Coumnagappul Wind Farm

Project Newsletter – May 2021

EMPower

Who Are EMPower

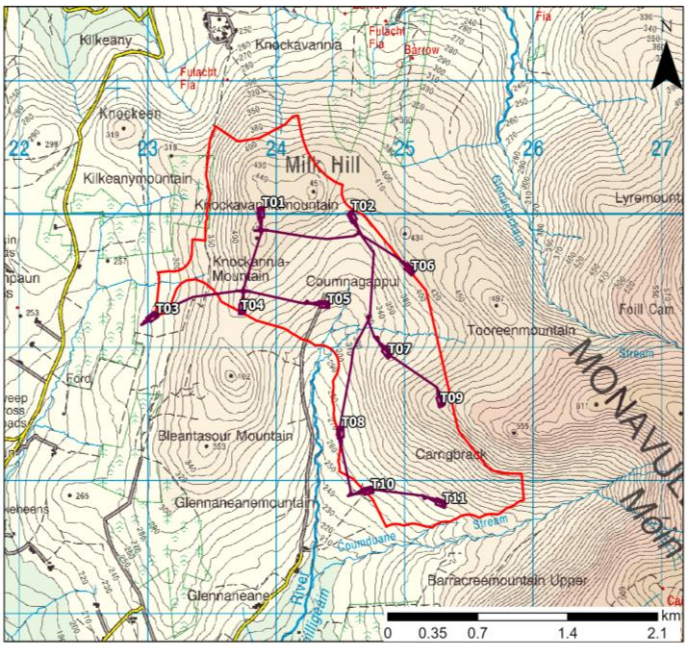
EMPower is an Irish renewable energy developer with over 700 MW in development in Europe and Africa. Our senior management team comprises five Irish professionals with a combined 95 years' experience delivering projects from conception to operation across five continents. EMPower's headquarters is in Dublin.

EMPower is owned by GGE Ireland Limited, Wind Power Invest A/S and EMP Holdings Limited. We commenced project development in Ireland in 2018 following the government's announcement of the Renewable Energy Support Scheme (RESS) and Ireland's revised electricity target of 70% renewables by 2030.

Our vision is to provide low carbon, ecologically non-invasive, affordable energy to facilitate Ireland's expanding economy and sustainable energy targets. We are currently preparing planning documents to submit a Strategic Infrastructure Development planning application to An Bord Pleanála in Summer/Autumn 2021. This is a legal requirement for applications above 50 MW. As well as all current best practice Irish wind energy development guidelines in place, EMPower follows Equator Principles and IFC Performance Standards throughout all stages of development in order to ensure the protection of the local ecology and communities where our projects are proposed

Our project website (www.coumnagappulwindfarm.ie) will be updated regularly with project information as it becomes available, and the final Environmental Impact Assessment will be published for comments prior to submission. Please submit comments through the website or email us directly at coumnagappul@emp.group

Proposed Coumnagappul Wind Farm Study Area



Coumnagappul WF - Proposed Layout

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Legend
Study Area
V150 Infrastructure

95 Years

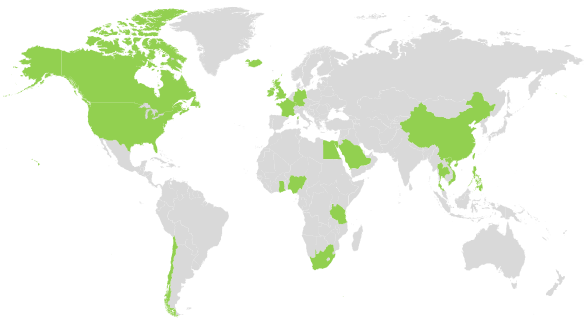
Combined Experience of EMPower Management Team in Renewable Energy

