on the Government supported Seafood-ORE Working Group and various subgroups to develop best practice guidelines for fisheries and ORE nationally. The group includes offshore wind developers, fishing industry representatives and State and Government agencies. It has an important role to play in building a national consensus on shared issues.

We don't all agree on everything, but we do agree that these guidelines are needed. I am happy to say there is now an understanding that if there is to be agreement there needs to be compromise on all sides. There is also an appreciation that we need to work together for the most robust outcome where fisheries and Irish ORE both sustainably coexist. This is in everyone's interest.


BE ANYTHING YOU WANT
BUT BE PART OF THE SOLUTION
#WorkInWind
WIND ENERGY IRELAND

What's the latest in wind energy research in Ireland and Europe?

By Daire Horgan, Research and Development Analyst, WEI and **Gabe Doran**, Research Communications Specialist, WEI

Did you know that Wind Energy Ireland's research team is currently working with 10 funded projects?

Our efforts span renewable energy technologies, focusing on advancing new innovations, shaping policy and building the skills needed for the future workforce. From floating offshore wind to hydrogen systems and environmental protection, we are actively contributing to Ireland's renewable energy transition.

Our EU-funded projects include ***T-shore***, which addresses the offshore wind industry's skills gap by developing training for technicians while establishing a European network of training centres, and ***Engineering Education for a Sustainable Future (EESF)***, which is focused on modernising engineering education to equip graduates with sustainability skills.

Scan for funded project

Nationally, our SEAI-funded projects are making headway in renewable technologies.

IDEA-IRL focuses on developing a roadmap for floating wind energy in Ireland, while *Spine H2* explores using surplus renewable electricity to decarbonise industrial heat demand through green hydrogen. The *RE:HARRIER* project focuses on studying various aspects of hen harrier ecology in relation to wind farms with the aim to help support sustainable wind energy practices while ensuring the conservation of this species.

AMSFLOW is developing advanced anchor and mooring solutions to optimise floating offshore wind platforms in challenging metocean conditions. *AtlanticFloat* is focused on improving the design and performance of floating wind turbines in harsh Atlantic environments and *DIFOWT (De-risking Ireland's Floating Offshore Wind Targets)* tackles key challenges related to investment in ports, vessels and workforce development to support Ireland's floating offshore wind ambitions.

Additionally, we are collaborating on *Offshore Adapt*, funded by the Marine Institute, to establish best practices for offshore wind turbine design flexibility, while the *Nature+Energy* project, funded by Taighde Éireann – Research Ireland (formerly SFI) alongside the wind industry and academic partners, explores how wind farms can contribute to land management and natural capital.

Communications and engagement

Our core role in these projects is on communication, dissemination and stakeholder engagement. We develop distinct, recognisable brands for each project, ensuring external visibility and recognition. Through our unparalleled access to industry leaders via our membership, conferences and hosted workshops, we offer a unique platform for engagement.

This access allows project partners to receive valuable industry input into their work, helping to bridge the gap

between industry and academia. With these connections we ensure that project outcomes are not only innovative but also aligned with real-world needs, delivering robust solutions that can be applied across the renewable energy sector in Ireland and Europe.

Key Highlights of 2024

One of this year's standout moments was the industry information session we hosted for T-shore, where we engaged the industry on our journey to establish the Irish Centre of Vocational Excellence (CoVE) for Offshore Wind Energy. The Offshore Conference also provided an excellent platform for our offshore projects to connect with key stakeholders and to explore future opportunities in the sector.

A conference highlight was the ***Thesis in Three*** competition, which saw three energetic presenters take to the stage to share their research in just three minutes. Congratulations to ***Glenn McNamara*** for winning this year's Thesis in Three! A huge well done to all participants, including ***Elizabeth Jarocki*** and ***Peadar Ó Rathaille***, who embraced the challenge with energy and insight. Special thanks to our research event sponsor, ***Bord na Móna | Ocean Winds Joint Venture***, for their continued support in making our event a success.

Policy-priming research remains a key focus at WEI, driven by the need to provide evidence and analysis that can influence policy development in critical areas of the Wind Energy Ireland strategy.

In 2024, in collaboration with our partners, we produced several important policy-research reports. These include the ***Cutting Carbon, Cutting Bills***, in partnership with Baringa, the ***Building our Potential: Ireland's Offshore Wind Skills and Talent Needs*** report with BVG, and ***Repowering Ireland: How we stay global leaders in onshore wind energy***, developed with MKO.

