

# Proposed Dyrick Hill Wind Farm Project

Project Newsletter No. 2 – March 2022

**EM**Power



Looking northwest across the potential project Study Area from the Lisleagh area

# Introduction

We started our community engagement process for the proposed Dyrick Hill wind farm project in December 2021. An introductory project Newsletter was shared with those who live closest to the project's Study Area prior to the start of the detailed design work and environmental assessment phase. The project's introductory Newsletter generated conversation which has helped to inform this second project Newsletter and the overall project design. This also ensures that accurate project information is circulated and residents local to the project's Study Area have an opportunity to address queries directly to the project team.

We are committed to continuing our approach of involvement and inclusiveness in our project engagement and we are working hard on innovative solutions which will enable the project team to keep the community updated on all aspects of this proposed project's design. A project specific information webinar is scheduled for the 07/04/22 between 7pm and 8pm. Registration for this webinar is available at [www.dyrickhillwindfarm.ie/webinar](http://www.dyrickhillwindfarm.ie/webinar).

The project information contained within this newsletter has been prepared to:

- Detail the main project Study Area and Buildable Area;
- Describe some of the technical, design and environmental project assessments & studies underway;
- Present accurate project design information and invite conversation with the proposed project's near neighbours. The project team would encourage and welcome any questions or comments to contact us via the contact details on the back page of this newsletter;
- Explore possible collaboration opportunities that the project may present for local communities and initiatives;
- Set out information on the next steps and project timeline



## 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% (recently updated to 80%) 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.

## Our Commitment

Our commitment is to engage meaningfully with our stakeholders on decisions that concern them. We aim to do this in a timely manner, and we commit to building relationships and starting a conversation on what aspects of this proposed renewable energy project could work best for this local area. We feel that designing any proposed project in this manner makes better social and business sense.

### 95 Years

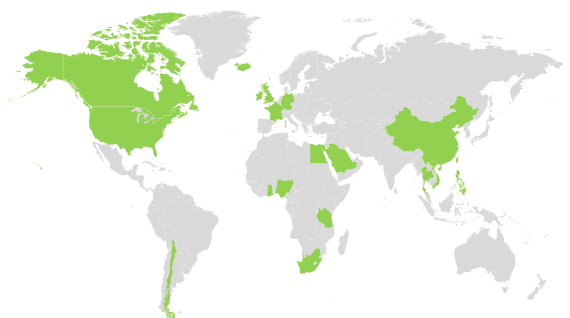
Combined Experience of EMPower Management Team in Renewable Energy

### 700 MW+

Wind Energy Capacity Currently Under Development By EMPower

### 5 Continents

Combined Geographical Experience of EMPower Team in Renewable Energy





# Why This Project?

Identifying a project Study Area suitable for a wind farm considers many different inputs. The suitability of the Study Area for the proposed Dyrick Hill project can be attributed, in part, to the following characteristics:

- It is not within a Special Area of Conservation (SAC), a Special Protection Area (SPA) or a Natural Heritage Area (NHA), although some of these areas do exist nearby;
- Located in an area designated as 'Open to Consideration' for wind farm development under the Waterford City & County Development Plan 2011 – 2017, subject to other considerations including demonstration of no adverse impacts on the receiving environment;
- Accessible location for connection to the National Electricity Grid;
- Good annual average wind speeds;
- Adequate access from national and regional road networks;
- Housing setback distances which aligns with the latest government guidance. The project team has already committed to a minimum setback of 740 meters between a dwelling and any proposed turbine location.

## Project Design Process

The proposed Dyrick Hill Wind Farm project's design starts with a review of existing information to avoid or minimize potential impacts and to establish a project "Buildable Area". This includes a design process that limits the angle of slope of the ground where development can occur, including a setback distance from watercourses and residences, as well as setback from any nearby European designated environmentally sensitive habitat sites and existing archaeological features.

Once the project's "Buildable Area" is established an initial turbine layout is then progressed to consider design considerations including the separation distance required between the turbines. The location and alignment of the associated project infrastructure, such as access roads and electrical infrastructure, is then developed. The final locations of all proposed project infrastructure is informed by several separate design iterations involving rigorous Study Area assessments including:

- Ecological and Aquatic Surveys;
- Ornithological Surveys;
- Geotechnical & Hydrological Ground Studies;
- Shadow Flicker Modelling;
- Noise Modelling;
- Archaeological Surveys;
- Landscape and Visual Assessment;
- Grid & Component Delivery Route assessments.



