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# Dernacart Wind Farm

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Information Booklet

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*Considering opportunity,  
promoting engagement,  
striving for sustainability*



**Statkraft**

## Introduction

With a growing general understanding of the impacts of Climate Change and the announcement of the Climate Change & Biodiversity Emergency we are all being challenged to consider the part we play in climate action. The Climate Action Plan 2019 sets out a plan to make Ireland a leader in delivering effective climate action.

It is clear that in order to deliver effective action on climate breakdown, we must embrace new ways of thinking. Presently we use fossil fuels to generate our electricity, heat our homes and run our cars however the majority of people now realise and accept that this needs to change. The development of renewable energy is the foundation upon which effective climate action can be delivered.

Despite the challenges, the low carbon vision for Ireland is a very positive one. Assuming that we achieve what has been set out in the government's Climate Action Plan 2019, we will not only benefit from having taken real and effective climate action, we can also enjoy many economic and social benefits along with providing a more sustainable future.

**Renewable energy is  
critically important for the delivery  
of effective Climate Action**

Each of us now has an obligation to assess our own carbon footprint and each community has the opportunity to assess what renewable energy has to offer, not only for the country, but for their local area. It is important that these facilities not only work well where they are located, but that they also bring real benefits to local people and that they support the economic, social and environmental sustainability of those local areas.

With this proposal, we believe that there exists the potential to develop a wind farm with significant set back distances from houses which would work very well in the local area. We also believe that this proposal has the capacity to bring very real benefits to local people whilst delivering climate action. We would hope that you might consider this project in terms of the challenges being addressed, the appropriateness of the design and the potential to bring benefit to the local area.

## About us - Statkraft

At Statkraft Ireland we believe that a better, cleaner and more sustainable world is possible to achieve and that by working together, we can avoid the worst impacts of climate change. A just transition to a low carbon society for the betterment of all can be achieved and we believe that it is not only possible to maintain the quality of life that we enjoy today, but to enhance it. We believe that it is within the gift of our generation to create an environmentally, socially and economically sustainable future for ourselves, our children and their children to enjoy.

As Europe's largest generator of renewable energy, Statkraft is already playing a significant role in combating climate change. Statkraft Ireland is endeavouring to develop suitable and appropriate renewable energy projects that will bring long lasting benefits, not only to our country and our future generations, but also the local communities in which they are located. We believe that through positive engagement with local communities and the public, renewable energy projects that are socially and environmentally appropriate can be developed. The transition to a low carbon society should be just and as such, how renewable energy projects will work in local communities and the potential benefits that can be brought to those areas is a central consideration for any project being proposed.

## Statkraft Facts

Statkraft is not only involved in hydroelectric, wind and solar energy generation but is also currently pursuing a strategy which includes the develop new businesses within the wider area of decarbonisation including:

- The development of *District Heating*
- Providing solutions for *Electric Vehicle* charging
- The development of grid system services to facilitate the transition to a low carbon electricity grid system
- The development of initiatives in the area of *Biofuels*
- The development of initiatives in the area of *Hydrogen* as an alternative fuel source.

## Climate Change

The urgent need to take effective action on climate change is now well accepted all over the world. The last 5 years form the top 5 of the hottest years on record. Extreme weather events are occurring on a regular basis now and this is projected not only to continue but to get significantly worse. We cannot stop climate change, but we can and must take action to limit global warming in order to avoid the worst effects that climate change can bring.

***“the last 5 years form the top 5 of the hottest years on record”***

## The Scientific Evidence

97% of scientists agree that greenhouse gases and Carbon Dioxide (CO<sub>2</sub>) emissions are directly responsible for this global warming. There is no debate remaining on this or on the fact that we are responsible for what is happening with our climate. It is also accepted that we still (although not for very long) have the chance to make a difference.

For 20 years scientists have warned us of global warming and how it would affect our climate. When 20 years ago the scientific community warned us that we would experience extreme snow, flooding, droughts and storms all in the one year, few people took the threat seriously. Yet we have seen that their computer modelling has been proven correct.

*It is now clear that we need to listen to what climate science is telling us.*

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***“Global warming has to be limited to below 2°C compared to the average temperature in pre-industrial times to prevent the most severe impacts of climate change and possibly catastrophic changes in the global environment” – European Commission on Climate Action***

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## Ireland and Climate Change

People, young and old, across Ireland and Europe are realising that their future quality of life is in the balance. There is a growing understanding that governments alone will not solve this problem and that we cannot bury our heads in the sand. To do this would be to steal an inherent right from our young people – the right to live in a sustainable world.