These reports play a crucial role in highlighting the challenges and opportunities that the industry faces, offering key insights for policymakers and industry leaders alike.

What's Coming Up?

As you are reading this, we are proud to announce the ***launch of the Irish CoVE for Offshore Wind Energy*** on Day 1 of the Trade Show. This marks a significant milestone in our efforts to develop vocational excellence in the sector.

Additionally, the ***DIFOWT project*** will be hosting a workshop as a side event during the Trade Show, bringing together key stakeholders to collaborate and explore policy issues aimed at mitigating risks facing Ireland's floating offshore wind industry.

In November, the T-shore project will head to Brussels for our second European event. This year, we will be entering the ***European Parliament*** to engage with key EU delegates from various commissions, departments, and agencies. Our discussions will focus on the progress we've made in establishing regional CoVEs across Europe, as well as harmonising vocational education for entry-level wind technicians.

Looking Ahead

The ***Annual Conference*** in January 2025 will feature the WEI Research Poster Room, which provides a valuable opportunity for researchers and students to showcase their work to key industry stakeholders. The Poster Room is open to all forms of research across the renewable energy landscape, making it a must-attend for anyone passionate about innovation and collaboration.

We invite anyone interested in our projects, policy work, or collaboration opportunities to reach out. Whether you're in wind energy or another area of renewable energy, our doors are open for conversations on how we can work together to advance Ireland's energy transition.

Research Manager: Dr. Sarah Kandrot
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Research & Development Analyst: Dáire Horgan
[daire.horgan@windenergyireland.com]

Research Communications Specialist: Gabe Doran
[gabe.doran@windenergyireland.com]

Scan for Poster Room Applications

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If you're interested in in-house training or a course not listed, please get in touch. We're also creating training bundles for new roles in the energy sector. To join a focus group for a specific job role, contact **Jeanette Gill** at **jeanette.gill@windenergyireland.com.**

Training Resources

Electricity Market Fundamentals for Renewables	Certificate in Industrial Instrumentation Calibration
Electricity Market Fundamentals for Heat and Transport	Micro-credential in Strategic Leadership
Grid Connection Process in Ireland	Suite of Battery Systems and Energy Storage courses
Operational Constraint and Curtailment in Ireland	Artificial Intelligence & Business Analytics
Introduction to Battery Energy Storage	Advanced Diploma in Env and Planning Law
Wind Energy as Gaeilge	Heat Pump Installer
Corporate Power Purchase Agreements	Project Management and Impactful Leadership
Certificate in Sustainability Strategy, Risk and Reporting	Diploma in Sustainability
Suite of Management courses: Diplomas in Leadership, Management, Organisational Change	Micro-credentials in Electricity Grid Operation, Engineering and Infrastructure
Environmental Essentials for Engineering Projects CPD Programme	QQI Level 6 Micro Solar Photovoltaic Systems Implementation and Electrical Installation
Certified Energy Auditor	Micro-credential in Strategic People Management
CPD Retrofitting Domestic Buildings	Micro-credential in Finance for the non-financial manager
IAM Certificate in Asset Management	Diploma in Strategy, Development and Innovation
IAM Diploma in Asset Management	Sustainability in Practice for Business
QQI Level 6 Industrial Electrical Safety and Systems	Sustainability for Business Success

We sincerely appreciate the continued support of all our member companies throughout 2024. Their dedication to upskilling employees through our training programs, championing green initiatives, and advancing Ireland's leadership in climate action is invaluable.

Green Tech Skillnet is co-funded by Skillnet Ireland and network companies. Skillnet Ireland is funded from the National Training Fund and the European Union through the Department of Further and Higher Education, Research, Innovation and Science.

Skillnet IRELAND

Rialtas na hÉireann
Government of Ireland

Co-funded by the European Union

WIND ENERGY IRELAND

2025 EVENTS

JANUARY

Annual CONFERENCE 2025

Annual Conference
16-17 January
Clayton Burlington Hotel

MAY

Offshore WIND 2025

Offshore Wind Conference
27-28 May
Clayton Burlington Hotel

APRIL

Wind EUROPE ANNUAL EVENT 2025 COPENHAGEN 8-10 APRIL

Ireland Pavilion
8-10 April
WindEurope, Copenhagen

JUNE

energy storage IRELAND Annual CONFERENCE

ESI Annual Conference
26 June
Croke Park, Dublin

OCTOBER

Wind Energy TRADE SHOW 2025

Wind Energy Trade Show
8-9 October
RDS, Dublin

NOV / DEC

WIND ENERGY IRELAND IRISH WIND INDUSTRY AWARDS

Irish Wind Industry Awards
TBC
Clontarf Castle, Dublin

Skillnet Offshore Wind Academy

Building Careers in Offshore Wind

EIA for Marine Renewable Developments

University of Galway

Commencing January '25

Offshore Wind Energy

University College Cork

Commencing January '25

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UCC University College Cork, Ireland Coláiste na hOllscoile Corcaigh

