# Submission re: National Planning Framework Ireland 2040 Our Plan

Just like ourself 20 years ago, most people associate wind farms with renewable and clean energy. Environmentally friendly, no emissions, no CO2 and no radiation that causes any damage. Another association that immediately comes to mind with wind energy: ... the wind is free, it costs nothing. Today the knowledge about wind energy has multiplied. Experiences were made over the course of time, which had not even been considered at the beginning of this new technology.

Our submission to the National Planning Framework Ireland 2040 Our Plan:

- 1. no more onshore windfarms
- 2. no more subsidies for windfarms

Yours sincerely
IWEAG – Inishowen Wind Energy Awareness Group – Chairwoman
Mary Crumlish
Amari House, Mossy Glen, Inishowen, Co. Donegal



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http://www.donegaldaily.com/2012/03/09/inishowen-residents-snubbed-by-planning-application-for-windfarm/

# INISHOWEN RESIDENTS SNUBBED BY PLANNING APPLICATION FOR WINDFARM

by stephen

Thousands of residents across Inishowen couldn't object to a planning application for a windfarm – because they didn't know about the application.

The planning application for the wind turbines was not advertised locally and went through the five week consultation period almost completely unnoticed.

The application was advertised in the Irish Times but not in any local news oultlet.

Now Sinn Féin County Councillor Jack Murray says Donegal County Council must review the approved list of media outlets that notifications of planning applications for wind turbines and other large structures can be placed.

Cllr Murray said "I asked my colleague Pádraig Mac Lochlainn to submit a Parliamentary Question to the Minister for Environment in relation to the suitable newspapers in which a planning notification for large structures can be placed.

"I did so as a recent planning application for two wind turbines in Inishowen was placed in the 'Irish Times' and was not noticed by anyone who lived in the vicinity of the proposed wind farm.

"By the time the local community had become aware of the application, they had missed the five week consultation period.

"Legislation states that notification must be placed on a road near the proposed site and in one newspaper from an approved list of newspapers – The Irish Times is one of Donegal's list of approved papers.

"This allows an application for a large structure to slip in under the radar as very few people will search for local planning applications in a national newspaper.

"I intend to submit a motion to the next county council meeting calling for the list of newspapers to be reviewed so that notification must be placed in at least one approved local paper," he said.

He says he will raise the matter at the next Inishowen Electoral Area meeting.

He will ask that planning applications for any new development which is larger than an individual dwelling be brought before local councillors so that they can inform the local community.

"I am hopeful that, if these new measures are put in place, no application for a large structure can go unnoticed by local residents."

#### 28.07.2012 Youtube

# https://youtu.be/R931N1rv7Xw

# **Europe's III Wind**

by Preserve Lenox Mountain

This film is about the people who live near existing and planned wind farm developments, and their objections to them. These views have been dismissed as selfish NIMBYism by government, climate change activists and energy companies, but have critics of wind energy really been answered? Sponsored by the Europe for Freedom and Democracy group in the European Parliament.

#### More info at

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#### 23.09.2012 Business Insider

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# Germany's Wind Power Chaos Should Be A Warning To Everyone

by Christopher Booker, The Telegraph

Germany has gone further down the 'renewables' path than any country in the world, and now it's paying the price.

On Friday, September 14, just before 10am, Britain's 3,500 wind turbines broke all records by briefly supplying just over four gigawatts (GW) of electricity to the national grid. Three hours later, in Germany, that country's 23,000 wind turbines and millions of solar panels similarly achieved an unprecedented output of 31GW. But the responses to these events in the two countries could not have been in starker contrast.

In Britain, the wind industry proclaimed a triumph. Maria McCaffery, the CEO of RenewableUK, crowed that "this record high shows that wind energy is providing a reliable, secure supply of electricity to an ever-growing number of British homes and businesses" and that "this bountiful free resource will help drive down energy bills". But in Germany, the news was greeted with dismay, for reasons which merit serious attention here in Britain.