Despite Ireland currently ranking as one of the worst performing country in the EU on climate action (according to the Climate Change Performance Index), government is now taking action to address climate breakdown. A Climate Change and Biodiversity Emergency has been declared and the Climate Action Plan 2019 has been announced. These are the first steps towards placing Ireland on a path to delivering real climate action.

As individuals, communities and as a nation, we have the ability to shape the future.

Climate change is inextricably linked to how we source and use the energy that we consume in our daily lives. We cannot continue to rely on fossil fuels for our energy needs. How we actively participate in embracing the adoption and development of low carbon technologies, in a way that works, will ultimately form the legacy that our generation leaves behind. We have the opportunity to do the right things and to do them in the right way.

***“There’s one issue that will define the contours of this century more dramatically than any other, and that is the urgent and growing threat of a changing climate.”***

*— U.S. President Barack Obama*

## Renewable energy and climate change

Delivering effective climate action is almost entirely dependent on sourcing our electricity from clean renewable energy sources. Emissions associated with the burning of fossil fuels are the largest contributor to climate change. Electricity generated from renewables does not require the burning of fossil fuels.

### *Renewable energy is the cornerstone of delivering effective climate action!*

Renewable energy allows us to carry out our daily practices of powering our businesses, heating our homes and traveling in a sustainable way that protects our future.

The Climate action plan 2019, sets out goals in terms of changing how we generate and use energy in Ireland. Over the coming decade we will have the opportunity to adopt low carbon technologies in our everyday lives that are based on the use of electrical energy.

With our electricity coming from renewables, we can make a real difference in tackling climate change.

**Climate Action Plan 2019**



**Electricity**  
**70%**

**Electricity generated from renewable sources by 2030**

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**Phase-out Coal and Peat**  
electricity generation



**micro-generation**

Homeowners to generate their own electricity and sell back to the grid under scheme for

## What does wind energy deliver?

Given our position on the edge of the Atlantic, Ireland has one of the best wind energy resources in the world and it currently plays a very significant role in our electricity generation system.

<p><b>Wind energy:</b></p> <ul style="list-style-type: none"> <li>Currently provides up to 65% of our electricity on any given day</li> <li>Accounted for 30% of all the electricity used in Ireland in 2018</li> <li>Modern wind turbines generate electricity at low wind speeds. It does not have to be 'windy'.</li> </ul> <p><b>According to the SEAI, in 2018, Wind Energy saved:</b></p> <ul style="list-style-type: none"> <li>2.7 Million tonnes CO2 emissions. The equivalent emissions of approx. 900,000 cars!</li> <li>1.1 Million tonnes of oil equivalent (Mtoe)</li> <li>€226 Million in imported fossil fuels</li> </ul>	<p style="text-align: center;"> <b>WIND ENERGY AND NATURE</b></p> <p style="text-align: center;"> <b>NO</b> fuel</p> <p style="text-align: center;"> <b>NO</b> greenhouse gases</p> <p style="text-align: center;"> <b>NO</b> air pollution</p> <p style="text-align: center;"> <b>NO</b> water pollution</p> <p style="text-align: center;"> <b>YES</b> clean energy</p>
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## Renewable energy mix

Wind energy can provide for the majority of our energy requirements however we will need to develop other renewables such as solar, biomass etc in order to ultimately eliminate fossil fuels from the system. There is no 'silver bullet' in terms of replacing fossil fuels however wind energy is Ireland's best resource in terms of renewable energy. For more information on this please visit the Dernacart Wind Farm website at [www.dernacartwindfarm.ie](http://www.dernacartwindfarm.ie)

## Dernacart Wind Farm

The proposed Dernacart Wind Farm consists of 8 turbines with a potential output in excess of 40MW of electricity. This would have the capacity to power approximately 30,000 homes with clean green renewable energy. The project will also incorporate a significant community benefit fund which assuming RESS (Renewable Energy Support Scheme) support, will form a multimillion-euro investment opportunity specifically for the local community. Under this scheme an investment opportunity would also be available for people who would like to invest in and get a return from the wind farm.