Ollscoil na Gaillimhe University of Galway

Skillnet Offshore Wind Academy is an enterprise initiative of Wind Energy Ireland. Skillnet Offshore Wind Academy is co-funded by Skillnet Ireland and participating businesses. Skillnet Ireland is funded from the National Training Fund and the European Union through the Department of Further and Higher Education, Research, Innovation and Science.

Skillnet Ireland

Rialtas na hÉireann Government of Ireland

Co-funded by the European Union

Wind lessons for Irish students big hit

Meenadreen Wind Farm in Co Donegal played host to students from St Ernan's NS recently as part of a new WindEurope education programme supported by Wind Energy Ireland and STEAM Education. The visit facilitated by Energia Group reinforced the climate action awareness lessons they have been receiving in their classrooms. I spy some Work in Wind recruits of the future!

A-Z EXHIBITORS

Company	Stand No
Adman Civil Projects Limited	H08
AFRY	C05
AiBridges	H05
AlphaMarine/UltraBeam	H04
Amplitude Acoustics Limited	G02
Anecto	G03
ARCH Safety	D07
ARMSA Academy	G06
ASL Safety	C02
Atlantas Marine	E02
Ayesa	F06
Belgium (Flanders Investment and Trade) Pavilion	H09
24SEA	H09
BLUE CLUSTER	H09
DEME	H09
E-BO ENTERPRISES	H09
GEO XYZ	H09
JAN DE NUL	H09
MARLINKS	H09
SARENS	H09
SMULDERS	H09
ZINGAMETALL	H09
Blåkläder Workwear	F03
Brandon Agencies	B05
BrightWind Ltd	G04
British Embassy Dublin	C04
Centre for Robotics & Intelligent Systems (CRIS - UL)	D02
Corio Generation	B03
Cornwall Insight	F08
DH Renewables	G05
DigiWind	F07
EirGrid	A06
EMR Integrated Solutions	i06
Energy Storage Ireland	H01
EnergyPro Asset Management	F04
ERM	B11
Erova Energy Ltd	A03
ESB Networks	D08
Gabriel O'Brien Crane Hire LTD	C09
Ganz Transformers and Electric Rotating Machines Ltd	B10
Gas Networks Ireland	H03
Global Maritime	D09
Government of Ireland	D04
Department of Transport	D04
Department of Housing	D04
Department of Further and Higher Education, Research, Innovation and Science	D04
Department of Enterprise, Trade and Employment	D04
Maritime Area Regulatory Authority	D04
Marine Institute	D04
Green Rebel	F05
GreenTech Skillnet	F01
GreenTech Skillnet	G01

A-Z EXHIBITORS

Company	Stand No
H&MV Engineering	B12
HSI Skillko	A02
Jambo	B09
Jones Engineering	G07
Kavanagh Crane Hire Ltd	C06
Kerry Education and Training Board	B02
Killybegs Marine Cluster	i02
Kudo Software	D01
KytePower Tech	B06
La Tene Maps	i07
MKO	C10
Munster Drone Services	D10
National Maritime College of Ireland	H07
Naue Geosynthetics Ltd	i05
Neo Environmental	H11
NeoDyne	H02
Netherlands Lounge by Holland Home of Wind	F10
GustoMSC	F10
HSM Offshore Energy B.V.	F10
INGEO2	F10
IQIP	F10
Lobster Robotics	F10
Mammoet Europe B.V.	F10
N-Sea	F10
TNO, the Netherlands Organisation for applied scientific research	F10
Nordex Energy Ireland	B01
Obelisk	i01
Ocean Crest Marine	C01
Petzl	i03
Renewable UK	C03
RPS, A Tetra Tech Company	D05
RS Ireland	C08
RSK Ireland Ltd	A04
RWE	D03
SafetyOn	H06
SECAD	B04
Skillnet Offshore Wind Academy	E01
Snickers Workwear	H10
Statkraft	D06
Suir Engineering	E03
Sustainable Energy Authority of Ireland	F02
TLI Group	F09
Tranemo Advanced Workwear	G08
T-shore Centre of Vocational Excellence Ireland	J01
Turner & Townsend	B07
University College Cork	i04
University of Limerick	C07
WEI Research Projects	J02
Wind Energy Ireland	B08
Wind Turbine Engineering	C11

