
Cushaling Wind Farm

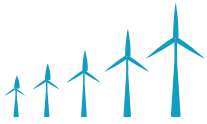
Information Booklet



*Considering opportunity,
promoting engagement,
striving for sustainability*



Statkraft



Introduction

How we generate and use electricity in Ireland is evolving at a rapid pace. There has been much emphasis placed on the development of renewable energy in recent times. This is largely due to a greater appreciation across government and society that effective action has to be taken on climate change and that we need to make considered decisions about where our electricity comes from without delay. Over the next decade, many areas will have the opportunity to consider what the development of renewable energy, and the transition to a low carbon society, could mean for their areas and how they could benefit from it.

By their nature, renewable energy developments be they wind, solar, biomass, biogas etc, will be located in rural areas. It is of the utmost importance that these facilities are developed in a way that works to the benefit of rural communities.

Electricity generation has supported areas of rural Ireland for many years

It is important that these facilities not only work well where they are located, but that they also bring real benefits to the local communities and that they support the economic, social and environmental sustainability of those local areas.

With this proposal we believe that one such opportunity exists. We believe that this proposal presents an opportunity 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 the local area. 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.

We believe that the transition to a low carbon society should be just and as such, how a 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 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”

97% of scientists agree that greenhouse gases and Carbon Dioxide (CO₂) 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.

“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 climate action (http://ec.europa.eu/clima/citizens/eu/index_en.htm)

What this means is that the world must **stop the growth in greenhouse gas emissions by 2020** and reduce them by 60% by 2050 compared with 2010.

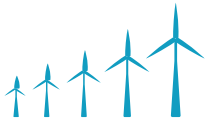
On the 9th May this year, Ireland declared a Climate Change and Biodiversity Emergency. We have all seen the effects of climate change and we have seen the decrease in the numbers of bees and other insects.

Young people across Ireland and Europe are also 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.

The facts on climate change are scary but this is not scaremongering. These are simply the facts.

As individuals, communities and as a nation, we have the ability to shape the future. The solutions to the challenges that we face are available to us. How we develop these solutions and how we actively participate in making sure that the development of low carbon technology is achieved in a way that works, will ultimately form the legacy that our generation leaves behind us. 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



A natural step in the evolution of locally generated electricity

Locally generated electricity has brought many benefits to the area of North Offaly. Many jobs were brought to this area through the harvesting of peat and there has been a significant economic gain from the production of electricity. Electricity generation in Ireland is transitioning and the energy that we are using, is switching from fossil fuels including peat and coal to renewable forms of energy. This transition is our best way of taking effective action on climate change.

The potential to extract local economic and societal gain remains with the development of renewable energy projects such as wind farms. Areas that develop renewable energy projects will have the potential to benefit from substantial community benefit funds which will often equate to multi-million-euro investments in local rural areas. At Statkraft, we believe that local communities should play a major role in determining how these funds should be used to maximise the benefit in the local area.

Locally generated electricity can continue to support locally based employment and locally based community groups!

The communities in the area around the proposed Cushaling Wind farm have an opportunity to consider such a renewable project and how, if granted planning permission, this proposal could make a real difference to the local area.

Further to initial consideration and following conversations with people in the local area, there would appear to be a desire for the support of local community groups and the development of new indigenous local industry which would support local employment.

We would like you to tell us how you feel the local area could benefit from this proposal

The proposed Cushaling Wind Farm has the potential to assist in delivering initiatives to that ensure that locally generated electricity will continue to support local communities. This proposal has the potential to provide the youth in the area with a better future and to extract local gain that can provide benefit for all.

Developing alternative industries and initiatives may not be straight forward, but with assistance and funding from renewable energy facilities, we believe that it is possible.

What is being considered?

The proposed Cushaling Wind Farm consists of 9 turbines with a potential output of up to 45mw of electricity and would have the capacity to power over 32,500 homes with clean green renewable energy. Associated with this project will be a significant community benefit fund which assuming RESS (Renewable Energy Support Scheme) support would form a multimillion euro investment opportunity specifically for the local area. 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 centers around the townland of Cushaling and is in the hinterland of the Cushaling Power Station. This area includes the townlands of, Kilcumber, Cloncant & Cushaling in County Offaly and one in the townland of & Ticknevin in Co. Kildare.

How has this proposal evolved?

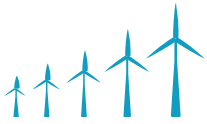
At the initial stages of consideration of this proposal, designers drafted a layout that would maximise the wind energy potential of the site. Staying in line with the guidelines, the following initial assumptions were made: The initial distances to houses was taken at 500m (subsequently increased to 1km), shadow flicker curtailment was taken at the maximum allowable levels, the turbine height was taken at 175m. The resulting layout from this exercise consisted of 14 turbines with a potential electricity output of 60mw.