The area being considered is located to the north west of Mountmellick, just south of Garrymore bog. This area includes the townlands of Dernacart, Forrest Upper and Forrest lower.

### How has this proposal evolved?

The location under consideration was initially identified following a review of areas that could provide suitable distances from houses and which were identified within the Laois County Development Plan. At the initial stages of consideration, designers drafted a project outline that would maximise the wind energy potential of the site. Staying in line with the guidelines, the following initial assumptions were made: The initial distances to houses was taken at 500m (subsequently increased), shadow flicker curtailment was taken at the maximum allowable levels, the turbine height was taken at 169m. The resulting layout consisted of 16 turbines with a potential electricity output of approximately 45MW.

Placing local appropriateness as a fundamental consideration, a review of this design was carried out in terms of commonly received community feedback during which, factors such as distance to houses, number of turbines, shadow flicker and noise were considered. It was found that it was possible to increase the distances to houses, reduce turbine numbers and improve general performance levels of the proposed wind farm by increasing the tip height by 16m. Essentially, the redesign resulted in 8 turbines being dropped from consideration and the distance to houses increased to 740m and over. The design changes are set out in the following table:

	Initial consideration	Current design proposal
Distance to houses	500M	740M
Number of turbines	16	8
Shadow flicker	In line with guidelines	Eliminated – no shadow flicker
Turbine height	169M	185M
Potential capacity (approx.)	45Mw	40Mw
Revised layout benefits	N/a	Further from houses 50% Reduction in turbine numbers Optimal design for general performance Less construction traffic Significant community benefit

Having established a working design layout, environmental surveys were carried out to ensure the suitability of the location. Many factors are considered as a part of the assessment process including the local environment, geology, hydrology etc. These surveys are ongoing and will form part of the planning application once submitted to the planning authority.

In addition to the above we had some initial conversations with people living in the local area regarding how this project could work best and deliver the most benefit possible to the area. As part of this ongoing engagement, we would like people not only to consider the design of the proposal being brought forward but also how funding from the development could play an important role in assisting the development of the area in the coming years.

The more feedback that you provide to us, the more potential this proposal has to be of benefit to you!

## Dernacart Wind Farm at a Glance

- 8 turbines
- 740m and upwards – distance from nearest houses in the community to the nearest turbine
- No Shadow Flicker at any homes in the area
- The capacity to provide clean, green energy to approximately 30,000 homes
- In excess of 40MW of renewable energy for the Irish grid system
- The maximum height would be up to 185m
- All cables would be under ground
- There will be a substation associated with the wind farm
- Associated works will include access tracks, turbine foundations and hardstanding areas, drainage works, temporary site compound, grid systems services, underground electrical and communications cables between turbines and an underground cable to connect the proposed project to the local substation.