Germany is way ahead of us on the very path our politicians want us to follow – and the problems it has encountered as a result are big news there. In fact, Germany is being horribly caught out by precisely the same delusion about renewable energy that our own politicians have fallen for. Like all enthusiasts for "free, clean, renewable electricity", they overlook the fatal implications of the fact that wind speeds and sunlight constantly vary. They are taken in by the wind industry's trick of vastly exaggerating the usefulness of wind farms by talking in terms of their "capacity", hiding the fact that their actual output will waver between 100 per cent of capacity and zero. In Britain it averages around 25 per cent; in Germany it is lower, just 17 per cent.

The more a country depends on such sources of energy, the more there will arise – as Germany is discovering – two massive technical problems. One is that it becomes incredibly difficult to maintain a consistent supply of power to the grid, when that wildly fluctuating renewable output has to be balanced by input from conventional power stations. The other is that, to keep that back-up constantly available can require fossil-fuel power plants to run much of the time very inefficiently and expensively (incidentally chucking out so much more "carbon" than normal that it negates any supposed CO2 savings from the wind).

Both these problems have come home to roost in Germany in a big way, because it has gone more aggressively down the renewables route than any other country in the world. Having poured hundreds of billions of euros in subsidies into wind and solar power, making

its electricity bills almost the highest in Europe, the picture that Germany presents is, on paper, almost everything the most rabid greenie could want. Last year, its wind turbines already had 29GW of capacity, equivalent to a quarter of Germany's average electricity demand. But because these turbines are even less efficient than our own, their actual output averaged only 5GW, and most of the rest had to come from grown-up power stations, ready to supply up to 29GW at any time and then switch off as the wind picked up again.

Now the problem for the German grid has become even worse. Thanks to a flood of subsidies unleashed by Angela Merkel's government, renewable capacity has risen still further (solar, for instance, by 43 per cent). This makes it so difficult to keep the grid balanced that it is permanently at risk of power failures. (When the power to one Hamburg aluminium factory failed recently, for only a fraction of a second, it shut down the plant, causing serious damage.) Energy-intensive industries are having to install their own generators, or are looking to leave Germany altogether.

In fact, a mighty battle is now developing in Germany between green fantasists and practical realists. Because renewable energy must by law have priority in supplying the grid, the owners of conventional power stations, finding they have to run plants unprofitably, are so angry that they are threatening to close many of them down. The government response, astonishingly, has been to propose a new law forcing them to continue running their plants at a loss.

Meanwhile, firms such as RWE and E.on are going flat out to build 16 new coal-fired and 15 new gas-fired power stations by 2020, with a combined output equivalent to some 38 per cent of Germany's electricity needs. None of these will be required to have "carbon capture and storage" (CCS), which is just an empty pipedream. This makes nonsense of any pretence that Germany will meet its EU target for reducing CO2 emissions (and Mrs Merkel's equally fanciful goal of producing 35 per cent of electricity from renewables).

In brief, Germany's renewables drive is turning out to be a disaster. This should particularly concern us because our Government, with its plan to build 30,000 turbines, to meet our EU target of sourcing 32 per cent of our electricity from renewables by 2020, is hell-bent on the same path. But our own "big six" electricity companies, including RWE and E.on, are told that they cannot build any replacements for our coal-fired stations (many soon to be closed under EU rules) which last week were supplying more than 40 per cent of our power – unless they are fitted with that make-believe CCS. A similar threat hangs over plans to build new gas-fired plants of the type that will be essential to provide up to 100 per cent back-up for those useless windmills.

Everything about the battle now raging in Germany applies equally to us here in Britain – except that we have only fantasists such as Ed Davey in charge of our energy policy. Unless the realists stage a counter-coup very fast, we are in deep trouble.

### Only warmists could pass this A-level

While Michael Gove tries valiantly to remedy our dysfunctional exam system he might take a look at some recent papers, such as that set last June for A-level General Studies students by our leading exam body, AQA. Candidates were asked to discuss 11 pages of "source material" on the subject of climate change. Sources ranged from a report of the UN's Intergovernmental Panel on Climate Change to The Guardian, all shamelessly promoting global warming alarmism. One document from the Met Office solemnly predicted that "even if global temperatures only rise by 2 degrees C, 30-40 per cent of species could face extinction". A graph from the US Environmental Protection Agency showed temperatures having soared in the past 100 years by 1.4 degrees – exactly twice the generally accepted figure.