Following consideration of the Study Area's constraints the project design team have now established a "Buildable Area" where wind turbines can conceivably be placed. You will find this illustration on page 6 of this Newsletter. Over the coming months a project Design Iteration 1 will be produced which will detail proposed wind turbine locations. Design Iteration 1 will then be re-assessed and re-worked during the Design Iteration 2 and 3 processes before a final project proposal is arrived at. The final design will then be submitted to the consenting authority for consideration in the form of a planning application. We believe that by following this Iterative Design process we can ensure a project proposal that best suits the surrounding environment is achieved.

# The Project Study Area

The Study Area for the proposed Dyrick Hill project is located in the townlands of Dyrick, Ballynaguilkee Upper, Broemountain and Lisleaghmountain in Co. Waterford. The Study Area and Buildable Area consists of over 400 hectares and 115 hectares, respectively. Measured in a straight-line direction, the Study Area is located approximately 16km northwest of Dungarvan and 8.5km southwest of Ballymacarbray and is owned by local landowners. Generally, the Study Area is comprised of farmland, forestry and upland heath with soils and subsoils present consisting predominantly of shallow bedrock with minor peat pockets and minor glacial till and podzols in lowland areas. The geology of the Study Area consists mainly of upper Devonian age sandstone and mudstone.

The Project's Study Area is not located within a Natura 2000 site (European Site) or a National Heritage Area. A number of European designated sites do occur within the wider area surrounding the project's Study Area. Some of these sensitive locations within 15 kilometres of the project's Study Area are listed below. All nearby sensitive habitats will be considered in detail for the final project's overall design.

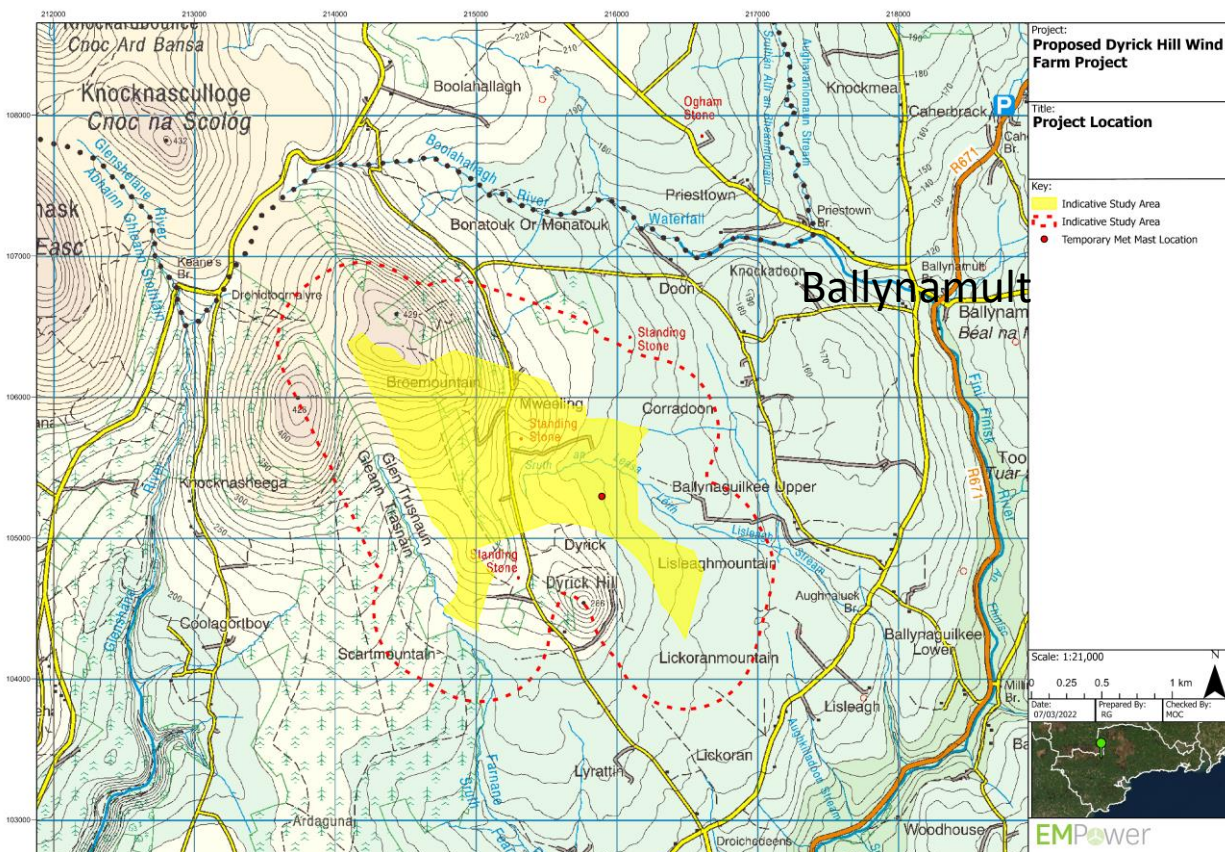
- Blackwater River Special Area of Conservation and National Heritage Area to the southwest;
- Lower River Suir Special Area of Conservation to the north;
- Nier Valley Woodlands Special Area of Conservation and National Heritage Area to the northeast;
- Glendine Wood Special Area of Conservation (south) and Glenboy Wood National Heritage Area (north).