## Design Proposal and Next Steps

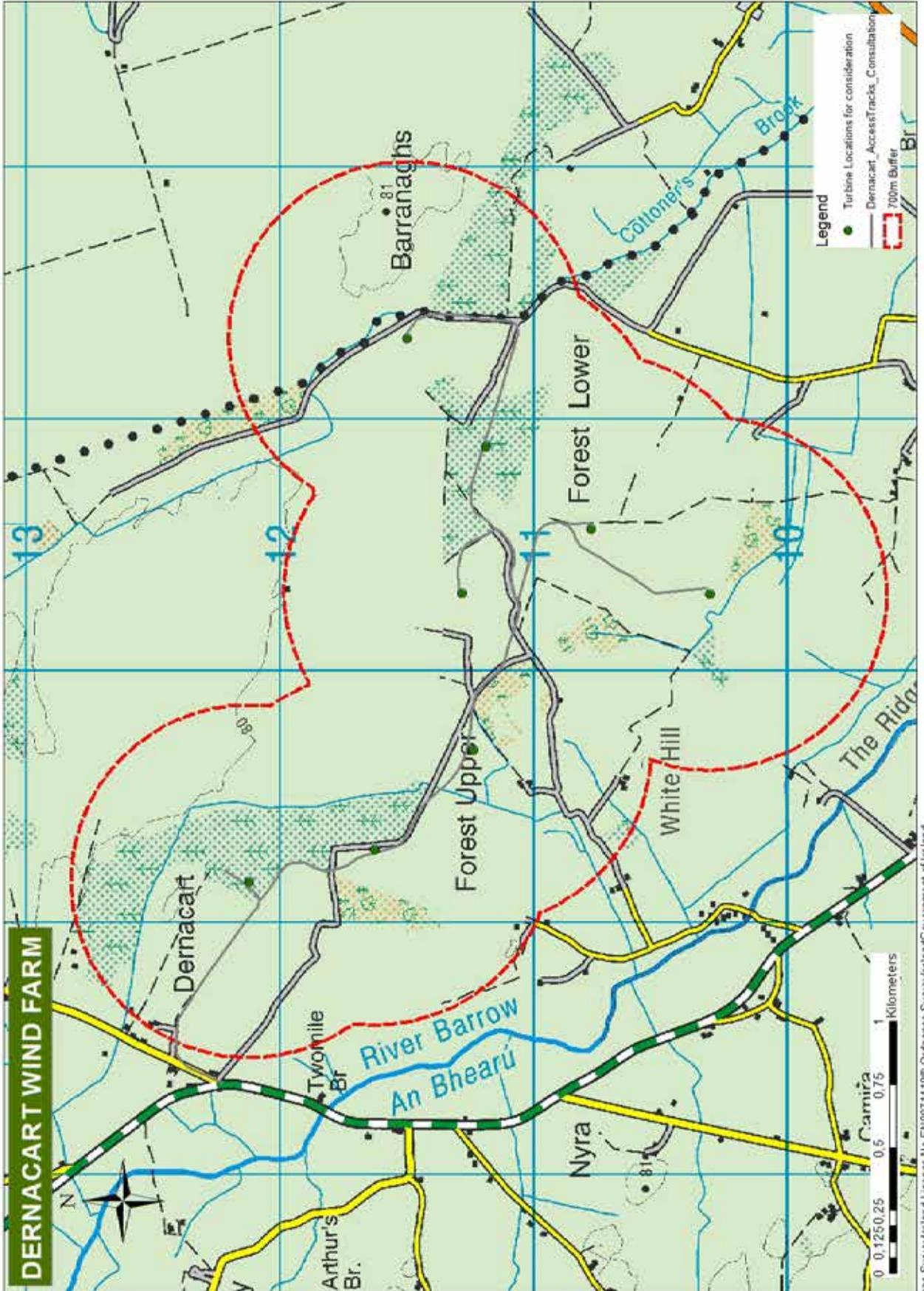
This proposal is still at design stage and as such details of the proposal may change. Our community engagement team will be working in the area to ensure that information is available and that you have an opportunity to discuss the various aspects of this proposal.

Overview of the Design Stages		
Design Stage	% Design	Description
Initial Scoping	0 – 40%	Based on high level information
Preliminary Layout	40% - 80%	Fluid and frequently open to change
<b>Design Layout</b>	<b>80% - 100%</b>	<b>Sufficiently fixed to allow meaningful discussion</b>
Planning Layout	100%	Fixed for presentation to the appropriate planning authority.

As this proposal is being developed (and before it is submitted to the planning authority) we will be providing information on the design layout and on the project in general. We would like to hear how you think that this proposal could work best in the area, how you think it could bring the most benefit to the local area and to discuss any queries or concerns that you might have regarding the proposal.

We would also like to discuss with you the reasons behind why this project is being brought forward for consideration and the issues that we need to consider in terms of the move away from a fossil fuel based electricity system towards renewable electricity.

Our community liaison team will be calling to people in the local area and we would invite you to meet with us. If you would like to contact us to arrange a visit, please do not hesitate to do so on the contact details located at the back of this booklet.



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## Harvesting the Local Benefits of Wind Energy

The development of renewable energy is a natural step in the evolution of locally generated electricity. Harvesting peat for electricity has brought significant economic gain for many areas of the midlands over the years. Ireland is now on a path of decarbonisation and the energy that we are using is switching from fossil fuels to renewables. The potential to extract local economic and societal gains remains with the development of renewable energy projects. All renewable projects that are developed over the coming years will attract a significant community benefit fund for the local area which will often equate to multimillion-euro investment opportunities for local communities.

### Local people know the local needs best

In all communities, it is the local people who know the area best. It is you, the people who live here that know the strengths, weaknesses, desires and aspirations of the area. As an area with a community that has proven its ability to identify opportunities and to develop successful initiatives such as the local Mountmellick Development Association Business Park, we believe that the community benefit fund associated with this project could deliver very significant benefits for the local area.

