

Frequently Asked Questions

- Q. 1. Why are the turbines so big?**
- A. Larger turbines maximise the amount of electricity produced from the clean renewable source. Wind energy is key to the Government's Climate Action Plan. The proposed height of the turbines is standard for modern wind turbines, and similar turbines have already been granted planning permission throughout the Country. The landscape and visual impact will be assessed for the project which will involve generating photomontages of the proposed development.
- Q. 2. Are wind turbines noisy?**
- A. Wind turbines emit noise. However, noise levels experienced due to a noise source, reduce with distance from the source. Therefore, the total noise level at a noise-sensitive location due to a wind turbine development depends on the distance from that location to each of the turbines, and the noise emissions from the turbines. A detailed noise assessment for the proposed development will be prepared and presented in the planning application; it will follow the best-practice guidelines for the assessment of noise from wind farms affecting noise-sensitive locations, i.e. residential houses.
- Q. 3. What is shadow flicker?**
- A. Shadow flicker is the effect of the sun (low on the horizon) shining through the rotating blades of a wind turbine, casting a moving shadow in a room in a nearby property. It will be perceived as a "flicker" due to the rotating blades repeatedly casting the shadow. This effect lasts only for a short period of time until the sun passes beyond the turbines. A shadow flicker study will be included as part of the planning application documentation and that will provide predicted shadow flicker levels at neighbouring properties together with proposals to mitigate shadow flicker effect where necessary.
- Q. 4. Why are wind farms needed?**
- A. The Climate Action and Low Carbon Development (amendment) Act 2021 commits Ireland to a legally binding target of net-zero emissions no later than 2050, and a cut of 51% by 2030, transitioning Ireland to a climate resilient, biodiversity rich, environmentally sustainable and climate neutral economy. The Climate Action Plan 2024 (CAP) identified the need to increase the share of electricity demand generated from renewable sources by up to 80% where achievable and cost effective, without compromising security of electricity supply, identifying a need for 9 GW (gigawatt) of onshore wind generation in order for Ireland to meet its 2030 targets.
- Q. 5. Can the land around the wind farm be used for farming?**
- A. The wind farm infrastructure takes up relatively little ground. The surrounding land can continue to be used for farming as normal.
- Q. 6. How close will the nearest turbine be to a house?**
- A. It is intended to achieve a minimum setback distance of 4 times the overall blade tip height, to all third-party properties. However, this setback distance can be reduced for involved properties, subject to a minimum setback distance of 500m from any relevant property.
- Q. 7. Who can I contact?**
- A. Enerco Offices: +353 (0) 217336034
Padraig Quille Mob: +353 (0) 861764784 clo@clonmoreinfo.com
We would like to hear any comments or queries you may have.

Decommissioning

The wind turbines which are part of each development are expected to have a lifespan of approximately 25 to 30 years. Following the end of their useful life, the wind turbines may be replaced subject to planning permission being obtained, or the site may be decommissioned fully, except for the electricity substation.

Upon decommissioning of the proposed wind farm, the wind turbines would be disassembled in reverse order to how they were erected. All above ground turbine components would be separated and removed off-site for recycling.

Turbine foundations would remain in place underground and would be covered with earth and reseeded as appropriate. Leaving the turbine foundation in-situ is considered a more environmentally prudent option. Site roads facilitate other uses during the lifetime of the windfarm and therefore would be left in situ after decommissioning.

Renewable Energy Project Wind Information Leaflet

Contents

Background **P.1**

Benefits **P.2**

Enerco Energy Projects **P.3**

Questions & Feedback **P.4**

Who We Are Enerco Energy

Enerco Energy, based near Macroom, Co. Cork is a 100% Irish owned leading renewable energy company, with the capability to develop, construct and operate projects that contribute towards our goal of creating a sustainable future.

The company's core activity includes the development and operation of medium to large scale wind farms. Enerco also works in other renewable sectors such as solar and battery storage.



To date Enerco and its associated companies had over c.885 MW of wind generating capacity in commercial operation and construction, with further 400 MW of projects at various stages in its portfolio to assist in meeting Ireland's renewable energy targets.

Climate Action Plan 2024

Introduction

In December 2023 the Irish government published the latest Climate Action Plan to build net zero carbon energy systems and create a sustainable country.

Current situation

- Ireland missed the target set for 2013-2020 of reducing emissions by 20% (relative to 2005 Levels) by one eighth and more worrying it is expected that recent growth in emissions will put the country on a trajectory to be 25% off target for the 2021-2030 period if we don't implement a new strategy.

Targets for 2030 and beyond

- Increase percentage of electricity generated from renewables to 80% by 2030.
 - 51% greenhouse gas reduction by 2030 and establish a trajectory which leads to Ireland being net zero carbon by 2050.
 - **Road map to achieve Targets**
- To meet the required level of emissions reduction by 2030 the Climate Action Plans includes:
- Adding 7GW of offshore wind (with 2GW earmarked for Green Hydrogen).
 - Increasing onshore wind to 9GW.
 - 845,000 EV's in private transport fleet by 2030.
 - Adding 8GW of Solar.