The only hint that anyone might question such beliefs was an article by Louise Gray from <a href="The Daily">The Daily</a> Telegraph, which quoted that tireless campaigner for the warmist cause, Bob Ward of the Grantham Institute, dismissing all sceptics as "a remnant group of dinosaurs" who "misunderstood the point of science".

If it were still a purpose of education to teach people to examine evidence and think rationally, any bright A-level candidate might have had a field day, showing how all this "source material" was no more than vacuous, one-sided propaganda. But today one fears they would have been marked down so severely for not coming up with the desired answers that they would have been among the tiny handful of candidates given an unequivocal "fail".

### 8 October 2012 Independent

http://www.independent.co.uk/environment/green-living/uk-to-outflank-objectors-with-wind-farms-in-ireland-8202948.html

# UK to outflank objectors with wind farms in Ireland

by Oliver Wright

Ministers are investigating a proposal to outsource the production of wind power to Ireland.

Faced with fervent and growing opposition to onshore wind farms in the UK, Tory MPs are backing a plan to site those facilities in Ireland – and then export the renewable energy generated back to Britain using cables running under the Irish Sea, to Wales.

A company has already sourced land to build more than 700 turbines in countryside to the west of Dublin. They would have the capacity to supply power for more than three million homes by the end of the decade – the equivalent of 10 per cent of the UK's renewable energy targets.

More importantly, such a development could take the pressure off the need for many more wind farms in the British countryside and save David Cameron from the wrath of his backbenchers who are in revolt at the Government's current plans. The scheme, called Greenwire, is the brainchild of an American company called Element Power.

It says it has already got the backing of the Irish government for its scheme, which could be up and running by 2018.

It says the Irish have a less reactionary attitude to onshore wind turbine developments than the British and points out that it would provide significant economic developments to the republic, while solving the UK Government's political conundrum. "From the Tory side, this is something that addresses their concerns about further onshore wind farm development, while at the same time bringing them closer to green growth," said Mike O'Neill, the president of Element Power. "And in Ireland people appear to be less concerned about the construction of wind farms and place greater emphasis on the economic growth they can bring."

So far the sticking point appears to be the need for British ministers to agree with their Irish counterparts that renewable energy generated in Ireland can count towards the UK's renewable energy targets.

Earlier this year the Irish Energy Minister, Pat Rabbitte, and his UK counterpart, Charles Hendry, agreed a formal Memorandum of Understanding on renewable energy trading between the two countries to be in place by the end of the year. Such an agreement would need to be written into the Energy Bill currently going through Parliament.

The company has met Ed Davey, the Climate Change Secretary, and this week will meet a

series of Tory ministers and MPs to press its case.

Coalition tensions over green issues have increased since last month's reshuffle. Owen Patterson, who has campaigned against wind farms in his own constituency, is believed to have clashed with Mr Davey on Coalition policy.

It comes after more than 100 Conservative backbenchers wrote to the Prime Minister earlier this year demanding he "dramatically cut" the £400m in annual subsidies paid to onshore wind developers.

But what is yet untested is the reaction of the Irish people to the plan. Wind may be an unlimited resource but the countryside is not and some experts predict resentment of what could be perceived as a fresh British land-grab.

http://www.thejournal.ie/high-court-renewable-energy-674469-Nov2012/

# Engineer challenges legality of renewable energy plan in High Court

Pat Swords claims the public have been denied their legal right to participate in planning and funding decisions for green energy projects.

A CHEMICAL ENGINEER has called for a judicial review of the Renewable Energy Action Plan which he claims is in breach of a UN agreement linking environmental and human rights.

Pat Swords, a Dublin-based chemical engineer who has been involved in implementing environmental plans for several years, was recently granted permission in the High Court to go forward with three points in a statement of grounds for application of judicial review.

Swords is questioning the legality of Ireland's renewable energy programme and its granting of planning permission and funding for environmental projects without public participation in decision making.