From initial conversations, it has been highlighted that Mountmellick has a vision of developing initiatives that will allow the area to lead the way on low carbon living. The fundamental principal of our community benefit package is that we seek to work with local people to deliver increased environmental, economic and social sustainability to local communities. We would be very interested in hearing what ideas you have on how this wind farm could deliver the most benefit to you and your local area.

***Through working with the local community, we aim to ensure that the community benefit fund delivers the maximum possible benefit and that it delivers for you. This fund will support the economic, environmental and social sustainability of the local area.***

### The new Renewable Energy Support Scheme (RESS)

In July 2018, the government announced details of the new renewable energy support scheme (RESS) which is aimed at encouraging the development of a *sustainable* renewable energy mix in Ireland. Should this proposal achieve planning consent and secure RESS support, there would be two very significant community opportunities.

1. Community benefit Fund. A very significant increase in community funds. For this proposal it would mean that there would be in the region of €250,000/year available for the local community for the duration of the scheme.
2. Community Investment Opportunity. A community investment opportunity for those living within 10km of the project with priority given to people living within 5km.

### What can the fund be used for?

We are keenly aware that money on its own means nothing. What money does bring is potential, and in order to maximise this potential what is needed is critical assessment and vision.

As part of our consultation process, we would like to challenge everyone to consider the needs of the local area and local people. Some of the questions that may warrant thought are:

- What are the strengths of the area and how could they be built on?
- What challenges do people in the area face?
- What support do local services require?
- What vision do you have for the local area?
- Are there gaps in the services in the local area?
- How could investment be used to support local people?

*We would like you to tell us how you think that this fund should be used!*

## Dernacart Wind Farm Community Benefit Fund

The significant community funds that would be associated with this proposal could be used to support a wide variety of initiatives.

The development of renewable energy is a very positive move for society in general given the role that it plays in effective climate action, but we believe that it is important to go further than this and to deliver the positive benefits of renewable energy to local communities.

Below we have outlined some initiatives that could be considered as part of this proposal. We would welcome, not only your feedback on these, but also any other ideas that you may have.

### What initiatives have other areas considered?

**Direct return** - In many areas it is felt that those living closest to the wind farm should receive a direct return from it. This is based on the principal that locally generated electricity should directly benefit those living in the local area. This is a concept that we support and one that we have worked with other communities on.

**Greener Living Initiatives** - Government has accepted that it will not be able to carry the cost of transitioning our society and way of living towards low carbon solutions. This means that whether through carbon taxes or the costs associated with upgrading our homes and cars, there will be implications for us all. That said, despite initial costs, making the change to low carbon solutions will lower your bills. This initiative is aimed at providing financial support for people to adopt low carbon solutions, reduce their bills and reduce their carbon footprints.

**Support for local community groups** - The community benefit fund can be used to develop local groups that service the needs of the local area. These would include local youth groups, services for the elderly, sporting organisations, schools etc.

**Local educational fund** - For some, the cost of access to further education, be that for themselves or their children, can be prohibitive. Part of the community benefit fund can be used towards assisting local people with these costs.

### What innovative ideas might there be for your area?

#### A Low Carbon Community Initiative

Positioning the Mountmellick area as a leader in the transition to a low carbon society is not an unrealistic or unachievable objective. Should there be a local desire to lead the way on climate change, its urban size and rural hinterland could give the area some significant advantages. Whilst the area has historically had competition from the larger neighbouring towns when it has come to attracting funding and employment, its size and history of community development, coupled with support from renewable energy projects, could allow for the development of an area recognised as being a low carbon leader. This would in turn present an attractive location for future enterprise development.

#### A Greener Farming Initiative

Given that the fundamental behind the development of the wind farm is to tackle climate change, the local farming community could be supported by way of helping them to lower their carbon footprint.