700 MW+

Wind Energy Capacity Currently Under Development By EMPower

5 Continents

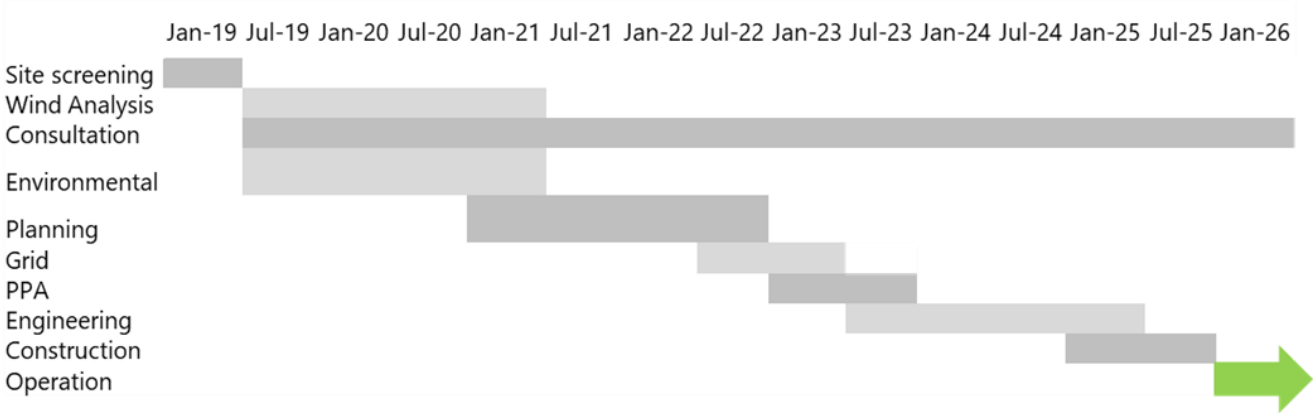
Combined Geographical Experience of EMPower Team in Renewable Energy



- 11 Turbines
- 66 MW
- Clean power for 38,957 Irish Homes
- No Overhead Transmission Lines

The proposed Coumnagappul Wind Farm project consists of a 832-acre Study Area owned by local landowners. The Study Area is located approximately 16km North of Dungarvan. The final footprint of the proposed project will be approximately 28 acres. EMPower is currently proposing a 11 turbine project, with a maximum blade tip height of 185m, subject to environmental impact assessment and planning permission. The Study Area is identified in the Waterford County Development Plan as 'Preferred'' for wind development.

Proposed Project Schedule

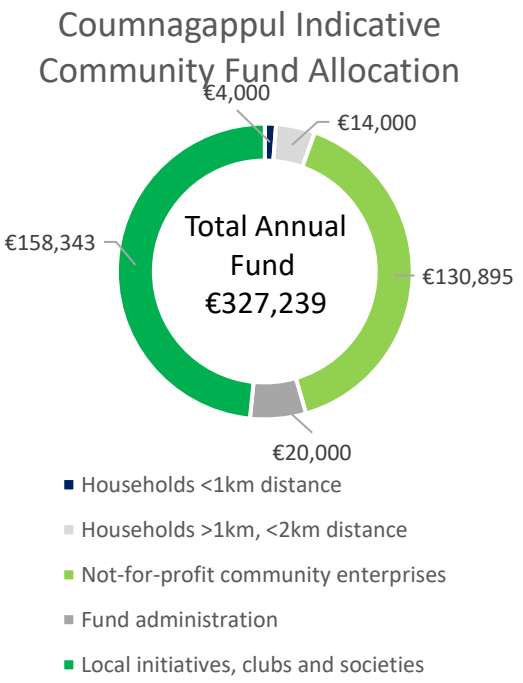


Community Benefit

If consented the proposed Coumnagappul Wind Farm will require a €72.6 million investment and will provide sustainable, low carbon energy generation infrastructure to meet Ireland's growing demand. The development benefits to the local community would include significant investment in local infrastructure and electrical systems, local job creation, and a contribution of approximately €15.8 million in Waterford county council rates over the project lifetime.

If consented the proposed Coumnagappul Wind Farm will also provide a community fund calculated in accordance with the Renewable Electricity Support Scheme (RESS) Terms and Conditions at €2 per MWh of electricity produced by the project. This is to be made available to the local community for the duration of the RESS (15 years). The average capacity factor of wind energy projects in Ireland is 28.3% (SEAI, 2019). Assuming this efficiency, and a capacity of around 66 MW, the community benefit fund would amount to an average of €327,239 per annum. The actual fund will vary around this average from year to year, depending on each year's wind conditions. Wind measurements at the Study Area suggest that Coumnagappul could be capable of achieving an above average capacity factor, and therefore a larger community fund.