Company name: Access Rescue Consulting at Height Ltd T/A ARCH
Contact details: Terry Devine
Phone number: +44 28 6632 6267

Access Rescue Consulting at Height Ltd T/A ARCH is a work at height training, industrial rope access and safety consultancy business supplying specialist maintenance and inspection services using industrial rope access, work at height, safety and rescue training, safety consultancy, inspection and maintenance packages to the wind energy, telecommunications, industrial and public sectors.

Company name: Atlantas Marine Ltd
Contact details: Nikki Parnham
Website: www.atlantasmarine.com
Email: nikki@atlantasmarine.com
Phone number: 01 935426000

Atlantas Marine Specialise in providing offshore ROV inspections of your subsea assets. We have almost 20 years of experience in the offshore wind market providing safe, cost-effective subsea inspections in the UK, Europe and Taiwan for all the major owners and operators such as RWE, Orsted, EDF and SSE.

We have solutions to meet all your inspection requirements from General Visual Inspections using HD cameras with the ability to live stream the footage to personnel onshore, right through to providing photogrammetry and 3D models on assets such as cable protection systems.

Company name: BrightWind Limited
Contact details: Shane Martin
Website: www.brightwindanalysis.com
Email: Shane@brightwindanalysis.com
Phone number: 086 1927255

BrightWind provides a boutique resource and energy assessment service led by leading analysts with over 90+ years experience working for developers in the wind and solar industries.

Our extensive experience, fast turn-around times and high quality services ensure that you make the most accurate, confident and informed development decisions.

Company name: Eirgrid

EirGrid develops, manages, and operates Ireland's electricity grid. We are responsible for the safe, secure and reliable supply of Ireland's electricity. Our job is to bring power from where it is generated to where it is needed throughout Ireland, onshore and offshore.

We are also leading the secure transition of the electricity grid to a sustainable low-carbon future. The Government of Ireland's Climate Action Plan 2023 places offshore wind power at the centre of the state's commitment to producing 80 per cent of our energy from renewable sources by 2030.

Company name: Erova Energy
Website: www.erovaenergy.ie
Phone number: 01 474 4817

Erova Energy is an energy trading company based in Dublin that commenced trading in the UK and Irish power markets in July 2015 and now has offices in Dublin, London and Amsterdam. Erova has expertise in short term traded markets with traded volumes in excess of 150 GWh/month across both proprietary and client based positions.

Erova services include interconnector trading, imbalance management, trading of renewable certificates, bespoke trading analytics, renewables forecasting and energy trading risk management solutions. We provide 24 hour shift trading with continuous market coverage 365 days a year.

Erova's commercial and trading experience, coupled with its organisational structure allows it to deliver all forms of PPA, RtM and TSA in a swift and uncomplicated manner. After 9 successful years, we've recently entered the electricity supply business, focusing on Large Electricity Users in Ireland. Erova Energy has offices in Dublin, London, and Amsterdam and accesses markets on a pan European basis.

Company name: ESB Networks
Contact details: Andrea Galligan
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Email: andrea.galligan2@esb.ie
Phone number: +353 87 743 1803

At ESB Networks, we're delivering the electricity network to empower our 2.4 million customers every day with choice and flexibility around how they consume, generate, trade and store electricity. By investing in our technical capability and collaborating with our partners and stakeholders, we're developing a smart and resilient electricity network of the future. Together, we're paving the way for Ireland's clean electric future through the electrification of heat and transport, as well as connecting renewables at scale to the electricity network.

We're delivering the electricity network for the future, designed to empower all electricity customers and make Ireland's net zero goal a reality.

ESB Networks, delivering the electricity network for Ireland's clean, electric future.

Company name: Ganz Electric
Contact details: Anna Szondi
Website: www.ganzelectric.com
Email: anna.szondi@ganzelectric.com
Phone number: +36307917011

Ganz Transformers and Electric Rotating Machines Ltd. is a 100% Hungarian-owned, multi-product, multi-solutions company that exists for more than 140 years and that built the first transformer in the world in 1884.

Our company manufactures unique high-voltage electrical equipment – power transformers, motors and generators – as well as provides related services.