***If you are interested in any of the above, please let us know. These are only some initial ideas on how the community benefit fund could be leveraged to provide long term, lasting benefits for the local area but we would be very interested to hear from you as to what you might think would work in your local area.***

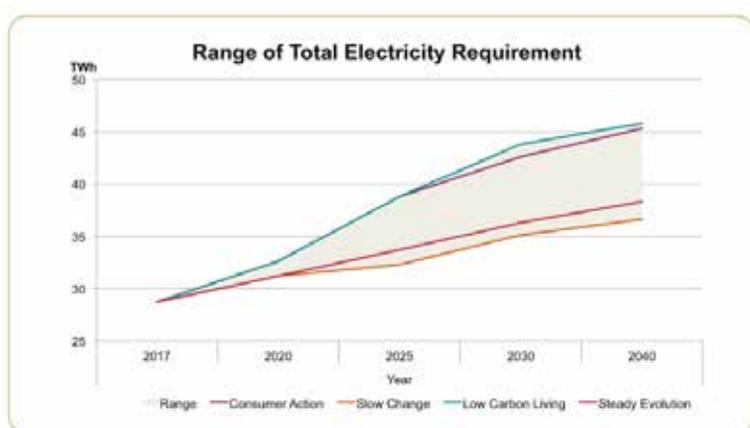
Achieving great things is not the exclusive domain of others – Great things can be achieved when we all work together towards a common goal.

## Energy in Ireland

Ireland has enough energy to power itself however, we imported 66% of our energy in 2017. The vast majority of the energy imported comes in the form of fossil fuels with some electricity coming from the existing interconnector with the UK. We use this energy in our transport, heating and electricity generation systems.

In the coming years, Ireland (along with most of the rest of the world) is going to be working towards increasing the electrification of the heating and transport sectors. What this will mean for our homes is that many people will be moving away from burning oil and coal etc for heating and using electricity based solutions such as heat pumps instead. Likewise, in transport, most manufacturers are moving towards electric vehicles (EVs) and it is predicted that EVs will become mainstream in the near future. **This would all be pointless if our electricity is still generated by burning fossil fuels!**

Developing renewable energy is key to reducing our reliance on fossil fuels and tackling climate change. The amount of renewable electricity required to achieve this will continue to grow. The target is for Ireland to reach a renewable penetration level of 70% of electricity from renewables by 2030.



*The future of our climate is in the balance. Clean, green electricity is the foundation upon which it can be saved!*

Source – EirGrid’s Tomorrows Energy Scenarios Report 2017

As can be seen from the above table, should we be successful in achieving a low carbon living (which is the aim), our electricity requirements are going to significantly increase. What is also interesting, is that even in a scenario where we fail to take effective climate action, and where there is slow change, our electricity requirements are still going to grow to a significant degree.

Ireland’s electricity grid started out as a world leader in renewable energy with the construction and operation of the Ardnacrusha hydroelectric facility in the 1929. Around this time, Ireland had the second lowest consumption of electricity in Europe. The demand for electricity has grown since those times and we have relied predominantly on fossil fuels as our source of energy. It is clear that our electricity demand is going to continue to grow and it is also clear that our electricity generation system needs to revert to its roots in developing a clean, green renewable energy mix.

**Find more info on our Project Website - [www.dernacartwindfarm.ie](http://www.dernacartwindfarm.ie)**

On our project website we have endeavoured provide further project information and to expand on the topics covered in this booklet. There is information on climate change and the challenges that we face along with information on the various different types of renewable energy that we need to develop detailing the benefits and limitation of each. Throughout this website we have facilities for you to contact us with any questions that you may have. Alternatively, you can reach us on the contact details located on the final page of this booklet.

## Climate Change

- The 5 hottest years on record? – the last 5 years
- 14 of the 15 hottest years have been since the year 2000
- The temperature of our oceans significantly influences our weather. Ocean temperatures are rising.
- Ireland is particularly exposed to extreme weather events due to our location on the edge of the Atlantic. We have already experienced widely varying extreme weather events.
- Climate change has the potential to cause catastrophic impacts on our weather
- The Irish government have declared a climate change and biodiversity emergency
- Changes in weather patterns will impact on our homes, businesses, economy and our daily lives.
- The Arctic is expected to be Ice free by the summer of 2040 – Global warming temperatures are given as an average across the globe. The actual temperature increase in the Arctic at present is closer to 3°C. This will impact very seriously on sea levels and weather events in Ireland. Latest studies predict a sea level rise of between 1m and 2m rise before the end of the century
- Carbon is responsible for climate change. Carbon in the atmosphere passed 400ppm for the 1<sup>st</sup> time in 2013. It failed to drop below this level in 2016 and is unlikely to ever again. We may not be able to reverse this but we can work to stop or limit it.
- We are the first generation to see the effects of climate change, and the last that can do anything about it.