He claims that the government has an obligation, under a UN agreement called the Aarhus Convention, to include the public in decisions relating to

environmental project plans as well as expenditure.

"There is a major problem with our planning system in this country,"

Swords told The Journal.ie.

The environment is important, it does not belong to the state and therefore the public have to be given rights to participate in it and in the decisions that are made.

The engineer also asserts that a full and comprehensive consideration of the effects of projects, the benefits and the alternatives should be carried out.

"There have been no proper technical, environmental or economic assessments carried out so we do not know the effects of the projects that are already in place, like what greenhouse gases have been saved or will be saved under future plans," he said. "We also don't know the alternatives because they haven't been explored."

#### Ignored

The Irish government ratified the 1998 Aarhus Convention in June this year though it was promised by the Green Party over four years ago.

Swords said the convention is now a "binding part of European law and it is being ignored by this government."

Last may Swords was successful in taking a case under the Aarhus Convention against

the EU over its adoption of a 20 per cent target for all renewable energy by 2020.

A compliance committee of the UN Economic Commission for Europe (UNECE) found in his favour and said that the EU was in breach of the convention in setting the target "without taking account of the fact that citizens should have been consulted, in accordance with rules laid down by the convention".

"The convention means the public have a right to information and

participation on decision making and yet in Ireland there has been no assessment of noise levels for people living in the area of projects, or on the health impacts for human beings, the effect on flora and fauna etc.," Swords said.

The engineer said this issue is particularly poignant now with electricity bills soaring and if he is successful it could mean project planning would be more competitive.

"Just because you put a green label on it doesn't mean you can put extortionate costs on it as well," he added.

#### "Can of worms"

If Swords is successful in his court action, it could mean a halt to all projects under the renewable energy plan until assessments are completed.

"It will open up a can of worms and it will delay future plans but all of this should have been done before," he said

"I'm not saying that my ideas are better than theirs, I'm just saying that you have to follow the law and that is the law. Better governance improves the situation for everyone."

When contacted by *The Journal.ie* in relation to Swords' court action, the Department of Communications, Energy and Natural Resources said it had no comment to make.

#### 08.03.2013 Irish Examiner

http://www.irishexaminer.com/breakingnews/ireland/windfarms-about-creating-wealth-for-ireland-minister-says-587341.html

# Windfarms 'about creating wealth for Ireland', minister says

The Energy Minister Pat Rabbitte has urged those concerned about proposed windfarms for the midlands to view them in a positive light.

Opposition has been growing across Meath, Westmeath, Offaly, Laois and Kildare to plans to erect up to 2,000 wind turbines.

The power generated is mainly for export to the UK.

Two companies, Mainstream Renewable Power and Element Power are behind the biggest project, which will see some of the world's largest wind turbines erected across the midlands.

Bórd na Móna is also planning a windfarm at Mount Lucas in Co Offaly.

Speaking to Midlands radio, Rabbitte said: "This is about jobs and creating wealth for Ireland.

"Why is the emphasis on the protest and not that we are creating new jobs in a sector that is renewable and brings down the cost of energy to Ireland? It creates a whole new possibility, it's a sector that wasn't there before."

#### 19.03.2013 Irish Examiner

http://www.irishexaminer.com/ireland/families-bid-to-sue-wind-farm-operator-225867.html

# Families bid to sue wind farm operator

by Michael Clifford

A group of families in a north Cork village are suing a wind farm operator in a landmark case, claiming the huge turbines are adversely affecting their health.

The seven families from Banteer claim they have been severely impacted, particularly through noise pollution, since the turbines began operating in Nov 2011.

If the action is successful, it is expected to lead to a number of others on similar grounds. Already, cases are being prepared by householders in Wexford and Roscommon.

The Banteer action is being taken by the "Shivnen family and others", and includes households where there are families with children, couples, and, in one case, a single occupant.

The case is listed for the High Court and has already come before Judge Kevin Feeney. It is currently at the discovery phase, with a likely hearing date in the autumn.

The turbines were manufactured and are operated by a German company, Enercon Services, which has a base in Tralee, Co Kerry. The company has been installing turbines in this country since 1998.