We produce our unique products with today's modern design and technological solutions. Our brand-new smart monitoring system, Ganz Intelligent Solution is aimed to bring a new era to manufacturing and maintaining power transformers and rotating machines in a sustainable way.

Company name: Gas Networks Ireland
Contact details: Kimberley Harris
Website: gasnetworks.ie
Email: Kimberley.harris@gasnetworks.ie
Phone number: 087 739 0896

Gas Networks Ireland operates and maintains Ireland's €3bn, 14,725km national gas network, which is considered one of the safest and most modern renewables-ready gas networks in the world.

Almost 725,000 Irish homes and businesses trust Ireland's gas network to provide efficient and reliable energy to meet their heating, cooking, manufacturing and transport needs.

The gas network is the cornerstone of Ireland's energy system, securely supplying more than 30 per cent of Ireland's total energy, including 40 per cent of all heating and almost 50 per cent of the country's electricity generation.

Gas Networks Ireland is aiming to deliver a repurposed, resized and fully decarbonised gas network by 2045. Its "Pathway to a Net Zero Carbon Network" envisions transforming the existing gas network into two separate systems carrying 100 per cent renewable gas, one dedicated to biomethane and the other to green hydrogen, with the potential to carry approximately 30 per cent biomethane and 70 per cent green hydrogen, as well as offering significant long term energy export opportunities.

Company name: Kyte Powertech
Website: www.kytepowertech.com
Email: info@kytepowertech.com
Phone number: +353 494331588

Kyte Powertech, established in 1977 in Cavan, Ireland, is a market leader in bespoke electrical solutions. We manufacture a wide range of Distribution Transformers from our 17,500 sqm facility, producing 16,000 transformers annually. As a global supplier adhering to international specifications (IEC, ANSI, BS, UL, ENATS), we serve Ireland, the UK, and Western Europe. Our QDCCC model (Quality, Delivery, Commitment, Cost, Communication) drives our strong customer relationships and high performance. Our integrated supply chain, including on-site design, engineering, logistics, and project management teams, ensures a streamlined procurement and delivery process.

Company name: Munster Drone Services Ltd
Contact details: Shane O'Leary
Website: www.munsterdroneservices.com
Email: info@munsterdroneservices.com
Phone number: 029 62100 / 087 9401232

Munster Drone Services provides cutting-edge drone solutions for clients in Ireland and the UK. Specialising in data capture for the wind industry, we are highly experienced in wind turbine blade inspections (internal and external), LPS testing, thermal imaging inspections, surveillance and monitoring, completing over 1,500 inspections annually. With a focus on safety, efficiency, and innovation, our drones are equipped with the latest technology to deliver high-resolution imagery and actionable insights. We help optimise operations, reduce costs, and enhance decision-making. Our team of certified pilots and data experts ensures that every mission is executed with precision, compliance, and produces exceptional results.

Company name: National Maritime College of Ireland
Contact details: NMCI, Ringaskiddy, Cork, P43 XV65
Website: www.nmci.ie
Email: NMCI.Reception@mtu.ie
Phone number: +353 021 4335600

The National Maritime College of Ireland (NMCI) is a state-of-the-art college located on a 10-acre campus in Cork. Specialising in maritime education and training, the NMCI serves both the merchant shipping industry and the Irish Naval Service's non-military needs. Offering degree and master's programmes in Nautical Science, Marine Engineering, Marine Electrotechnology, and Supply Chain & Logistics, NMCI also features specialist spaces such as a sea survival pool, fire-fighting unit, and simulation equipment for navigation, communications, and cargo handling. NMCI provides accredited professional courses, including Global Wind Organisation (GWO) training, STCW, OPITO, and advanced simulation courses for the maritime industry.

Company name: Obelisk
Contact details: Ronnie Delaney
Website: www.obelisk.com
Email: rdelaney@obelisk.com
Phone number: 086 8583473

Obelisk provides design, build, install and maintenance services across essential infrastructure for the telecoms and renewables sectors. We provide wireless connectivity, solar PV and met masts solutions sustainably and safely through our values of professionalism, integrity, innovation and respect.

Company name: RS IRELAND
Contact details: ALISTAIR QUAYE
Website: https://ie.rs-online.com/
Email: enquiries.ie@rs.rsgroup.com
Phone number: 01 415 3100

RS has been supporting industry in Ireland for over 75 years. A high-service distributor supporting customers with an extensive range of more than 750,000 electronics and industrial products available. RS delivers more than 44,000 parcels a day to over 1 million customers globally, providing a one-stop source for everything engineers need.