A number of grid connection options are currently being assessed for the proposed project. The nearest existing substation is Dungarvan 110kV substation which is located approximately 15 kilometres south. Consultation with Eirgrid and ESB will also dictate the eventual connection point chosen for this proposed project.

If the project is consented the sea ports of Waterford or Cork provide the most likely port of entry for the project's wind turbine components. Delivery route surveys are currently underway in order to select the most viable access route. The final Environment Impact Assessment Report, including all studies and assessments, will be submitted with the project's planning application and will be available to the public for viewing and comment.

## The Proposed Project

From the early assessments carried out we believe that the proposed project's current "Buildable Area" could accommodate a maximum of 13 individual wind turbines. This initial assessment will require much more detailed analysis to confirm a final design. Once Design Iteration 1 is reached we will share this via public Newsletter. Wind measurements from the meteorological mast erected in 2021 will also be used to establish the type and quantity of wind turbine the Study Area could accommodate.



# Environmental Impact Assessment

EMPower has commissioned Jennings O'Donovan & Partners Limited (JOD) to complete an Environmental Impact Assessment (EIA) for the proposed Dyrick Hill Wind Farm Study Area. Established in 1950 and based in Co. Sligo, JOD are one of the longest established and most reputable multi-disciplinary engineering consultancies in Ireland. JOD have been an established presence in the Renewable Energy Wind Farm Sector since 1998. To date, the company has a portfolio of project involvement extending to over 2,040 MW of power in Ireland and Northern Ireland and is a recognised market leader in the area of Wind Energy development.

The EIA process will assess what effects the proposed project might have on the surrounding environment and local community. The result of this assessment will be an Environmental Impact Assessment Report. The final Environmental Impact Assessment Report will accompany the planning application submitted to the planning & regulatory authorities and will also be available for public viewing.

The final design will ensure that any sensitive areas of the Study Area are protected throughout the proposed projects ongoing development.

The EMPower team will host an initial Dyrick Hill project consultation webinar on the 07/04/2022. This will give interested stakeholders an opportunity to discuss the proposed project's design process with members of the design team. You can register for this webinar at [www.dyrickhillwindfarm.ie/webinar](http://www.dyrickhillwindfarm.ie/webinar).

The Dyrick Hill wind farm Environmental Impact Assessment Report will cover several topics, including but not limited to:

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

A further description of some key Environmental Impact Assessment Report activities is presented here on the right.



## Population and Human Health

This involves examining the potential impacts of the proposed project on the surrounding community, examining items such as land use, local employment, health and safety, tourism, population trends and local amenities.



## Ecology

An ecological impact assessment will be carried out in order to assess the potential 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 rotor on nearby dwellings. EMPower will carry out a full shadow flicker analysis to ensure zero potential impact of shadow flicker on local dwellings 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 now 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 all locations within a 20 kilometre radius of the Study Area. Photo montages will identify the visual impact of the proposed project by simulating the turbines as they would look if built.

This information will be publicly available before a planning submission is made and will be used to inform the final design and turbine selection.