The key factors in the legal action are expected to be planning regulations under which wind farms are installed and evidence of any alleged ill health effects.

So far, no legislation has been passed in relation to wind turbines. Planning is governed largely by guidelines that date from 2006, but which are based on technological capabilities dating from 1998.

The guidelines are being reviewed by the Department of the Environment, which is expected to report in the coming months.

The Banteer action is the first of its kind in this country, and comes at a time when the exploitation of wind energy is coming to the fore in public policy.

One such case has been recorded in the UK, concerning homeowner Jane Davis, who sued on the basis of the adverse impact from a nearby farm on her home and her health. That case was settled out of court and included a confidentiality clause.

The setting of EU targets for renewable energy rather than fossil fuels is driving moves towards wind energy, and most new developments are onshore rather than offshore due to cost.

A major development in the Midlands is under way in which 2,000 turbines are due to be installed to generate electricity which will be exported to Britain. The plan, undertaken by two energy companies, has caused uproar in some quarters, but dozens of farmers are believed to have signed up to allow their land to be rented out to house the turbines.

A number of public meetings have been called across the Midlands by residents and concerned interests about the proposal.

At a recent meeting in Bloomfield House, it emerged that a couple living near Roscommon town were forced to leave their home because of the effect a nearby turbine was having on their health.

Tim Cowhig, CEO of one of the developers, Element Power, said there is no scientific evidence to link wind turbines to ill health. "My view is that people need proper information and a proper national debate. We haven't had that to date," he said.

Last year, the Noise and Health journal published results from a US survey which compared sleeping patterns between a group living within a mile of a wind farm, and another beyond that distance.

The study suggested that the former group's sleeping was directly impacted by the operation of the turbines. It is believed to be the first study to show a relationship between the wind farms and what the journal calls the "important clinical indicators of health, including sleep quality, daytime sleepiness, and mental health".

#### 09.04.2013 The Irish Times

http://www.irishtimes.com/news/environment/opposition-mounts-to-building-of-wind-farms-in-midlands-1.1352942

# Opposition mounts to building of wind farms in midlands

# Roscommon couple take issue with contentious UK study

by Ronan McGreevy

The proposals to build 2,300 wind turbines in the midlands to serve the UK market is already proving to be contentious even before a single one is erected.

Opponents are objecting on two main grounds. The first is the aesthetic principal of having these artificial leviathans in places often of great natural beauty. The other is noise.

Just as the wind makes noise, so too do wind turbines. The louder the wind, the louder the noise.

Noise limits for wind farms are governed by Energy Technology Support Unit (ETSU-R-97) guidelines introduced by the UK Government in 1997 and adopted here.

They recommend a lower fixed limit of 45 dB (decibels), about the equivalent of a very quiet conversation or the sound your hard drive makes as it warms up, or a maximum increase of 5dB above background noise. This is important as a gale force wind will generate up to 80dB naturally.

<u>Martin Lester</u> from the UK Institute of Acoustics (IoA) says noise should not be a problem if a wind turbine is set back at least 250m-300m from a house, but it depends on the number of turbines and their height.

The ones proposed for the midlands are 185m high. Because they are bigger, they will generate more noise. Paradoxically they are – by virtue of their height – further away from houses than smaller turbines.

Mr Lester, who lives in <u>Northern Ireland</u> and carries out noise assessment on wind turbines for planners, said "in general it shouldn't be a problem" if they are set back far enough from homes. "You'll get certain turbines that are noisier than others or if they have certain characteristics, they need to be set back further."

How far, though, is a matter of contention.

Contentious UK noise research

In the first academic study of its kind, the University of Nottingham carried out research among more than 1,000 British households living within a kilometre of a small wind turbine.

They measured the noise from the turbines, used computer modelling to predict what a

resident should be able to hear and then questioned local people about the impacts of the turbine using a questionnaire.

About one in 10 of those who responded reported health problems such as insomnia, but not for the reasons one might believe.

The researchers concluded that it was not the turbines that caused the problems, but the personalities of those involved.

Those who exhibited signs of neuroticism in the questionnaires that accompanied the survey were more likely to complain of noise.