Company name: RSK Ireland Ltd
Contact details: Michael Kerr
Website: www.rskgroup.com
Email: MKerr@rsk.co.uk
Phone number: +353 (0) 1244 4511

RSK is a leading integrated environmental, engineering and technical services business employing more than 15,000 staff in 250 offices in 40 countries globally.

RSK now have in excess of 600 employees on the island of Ireland working for 10 business units providing environmental impact assessment, ecological consultancy, civil and structural engineering design, site investigation and drilling, dewatering and site services for the Irish Wind Energy industry.

RSK provides both multi-disciplinary teams and bespoke single service solutions, determined by our client's project needs.

Company name: The Sustainable Energy Authority of Ireland
Contact details: Gillian Baker, Maeve O'Reilly
Website: https://www.seai.ie/
Email: info@seai.ie
Phone number: +353 (0) 808 2100

SEAI is Ireland's national energy authority investing in, and delivering, appropriate, effective and sustainable solutions to help Ireland's transition to a clean energy future. We work with government, homeowners, businesses, and communities to achieve this through providing expertise, funding, educational programmes, policy advice, research, and the development of innovative technologies. SEAI are also responsible for the delivery of the Community Benefit Fund National Register. SEAI is funded by the Government of Ireland through the Department of Environment, Climate and Communications.

Company name: Snickers Workwear
Contact details: Unit B5, Calmount Business Park, Ballymount, Dublin 12
Website: https://www.snickersworkwear.ie/
Email: info@hultaforsgroup.ie
Phone number: 01-4098400

Snickers Workwear offers innovative, technical workwear with uncompromising safety that work together with today's craftsmen and women wanting the most durable and style-conscious solutions available. We lead the industry in style and design by emphasizing safety, functionality, longevity, comfort and inspiring demanding professionals to a smarter and safer work life.

Company name: Turner & Townsend Limited
Contact details: Philip Matthews
Website: https://www.turnerandtownsend.com/
Email: philip.matthews@turntown.com
Phone number: +353 (0)1 400 3300

We specialise in the strategy, set-up and delivery of the world's most impactful projects and programmes, turning challenge into opportunity and complexity into success across energy and natural resources, infrastructure and real estate. Focused on outcomes, we combine our global experience, learning and capability in programme advisory, digital, project management, cost and commercial, controls and performance, procurement, sustainability and asset management to help our clients move strategy into action. With extensive experience in clean energy, transmission and distribution we are pleased to welcome Jumbo Consulting Group to the Turner & Townsend family, adding their considerable global expertise in offshore wind / transmission procurement and contract management to our service capability.

Company name: Igoe International Ltd
Contact details: Brendan Igoe
Website: www.zinga.ie
Email: bcigoe@igoe.ie
Phone number: +353 (0)1 830 2250

The ZINGA Film Galvanising System is a single pack coating that contains 96 percent pure zinc in the dry film and provides cathodic protection of ferrous metals.

It can be used as a unique galvanising system as an alternative to hot-dip galvanisation or metallisation, as primer in a duplex system (active + passive 2k or powder topcoats) or as a recharging system for hot-dip galvanisation, metallisation or Zinganised surfaces.

It can be applied by spray, brush or roller on to a clean and rough substrate in a wide range of atmospheric circumstances.

ZINGA is also available as an aerosol Zingaspray for maintenance.

THE DELTA4000 PLATFORM

Turbine	N133/4.X	N149/5.X	N163/6.X
Wind Class	IEC S	IEC S	IEC S
Rotor Diameter [m]	133.2	149.1	163
Tip Height [m]	145 to 192	175 to 210	180 to 220
Blade Length [m]	64.4	72.4	79.7
Max Sound Power (dB(A) Serrated Trailing Edge	104.5	105.6	106.6
	Grid Compliant Strong Wind Sites	Grid Compliant Medium to High Wind Sites	Grid Compliant Low to Medium Wind Sites
	Country Specific Tower Designs for 169m Tip Height	Country Specific Tower Designs for 185m Tip Height	Country Specific Tower Designs for 185m Tip Height

Our **DELTA4000 PLATFORM** is adaptable to a wide range of site conditions and is a perfect fit for Irish wind projects. Based on our proven architecture, with grid compatibility guaranteed.

https://www.nordex-online.com/en/uk-ireland/

NORDEX

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