This scheme is proposed to be divided as per the illustration in the chart below. An annual minimum payment of €1,000 will be provided to each household within 1km of any proposed Coumnagappul wind turbine. An annual minimum payment of €500 will be provided to each household located between 1km and 2km of any final turbine position. These payments will be fixed and will not fluctuate. 40% of the fund, amounting to approximately €130,895 per year in this example, will be allocated to not-for-profit community enterprises, with an emphasis on low-carbon initiatives. The remainder of the fund will be directed towards local clubs, societies and other initiatives. EMPower strongly believe that the communities nearest our projects are those that should benefit most from any Community Fund. We welcome any suggestions from the community for suitable local projects that could be supported under this initiative.



112
Direct jobs in construction phase

26
Highly skilled jobs over project lifetime

€ 72.6 million
Investment in Irish infrastructure

€ 4.9 million
Total Community Fund Contribution

€ 15.8 million[1]
County Council Rates Contribution

1 – Estimated €8,000 per mega watt installed for 30-year project lifespan.

Environmental Impact Assessment

Following initial Study Area assessments, EMPower have commissioned an Environmental Impact Assessment (EIA) for the proposed Coumnagappul Wind Farm to assess what effects the proposed project might have on the environment and local community. The result of this assessment will be an Environmental Impact Assessment Report (EIAR). The proposed Coumnagappul Wind Farm project will include the final EIAR with the planning package submitted to the planning & regulatory authorities. The compilation of the Coumnagappul EIAR is currently being carried out by the Cork based environmental and engineering consultancy, Fehily Timoney & Company Consultants.
The final design will ensure that any sensitive areas of the Study Area are protected throughout the projects ongoing development.

The EMPower team will host a Coumnagappul project consultation webinar event in June 2021, with the aim of providing ongoing design information to the local residents and to respond to any questions or comments on the proposed project.

The proposed Coumnagappul Wind Farm EIAR will cover a number of topics, including:

- Population and Human Health;
- Biodiversity;
- Land;
- Soil;
- Water;
- Air;
- Climate;
- Material Assets;
- Cultural Heritage;
- Landscape.

A further description of some key EIAR activities is presented to the right.

Population and Human Health

This involves examining the effects of infrastructure projects on the surrounding community, examining land use, employment, health and safety, tourism and local amenities.

Ecology

An ecological impact assessment will be carried out in order to assess the impact on the Study Area's flora and fauna, evaluating potential impacts on the local ecosystem. In line with industry best practice, EMPower are currently conducting 2 years bird surveys at the projects Study Area.

Shadow Flicker

Shadow flicker refers to alternating changes in light intensity caused by the moving turbine rotors impacting dwellings. EMPower will carry out a shadow flicker analysis to avoid any potential impact of shadow flicker on local buildings in line with current guidelines.

Noise Assessment

The evolution of wind farm technology over the past decade has reduced mechanical noise from turbines significantly with the main sound being the aerodynamic 'swoosh' of the blades passing the tower. However, strict guidelines on wind turbines and noise emissions remain to ensure the protection of residential amenity.
A noise assessment will be carried out to assess the potential impact of noise on the surrounding community by installing sound meters at noise sensitive locations and using turbine simulations to ensure that the project complies with all relevant noise guidelines.

Landscape and Visual

A zone of theoretical visibility (ZTV) will be produced outlining which turbines will be visible from various locations. Photo montages will identify the visual impact of the project by showing the operational turbines in situ.
This information will be publicly available before a submission is made to the consenting planning authority.

Water & Hydrology

Hydrology and hydrogeology refers to the study of how water flows under and through the landscape. A desktop survey to establish the baseline conditions within and adjacent to the Study Area will be undertaken. Following this desktop survey, field visits will confirm a number of these findings and inform any required actions or mitigation strategies for the various stages of the proposed project's development, most notably construction. The final project design will minimise the risk of construction materials disturbing local water courses, streams and rivers in the proposed project's vicinity.