Having established a theoretical design that would maximise energy output, feedback that is commonly received in terms of local considerations was taken in board along with environmental considerations etc. Taking factors including increased set back, shadow flicker and environmental factors into account, the design team reviewed the layout in order to achieve a design proposal that placed the appropriateness in terms of the suitability from a local perspective as a fundamental in the design criteria. Following this review, the design changes set out in the table below were made:

	Initial Consideration	Current Design Proposal
Distance to houses	500m	1000m (1km)
Shadow Flicker	In line with guidelines	Eliminated – No Shadow Flicker
Number of turbines	14	9
Turbine Height	175m	185m
Potential Capacity (approx.)	60mw	45mw

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!



Cushaling Wind Farm at a Glance

- 9 turbines
- 1km set back from houses
- No Shadow Flicker at any homes in the area
- Up to 45mw of renewable energy to the Irish electricity grid system
- The maximum height would be up to 185m
- All cables would be under ground
- The wind farm substation would be in the area of the Cushaling Power Plant
- An associated battery storage facility will be located within the substation compound
- Associated works will include access tracks, turbine foundations and hardstanding areas, drainage works, temporary site compound, underground electrical and communications cables between turbines and an underground cable to connect the proposed project to the local substation

If granted planning permission and developed, some of the benefits would include:

- Capacity to provide clean renewable energy for over 32,500 homes
- If successful in securing the new Renewable Energy Support Scheme (RESS), this wind farm would attract a community benefit fund in the region of €275,000/year for the local area for the duration of the scheme.

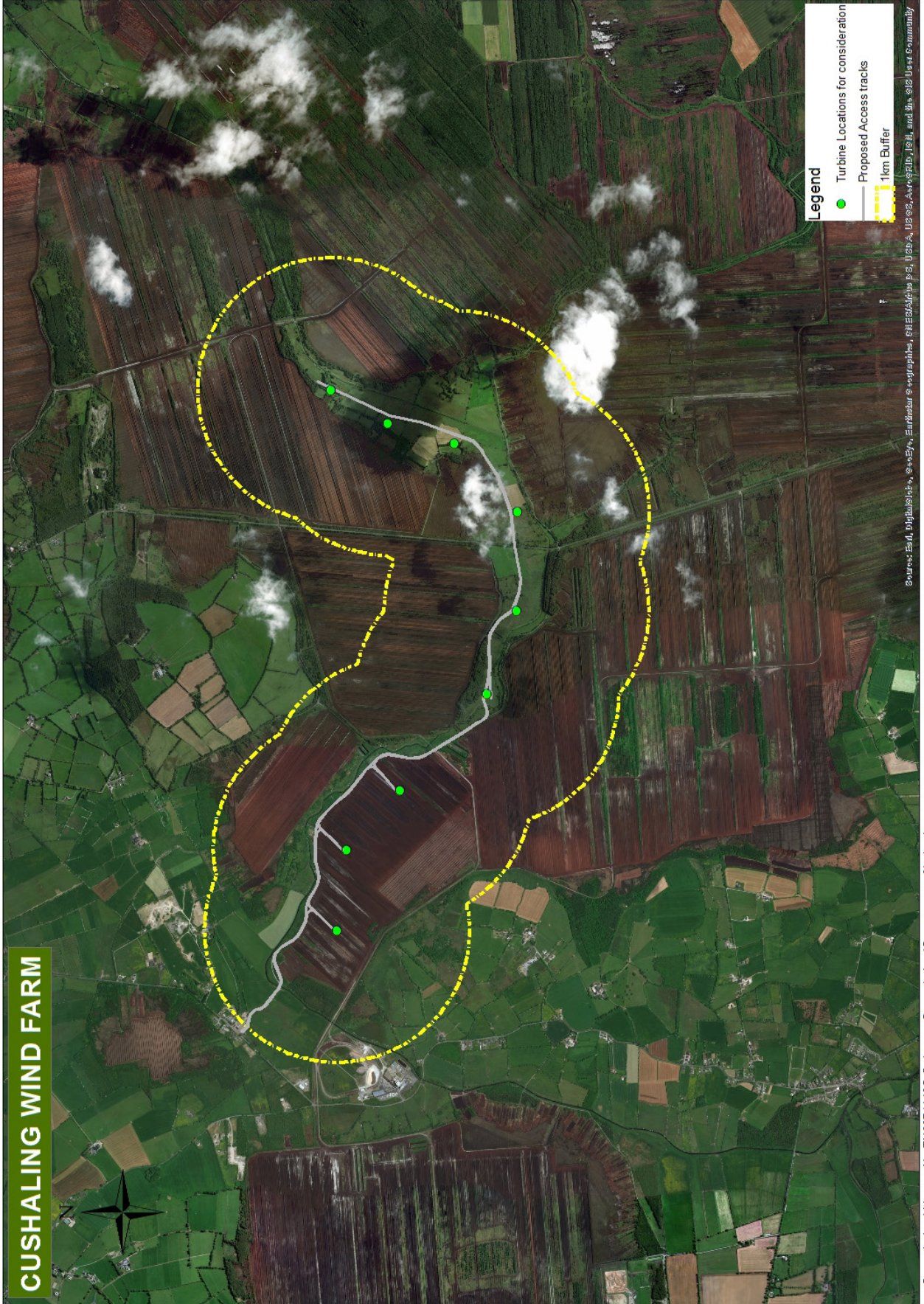
Design Proposal and Next Steps

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 have your say.