## Water & Hydrology

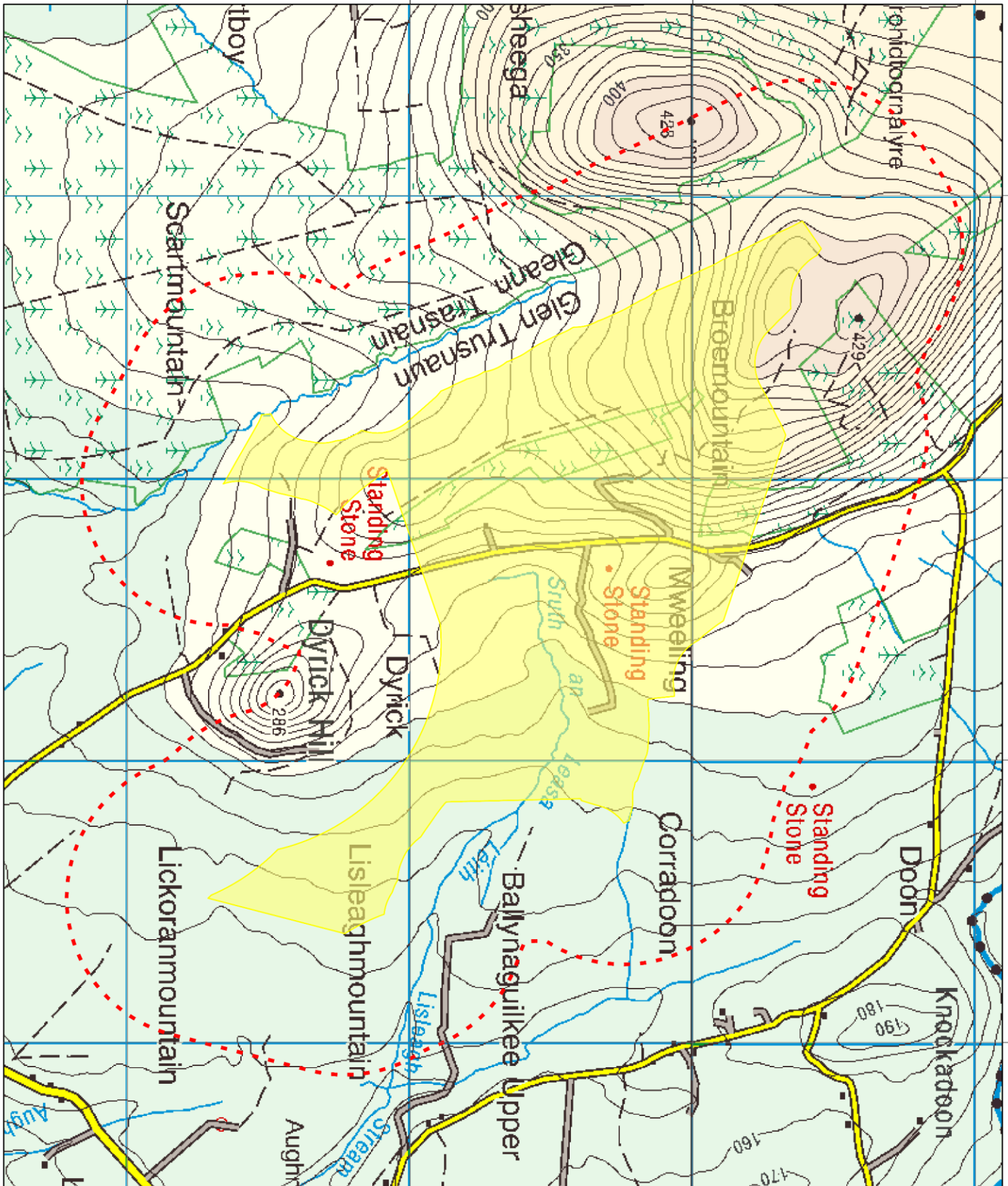
Hydrology and hydrogeology refers to the study of how water flows under and through the landscape. A desktop survey to establish the baseline conditions within and adjacent to the project's Study Area will be undertaken. Following this desktop survey, field visits will confirm a number of these findings 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.



Project:  
**Proposed Dyrick Hill Wind  
Farm Project**

Title:  
**Indicative Project  
Buildable Area**

Key:  
■ Indicative Buildable Area  
■ Indicative Study Area



Scale: 1:12,500

0 0.15 0.3 0.6 km

Date: 03/03/2022  
Prepared By: RG  
Checked By: MOC

**EMPOWER**

# Proposed Project Schedule

Proposed Dyrick Hill Schedule	2020				2021				2022				2023				2024				2025				2026				2027			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Ornithology Studies																																
Planning Consultant (EIAR)																																
Stakeholder Consultation																																
Wind Measurement (Met Mast)																																
Planning Submission & Consideration																																
Grid Connection Application																																
Detailed Project Design																																
Project Construction																																
Project Operational																																