Source: Climate Action Plan 2024 (20/12/2023)

Wind in Ireland

By the end of 2022 Ireland's installed wind capacity was 4,540 MW. Wind energy accounted for 85.7% of normalised renewable electricity in 2022 and was one of the largest sources of electricity, second only to natural gas.

Source: SEAI – Renewable Energy in Ireland 2023 Report (12/2023)

2023 was record year with wind farms provided 35% of Ireland & Northern Ireland's electricity, totalling 13,725GWh and it is equivalent to the electricity consumption of more than 3million houses. As more wind farms are being built this record will continue to be broken and wind energy will fulfil more and more of our energy demand.

Source: www.windenergyireland.com

The amount of CO₂ avoided through the use of renewable energy was 6.75 million tonnes in 2022, more than any previous year, with 4.48 MtCO₂ avoided by wind energy. Wind energy helps to reduce both our reliance on imported fossil fuels and our carbon emissions whilst contributing towards a downward pressure on the price of electricity.

Source: SEAI - Energy in Ireland 2023 Report (12/2023)

Solar in Ireland

Solar energy is slowly increasing in Ireland, this follows other Northern European countries such as Germany and the UK, which have successfully deployed solar power at a rapid pace over the last decade. Solar has become a much more viable energy source, thanks to both the consistently falling costs and the increasing generational capacities of solar modules.

What is an EIAR?

An Environmental Impact Assessment Report (EIAR) is a document that describes the proposed development and all issues relating to the potential impact of the proposed wind farm on the environment.

Each wind farm project undergoes a rigorous environmental impact assessment by the planning authority and/or An Bord Pleanála, prior to being granted planning permission. An EIAR is prepared and forms part of the planning permission application to be submitted to the Local Authority or An Bord Pleanála as appropriate.

The EIAR usually includes detailed information on impacts relating to the following topics:

1. Introduction
2. Background to the Proposed Development
3. Consideration of Reasonable Alternatives
4. Description of the Proposed Development
5. Population & Human Beings
6. Biodiversity
7. Birds
8. Land, Soils & Geology
9. Water
10. Air Quality
11. Climate
12. Noise and Vibration
13. Cultural Heritage
14. Landscape and Visual
15. Material Assists
16. Vulnerability to Accidents & Natural Disasters
17. Interaction of Foregoing
18. Schedule of Mitigation



Knocknagoum Wind Farm 44.5MW

Wind Resource in Ireland

Wind Energy is one of Ireland's greatest natural resources. Modern wind farms use this natural resource to produce energy to power homes and industries throughout Ireland. Ireland has one of the best wind resources in Europe.

How Wind Turbines Work

When the wind speed rises above 4 metres per second (a gentle breeze) the turbine turns into the wind and the rotor begins to rotate. This causes a shaft inside the rotor to rotate. This shaft is often attached via a gearbox to a generator or may be gearless. The rotation of the generator generates electricity in much the same way as a bicycle dynamo works. The electricity is carried via cables down the turbine tower, and out into the local electricity grid to power homes and industry throughout Ireland.

Environmental Benefits

A wind farm generates clean, renewable, carbon neutral electricity. Every megawatt installed is the equivalent of powering approximately 730 homes for a year.

Knocknagoum Wind Farm

Knocknagoum Wind Farm generates enough power to supply approximately 32,500 homes every year. Every watt of electricity generated at the wind farm will replace the same amount that would have been generated by burning coal or gas. A wind farm will emit no toxic substances or air pollutants, unlike coal or gas power stations. The carbon emissions created during the construction of the wind farm and the manufacturing of the turbines etc. will typically be offset in the electricity generated by the wind farm in the first 1-2 years of operation, therefore the wind farm generates carbon neutral power for the remaining 23-28 years of the project (Modern turbines typically have a lifespan of 25-30 years).

Economic Benefits

Wind farm developments have several long-term and short-term benefits for the local economy. The developments can represent an investment of several million euro in the locality of the development, with a large percentage of the total cost relating to on-site works, which would be relying heavily on local contractors and suppliers. The project will create many local jobs during the construction stage, which generally lasts in the region of 18 months.

The construction phase will see employment opportunities for:

- Local contractors
- Construction plant suppliers
- Machinery operators
- Skilled labourers
- Construction materials suppliers
- Transport companies.