As this proposal is being developed, and before it is submitted to the planning authorities, we will be providing further information on what is being considered. We would like to hear how you think this proposal could work best in the area and how it could form a development that would deliver real benefits to the local community. We are interested in any queries or concerns that you might have.

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.





Harvesting the Benefits of Wind Energy

The transition from harvesting energy from peat, to harvesting the energy of the wind is one that can (and should) bring significant long-term benefits for the local area. We believe that each local area has its own needs and requirements in terms of the design and structure of community benefits. This proposal if granted planning permission could deliver a multimillion-euro community fund for the local area.

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 in this area that know the strengths and weakness of the area. In some communities, there may be a lack of support for the youth. In other communities there may be a lack of facilities for the elderly. In some cases, it may be employment prospects or alternatively commuting for work may be an issue. Rural transport can often be an issue.

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 €275,000/year available for the local community.
- 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 challenges do people in the area face?
- What are the strengths of the area and how could they be built on?
- What support do local services require?
- What threats will face the local area in the coming decade?
- 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!

Considering these questions may lead you to identify opportunities for your local area. Should this proposal receive planning consent, we will work with you to develop these ideas and achieve your goals. Should it not, you will still be able to work towards making your area a better place to live in and improving your quality of life albeit without the significant financial assistance that this proposal could offer.

We would like to get your thoughts on how this proposal could deliver for you in your local area.

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 have accepted that they 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 upgrade their homes, 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 can 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 local enterprise development initiative

Taking into consideration the impact that the move away from peat harvesting may have in the North Offaly area, we believe that there may be an opportunity for this fund to be used to develop local enterprise initiatives. The IDA, Teagasc and Fáilte Ireland could be engaged with to consider how this might be achieved. Part of this may be to establish a fund to support local business start-ups.

A Greener farming initiative

Given that the fundamental behind the development of the wind farm is to tackle climate change, it would seem reasonable to support the local farming community 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.

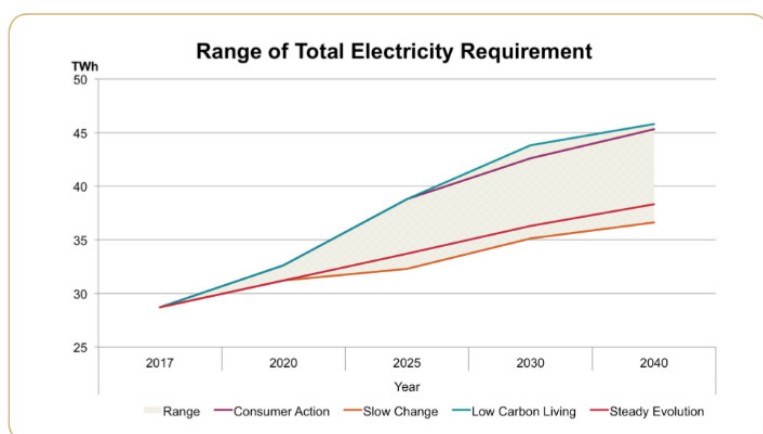
Achieving great things is not the exclusive domain of others – Great things can be achieved when we all work together towards a common goal.

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. It is considered that Ireland can 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.cushalingwindfarm.ie

On our project website we have endeavoured to expand on the topics covered in this booklet. There is further information on climate change and the challenges that we face along with more information on the various different types of renewable energy that we need to develop along with the benefits and limitation of each. Throughout this website we have facilities for you to contact us with any questions that you may have along with the contact details of our community engagement team.

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 1st 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
- In 2018, wind energy provided 30% of Irelands total electricity demand
- March 14th 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 (MtCO₂)
- 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.





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 of 3 times as many more turbines (27) but at a similar scale.

2 Visit the following websites

www.iwea.ie Irish Wind Energy Association (IWEA) and www.youtube.com/watch?v=eqKZkcxekR8	www.offalycoco.ie Offaly County Council
www.windenergy.ie Wind Energy Facts	www.epa.ie Environmental Protection Agency
www.seai.ie Sustainable Energy Authority Ireland (SEAI)	www.gsi.ie Geological Survey Ireland
www.un.org/climatechange UN Climate Change Website	www.fisheriesireland.ie Inland Fisheries Ireland
www.climatecouncil.ie Ireland's Climate Change Advisory Council	www.npws.ie National Parks and Wildlife Service
	www.kildarecoco.ie Kildare County Council

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@cushalingwindfarm.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 - or you can also direct any specific questions you have to privacy@statkraft.com

Contact Us

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