Note: Q1, Q2, Q3 and Q4 in the above schedule represent yearly quarters. For example, Q1 represent the first quarter of that year

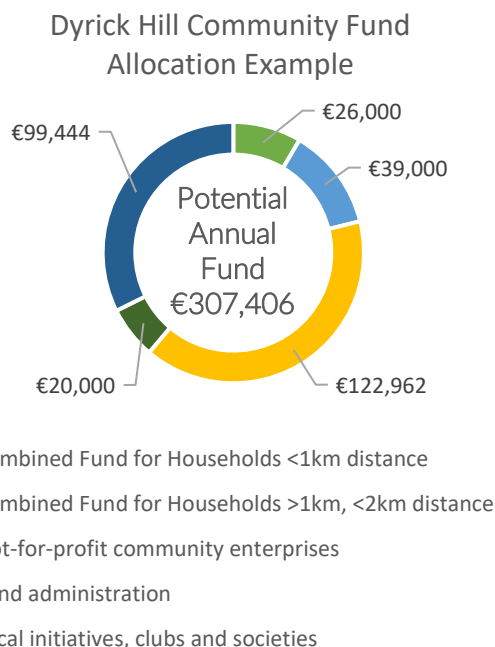
## Community Benefit

For the purpose of discussion, if the Dyrick Hill project was consented and contained 10 individual turbines, with a combined electricity generating capacity of 62 Mega Watts, the following project community benefit fund could be realised. A 10 turbine, 62 Mega Watt project would require an investment of over €70 million euro and would 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 €14.8 million<sup>1</sup> in Waterford City & County Council rates over the project's lifetime. The above example would also produce enough renewable electricity to power over 32,000 average Irish homes (SEAI 2018)

A community fund calculated in accordance with the Renewable Electricity Support Scheme (RESS) Terms and Conditions, €2 per Mega Watt hour of electricity produced by the project, would also be put in place. This would 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 an estimated project capacity of 62 Mega Watts, a community benefit fund would amount to an average of €307,406 per annum. The actual fund will vary around this average from year to year, depending on each year's wind conditions. Initial wind measurements at the Study Area suggest that the proposed Dyrick Hill project could be capable of achieving an above average capacity factor, and therefore a larger community fund.

*“EMPower strongly believe that the local communities in which we propose our projects should benefit most from any associated project community fund”*

For the above example, a potential fund could be divided as per the illustration below. An annual minimum payment of €1,000 could be provided to each household within 1 kilometer of any proposed Dyrick Hill wind turbine. An annual minimum payment of €500 could be provided to each household located between 1 kilometer and 2 kilometers of any final turbine position. 40% of the fund, amounting to approximately €122,962 per year would be allocated to not-for-profit community enterprises, with an emphasis on low-carbon initiatives. The remainder of the fund would be directed towards local clubs, societies, admin and other initiatives. We welcome any suggestions from the community on how a community fund could best be allocated or ideas for suitable local projects that could be supported under this initiative.



€ 70 million<sup>1</sup>

Investment in Irish infrastructure

€ 4.6 million<sup>1</sup>

Total Community Fund Contribution

€ 14.8 million<sup>2</sup>

Approximate County Council Rates Contribution

1 – Example for 10 Turbine project with a capacity factor of 62 MW  
2 – Estimated €8,000 per mega watt installed for 30 year project lifespan





## Contact Us

We welcome conversation, engagement and interaction with you on any aspect of how we propose to progress the Dyrick Hill Wind Farm project and particularly on how we communicate project information to you. If you would like to chat about this proposed project further please contact us via any of the below means.

Website : [www.dyrickhillwindfarm.ie](http://www.dyrickhillwindfarm.ie)

Email : [dyrickhill@emp.group](mailto:dyrickhill@emp.group)

Phone : 01 588 0178

Write : EMPower, 2 Dublin Landings, North Wall Quay, North Dock, Dublin 1

### Project Webinar:

The project team will host the a Dyrick Hill project specific live webinar on **Thursday evening the 07th of April 2022 between 7pm and 8pm**. You can register for the event at [www.dyrickhillwindfarm.ie/webinar](http://www.dyrickhillwindfarm.ie/webinar).

The Webinar will detail the elements discussed in this newsletter. Also, members of the project design team will be available to talk through any aspect of the Dyrick Hill project proposal which you would like to discuss further.