The personality traits measured were neuroticism (the propensity to be more anxious), negative affectivity (the propensity to feel negative emotions), and also frustration intolerance (sensitivity towards frustrations, discomforts and annoyances).

Dr <u>Claire Lawrence</u> from the University's School of Psychology said: "We measured the actual noise from the turbines and used environmental noise modelling software that helped us to predict how much sound is actually heard by those living in the vicinity. We found there was no relationship between the 'real' level of noise and reports of ill health."

The study is already contentious, not least because it only deals with small turbines, while the ones planned for the midlands are monsters in comparison.

Standing some 735m as the crow flies from a 100m high turbine, the sound of a wind turbine in fairly windy conditions is like a persistent, swishing noise which competes with the noise of the wind itself for attention.

'A droning, pulsating noise'

The noise is very real to Michael and <u>Dorothy Keane</u>, who live in the shadow of wind turbines in rural Co Roscommon. Their house is a kilometre and a half from a main road. They retired to their isolated cottage in 2004 not realising that planning permission had been granted in their area for three turbines.

In 2011, a company called <u>Gaelectric</u> erected two turbines within viewing distances of their home.

Inside their home, the turbines sound like the distant rumble of a washing machine in the basement when you are in the top floor, but <u>Michael Keane</u> said that noise was only a "one or a two out of four" in comparison with how noisy the turbines can get.

Dorothy Keane said there are certain people sensitive to the noise of turbines "and it seems I'm one of those people. I can hear this thing all of the time in my head. It is like a jitteriness in my chest, a droning pulsating noise all the time."

She describes it as being like the sound of "two freezers in my head at all time. All we want to do is get back to where we were and get back to a point where we can go to bed without a sleeping tablet. Going to bed at night is like going into a torture chamber".

The couple have gone to extraordinary lengths to block out the noise. Their bedroom window has a duvet and four layers of curtains, but still it creeps into their house and into their heads.

### Criticism of study

Mr Keane is scathing of the University of Nottingham study. "These are <u>Mickey Mouse</u>turbines that wouldn't power three electric heaters. Why would you waste academic time on turbines as small as these? There's simply no comparison with what we have and what is proposed for the midlands."

A representative from Gaelelectric visited the couple and said they were committed to resolving any issues.

They have promised to appoint two independent consultants, one for themselves and one for the Keanes. The couple are now trying to source a sufficiently qualified consultant to carry out acoustic tests.

Mr Lester said an amount of research has been done into the phenomenon of people who are particularly sensitive to the noise of wind turbines, but there have been no concrete conclusions.

"I know a number of people have very strong feelings about it. They consider it does exist. It may relate more to wind farm rather than individual turbines," he said.

"If you identify a noise which is an unwanted sound, then the human brain can pick that out even when it is, as a measured sound level, very much quieter than everything else that is going on. You will get people who think that a certain noise they can hear is a major problem."

### 27.08.2013 Independent

http://www.independent.co.uk/news/uk/politics/exclusive-un-ruling-puts-future-of-uk-wind-farms-in-jeopardy-8786831.html

# Exclusive: UN ruling puts future of UK wind farms in jeopardy

by Margareta Pagano

Plans for future wind farms in Britain could be in jeopardy after a United Nations legal tribunal ruled that the UK Government acted illegally by denying the public decision-making powers over their approval and the "necessary information" over their benefits or adverse effects.

The new ruling, agreed by a United Nations committee in Geneva, calls into question the legal validity of any further planning consent for all future wind-farm developments based on current policy, both onshore and offshore.

The United Nations Economic Commission Europe has declared that the UK flouted Article 7 of the Aarhus Convention, which requires full and effective public participation on all environmental issues and demands that citizens are given the right to participate in the process.

The UNECE committee has also recommended that the UK must in the future submit all plans and programmes similar in nature to the National Renewable Energy Action Plan to public participation, as required by Article 7.

The controversial decision will come as a blow for the Coalition's wind-power policy, which is already coming under attack from campaigners who want developments stopped because of medical evidence showing that the noise from turbines is having a serious impact on public health as well as damaging the environment.