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Wind Energy Frequently Asked Questions

How efficient is wind energy?

Wind turbines produce electricity approximately 85% of the time. The other 15% of the time they are not turning for reasons, such as: very low wind speeds, very high wind speeds, and maintenance/repair work.

Studies suggest that after six to seven months, a wind turbine will have produced as much energy as has gone into constructing it. The output of a wind turbine depends on the turbine's size and the wind's speed through the rotor. A wind turbine with a net capacity factor of 28% and a capacity of 6 MW can produce more than 14,900 MWh in a year – enough to supply approximately 3,500 average Irish households. If consented the proposed Coumnagappul Wind Farm's current proposal is anticipated to produce enough electricity to power over 38,957 Irish homes.

Do wind farms effect house prices?

There is no peer reviewed evidence that a correctly developed and constructed wind farm will lower property prices or that they impact on property prices in Ireland. Concerns on this topic have driven a great deal of research in many different countries, including the UK, Germany, Australia and the USA, over the last 20 years examining house prices in communities close to wind farms and all have varying conclusions. The majority of research aligns with detailed studies by The Centre for Economics and Business Research (CEBR), The Institute of Chartered Surveyors, The House of Commons Library and Renewable UK where conclusions that wind farms have little or no impact on property values are reached.

What is a wind turbine's lifetime emissions?

Wind energy emits no toxic substances such as mercury and air pollutants like smog-creating nitrogen oxides, acid rain-forming sulphur dioxide and particulate deposits.

A 2014 study by the Intergovernmental Panel on Climate Change (IPCC) found onshore wind energy to have the lowest mean lifecycle emissions of all viable sources, such as solar, nuclear energy and natural gas, at just 11 grams CO2(e) per kWh.

Are wind turbines linked to health issues?

EMPower are committed to ensuring that we design, develop, construct and operate our projects and carry out our work to the highest possible health and safety standards. In 2018 the World Health Organisation (WHO) assessed the environmental noise guidelines for a range of noise sources including traffic, noise, aircraft, railways, leisure and activities and wind turbines. The WHO findings align with the view of the Irish Department of Health which states that, "There is no reliable of consistent evidence that wind farms directly cause adverse health effects in humans"[1]. The Irish Department of Health based these findings on research carried out by the Australian National Health and Medical Research Council. The balance of scientific evidence and human experience to date has concluded that wind turbines are not harmful to human health – in fact, wind energy reduces harmful air emissions and creates no harmful waste products when compared with other sources of electricity. However, EMPower are conscious that the potential exists for someone who does not like wind turbines or wind energy to become frustrated, annoyed and possibly anxious on any wind energy project proposal. Please contact us if you would like further detail on this topic.

Do wind farms make noise?

It is the duty of EMPower to demonstrate during the planning process noise levels of our turbines will not adversely affect local residents. The studies completed during this period will be used to design the Coumnagappul project so noise levels at nearby residential homes do not exceed national planning guidelines. Currently in Ireland and the United Kingdom, guidelines in relation to wind turbine noise levels are set at: "35 and 45 decibels dependent on the time of day and the level of background noise", in line with international best practices Current guidelines cite a minimum distance of 500m between residential dwellings and Wind Turbines. EMPower are designing the proposed Coumnagappul project to be a minimum of 750m from residential dwellings.

Did you know:

The projects noise consultant must discount the noise emitted by existing wind turbines in the area in order to establish a true back ground noise level. Wind Farms are limited in the amount of noise they can emit above this lower background level

If you would like to discuss any of the sample questions listed here or any other aspect of the design of the proposed Coumnagappul project, please contact us on any of the below mediums.