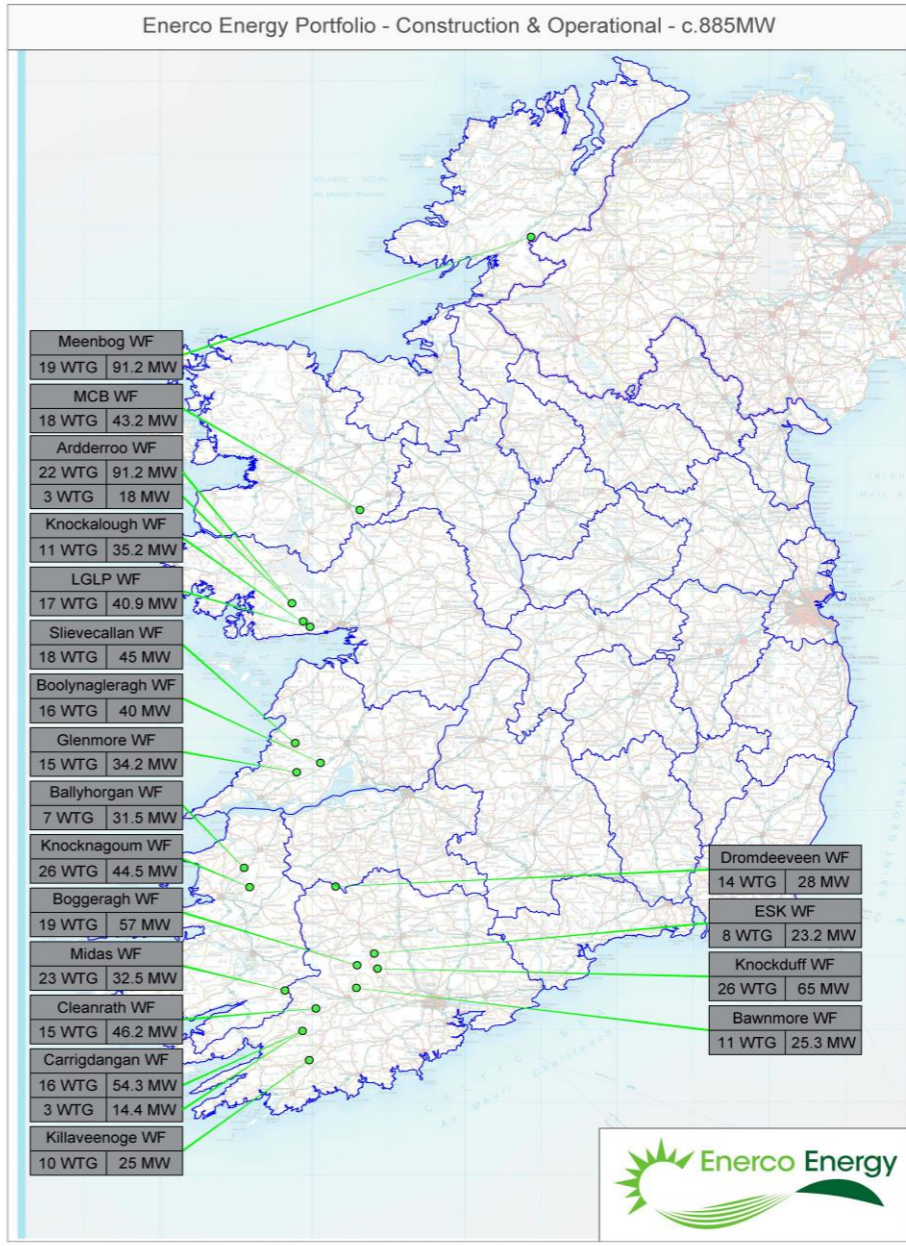
Increased activity in the locality benefits the local hospitality and service sector. Contractors and wind farm employees use shops, restaurants, hotels and B&Bs in the wind farm proximity throughout a project lifecycle.

Security of Energy Supply

In 2022, Ireland imported 81.6% of its total primary energy requirement, one of the highest ratios in Europe (Source: SEAI - Energy in Ireland 2023 Report (12/2023)). The more of its own energy Ireland can produce, the less vulnerable it would be to foreign policy and conflict interrupting gas, oil, and electricity supply lines. There is an opportunity to continue developing a strong indigenous wind industry, that will take advantage of Ireland's excellent wind resource, reducing our import dependency.



LGLP Wind Farm 40.9MW



Benefits of Wind Turbines



- Carbon Neutral Electricity
- Low Ecology Impacts
- Income directly into the locality
- Employment Generation
- Boost Local Economy
- Improve local road and power infrastructure
- Low-Cost Electricity

Community Involvement

- As a long-term owner, developer and operator of energy assets Enerco Energy Ltd. seeks to be an active partner in the communities in which we develop and operate projects.
- A community benefit scheme will be made available every year for the operational lifespan of the wind farm.
- The community benefit scheme will be available to communities and voluntary groups. The benefit will be set out to aid the local community, by supporting projects and the area around the development.
- The community closest to the proposed development will decide how the community benefit scheme is administered and whether the focus is on local groups and clubs, or those living closest to the wind farm.
- As part of planning a project we like to hear from the community about their vision for its future and how the project might help.
- For more information on community benefit, please visit www.clonmoreinfo.com.