Legal experts confirm the UNECE decision is a "game-changer" for future wind-turbine developments in the UK. David Hart, QC, an environmental lawyer, said: "This ruling means that consents and permissions for further wind-farm developments in Scotland and the UK are liable to challenge on the grounds that the necessary policy preliminaries have not been complied with, and that, in effect, the public has been denied the chance to consider and contribute to the NREAP."

The UN's finding is a landmark victory for Christine Metcalfe, 69, a community councillor from Argyll, who lodged a complaint with the UN on the grounds that the UK and EU had breached citizens' rights under the UN's Aarhus Convention.

She claimed the UK's renewables policies have been designed in such a way that they have denied the public the right to be informed about, or to ascertain, the alleged benefits in reducing CO2 and harmful emissions from wind power, or the negative effects of wind power on health, the environment and the economy.

Ms Metcalfe made the legal challenge on behalf of the Avich and Kilchrenan Community Council at the Committee Hearing in Geneva last December. She and the AKCC decided to take action after their experience of dealing with the building of the local Carraig Gheal wind farm and problems surrounding the access route, an area of great natural beauty.

The retired councillor said she was "relieved" by the UN decision. "We were criticised by some for making this challenge but this result absolves us of any possible accusations of wrong-doing... The Government needs to do more than just give ordinary people the right to comment on planning applications; they deserve to be given all the facts."

A Department of Energy and Climate Change spokesperson said: "We are aware of this decision and we are considering our response. Wind is an important part of our energy mix providing clean home-grown power to millions of homes. Developers of both offshore and onshore wind farms do consult with communities and provide generous benefits packages."

The Aarhus Convention: What is it?

The Aarhus Convention, or the Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters, is named after the Danish city where it was first established by a UN summit.

It sets up a number of rights for individuals and associations in regard to the environment. People can request to know the health risks linked to the state of the environment and applicants should be informed within one month of the request.

It also ensures the public get a say in any environmental project such as a wind farm. Public authorities must provide information about environmental projects, and those affected by such schemes must be told if they are going ahead and why.

http://www.westmeathexaminer.ie/news/roundup/articles/2013/09/06/4017485-couple-maintain-turbines-have-forced-them-to-move-house/

# Couple maintain turbines have forced them to move house

"If we can be floored by just two wind turbines, 100m tall, 700m from our home what effect will 2,500 wind turbines, 185m tall have?"

That was the warning issued by the Roscommon couple Michael and Dorothy Keane at last Thursday evening's windfarm information meeting in Rochfortbridge.

The Keanes claim that their mental and physical health have been adversely affected by the construction of two 100m wind turbines close to their Skrine home in 2011, so much so that they are now moving to Leitrim in September.

Dorothy says they realised that there would be a problem with the proximity of the turbines "as soon as they started to spin".

"We noticed a change in the way we operated. We realised we had low motivation and low energy. We had low concentration levels and couldn't function properly. We started getting feelings of anxiety for no good reason. We were both experiencing pressure in the ears and in the chest and feeling shaky some of the time. We couldn't figure out what was going on. We couldn't sleep at night and we couldn't stay awake during the day."

Michael says that their current mental and physical health problems – they are both on anti-depressants, anti-anxiety tablets and sleeping tablets – stem from sleep deprivation caused by noise coming from the wind turbines, especially the infra-sound pollution coming from the turbines. Described by Michael as a "killer", infrasound is inaudible but is believed by some scientists to cause a range of health problems, including breathing and digestive difficulties, sleeping problems, headaches, concentration and memory problems. "Driven demented" by the noise, the Keanes say that a number of doctors have told them that the solution to their health problems is to move home.

"We were referred to a mental health unit in Roscommon and the advice is help and short-term medication but ultimately you have to leave your home. The consultant psychiatrist diagnosed chronic stress, anxiety and sleep deprivation... We have to remove ourselves from the source of the problem because we know that the turbines ain't going anywhere," Dorothy said.

The Keanes say that while they have made their house "valueless" by going public with their problems, they say they decided to speak out to alert people to the dangers of windfarms.