## Wind Energy

- Wind energy is our largest and cheapest source of renewable energy
- A cost benefit analysis has shown that between the years 2000 and 2020, wind energy has cost less than €1 per person per year
- Wind energy's entry onto the Irish grid system has displaced expensive and polluting sources of electricity generation
- In 2018, wind energy provided 30% of Irelands total electricity demand
- March 14<sup>th</sup> 2018 wind energy delivered 3, 655MW of renewable electricity
- SEAI figures for 2017 show that Wind Energy avoided:
  - €226million of imported fossil fuels
  - 1.1 Million tonnes of oil equivalent (Mtoe)
  - 2.7 Million tonnes of carbon dioxide (MtCO<sub>2</sub>)
- Wind farms deliver clean, green electricity for Irish homes and businesses
- Wind farms work well in local areas
- Wind farms deliver significant benefits and opportunities for local communities
- Wind farm community benefit funds are delivering millions of euros for communities across the country
- Wind energy is Irelands greatest asset in terms of developing an appropriate renewable energy mix on the Irish grid and combating climate change



## Are you on the right side of climate change?

- Assess your own carbon footprint
- Seek out information on supports for low carbon solutions
- Seek out new opportunities for renewable energy
- Consider all renewable energy proposals
- Make climate action a consideration in your day to day living
- Join a local Sustainable Energy Community or other Climate Action Group



**Your actions do not need to be big and dramatic! Each step on the path brings you closer to your goals.**



## 1 Visit a wind farm

If you want to really experience wind energy for yourself, without any doubts about the quality and accuracy of the information you are getting – visit a wind farm and talk to the people living in that area. Locally, the Mount Lucas Wind Farm consists of over 3 times more turbines (27) which are of a similar scale.

## 2 Visit the following websites

<b>www.iwea.ie</b> Irish Wind Energy Association (IWEA) and <a href="http://www.youtube.com/watch?v=eqKZkcxekR8">www.youtube.com/watch?v=eqKZkcxekR8</a>	<b>www.laoiscoco.ie</b> Laois County Council
<b>www.windenergy.ie</b> Wind Energy Facts	<b>www.epa.ie</b> Environmental Protection Agency
<b>www.seai.ie</b> Sustainable Energy Authority Ireland (SEAI)	<b>www.gsi.ie</b> Geological Survey Ireland
<b>www.un.org/climatechange</b> UN Climate Change Website	<b>www.fisheriesireland.ie</b> Inland Fisheries Ireland
<b>www.climatecouncil.ie</b> Ireland's Climate Change Advisory Council	<b>www.npws.ie</b> National Parks and Wildlife Service

## 3 Talk to our Project Communication Officer

George O'Connor is the local Community Liaison Officer for this project. George has many years' experience in both wind energy and working with communities. Whilst he is very knowledgeable about renewable energy projects, he also has a very good appreciation for the fact that individuals and communities have many different thoughts on what works in different areas. Pat O'Sullivan and Jim O'Reilly work alongside George and we are available to provide information on this proposal or indeed the wider issues of climate action.

We would encourage anyone who has an interest in this proposal to contact us on the below contact details:



• **By phone:**  
George O'Connor – 087 352 1511



• **By email:**  
[enquiries@dernacartwindfarm.ie](mailto:enquiries@dernacartwindfarm.ie)



*"Climate change is a fundamental problem that we must solve and not merely pass on to the generations to come. We can't let our children and grandchildren look back on this critical period in time and say that we failed them."* Mary Robinson

## Privacy Policy

Here at Statkraft we take your privacy seriously and we treat your information with respect. To facilitate environmental safety management systems and to ensure appropriate assessment and development; consultation and domiciliary data within the study area is collected. For more information about how Statkraft processes personal data, please consult our general privacy policy at [https://www.statkraft.co.uk/globalassets/1-statkraft-public/global-menu/privacy-statement-external-2018\\_eng.pdf](https://www.statkraft.co.uk/globalassets/1-statkraft-public/global-menu/privacy-statement-external-2018_eng.pdf) - or you can also direct any specific questions you have to [privacy@statkraft.com](mailto:privacy@statkraft.com)

## Contact Us

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