[1] https://www.oireachtas.ie/en/debates/question/2015-03-25/section/213/

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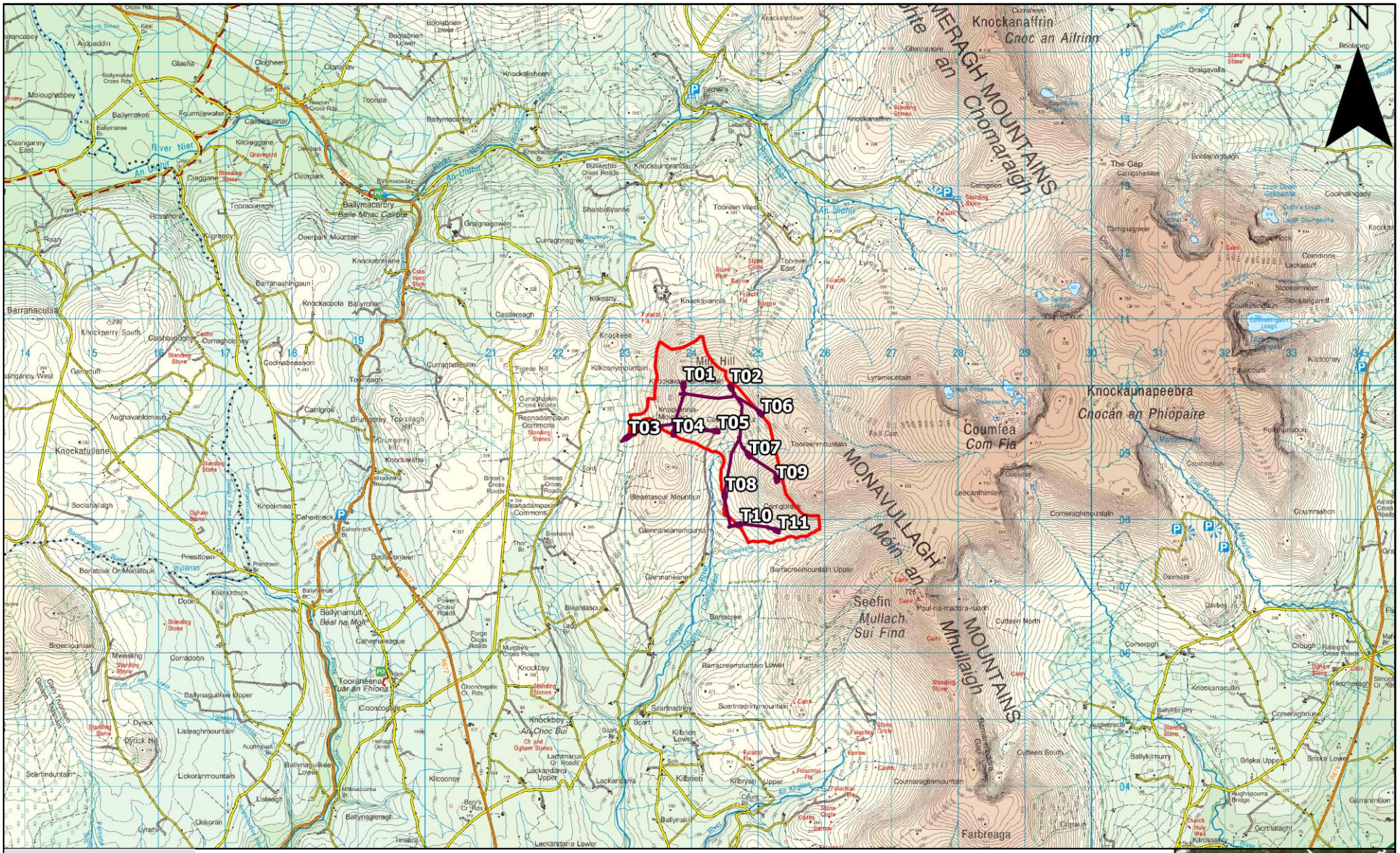

Coumnagappul Wind Farm - Proposed Project Location

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Contact Us

We welcome conversation, engagement and interaction with you on any aspect of how we are progressing the Coumnagappul project proposal. If you would like to chat about this proposed project further, please contact us via any of the below means.

Website : www.coumnagappulwindfarm.ie
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Write : EMPower, 2 Dublin Landings, North Wall Quay, North Dock, Dublin 1