"The home we are living in was meant to be our retirement home that we would be carried out of in a box, instead we will be carrying out boxes. We're blessed that we have the resources to rehome ourselves but our rainy day money is gone. The rainy day has come," Michael said.

http://www.telegraph.co.uk/news/earth/energy/windpower/10291432/Irish-Lilliputs-square-up-to-fight-British-wind-giants.html

# Irish Lilliputs square up to fight British wind giants

by Geoffrey Lean

Plans are far advanced to erect a forest of giant wind turbines in the flat countryside of the Irish Midlands to generate electricity for the UK - but the protests are growing

To get to Lilliput you travel along a narrow, flat road with a surface so uneven that it feels like the undulations of a sea, then turn right at a pine tree to end up on the shores of the Lough Ennell, in the dead centre of Ireland.

Indeed, the spot where the holidaying Jonathan Swift used to take to the lake – and, once, looking back from his boat, was struck by how small the people on the shore appeared to be – does seem moribund these days, with a disused boathouse, a sad sandpit, a single picnic table and litter bin, part of a nearby "adventure centre". But it lies at the heart of a growing conflict

that promises to be every bit as epic as the contest between the "Big- endians" and "Little-endians" in Gulliver's Travels.

For, virtually unknown in Britain – and little publicised in Ireland – plans are far advanced to erect a forest of giant wind turbines over three times the height of Nelson's column in the flat countryside of the Irish Midlands, to generate electricity for the UK. Over the next few years, some 1,100 turbines – more than have been erected in the whole of England – are due to be crammed into the counties of Meath, Westmeath, Offaly, Laois and Kildare and parts of Tipperary and Kilkenny.

Earlier this year the British and Irish governments signed a memorandum of understanding for electricity to be exported along highly efficient undersea cables, and a formal agreement is due to be finalised in 2014.

The agreement – much the most advanced element in a scheme to link the electricity grids of 10 Northern European countries – is strongly backed by both prime ministers. Britain is falling behind in its efforts to provide 30 per cent of electricity from renewable sources by 2020, amid ever- increasing hostility to onshore wind. Ireland, by contrast, is expected easily to meet an even more stringent goal, and have capacity to spare; indeed its total wind resources are 19 times greater than it needs.

Britain hopes to save a total of £7 billion by importing the power rather than building the same capacity offshore, while exporting it is predicted to earn the hard-strapped Irish economy over £2 billion a year – about the same as exports from the dairy industry.

Indeed, proponents like Eamon Ryan – the Green Irish energy minister who paved the way

for the scheme – see exploiting the country's wind as producing a similar economic revolution as did capitalising on its grass half a century ago.

But there is also an unspoken element to the deal. By effectively moving most of its turbine construction to Ireland – and thus increasing Britain's wind energy capacity by 80 per cent – ministers have hoped to bypass

objections, since opposition to windpower has so far been almost negligible there. For a while they got away with it, as companies have quietly signed up hundreds of farmers to open up their land, typically promising to pay some £15,000 a year per turbine.

That changed when Andrew Duncan, a Westmeath auctioneer, was approached, by accident, a year ago, and decided to find out what was going on. At the time, he says, he "saw no problem in wind" but he was horrified to find that his home was to be enveloped by turbines "front, side, and back". Discovering the overwhelming scale of the proposals, he decided not just to fight for his own area but to alert the whole Midlands.

He and others formed the first protest group last October. Now there are 30, with another two starting up last week. Three thousand people marched against the plans in the town of Mullingar, almost every house in villages near Lilliput sports a poster denouncing the development, and a poll in one affected area recorded opposition running at over 90 per cent. Other parts of Ireland are now beginning to follow their lead.

"We are normal people who have never objected to anything in our lives," he says. "But we have been compelled to resist something that is being imposed on us as Britain tries to export its environmental problems to us." So strong has the opposition become in less than a year that proponents and opponents of the scheme increasingly believe it will not go ahead as planned.

Both sides now increasingly suggest that the turbines – which protesters fear may increase to over 2,000 – should be sited far from housing on the area's tens of thousands of acres of worked-out peat bogs. But, unless such a compromise is reached, the people of the Midlands look like restraining the wind giants as effectively as the Lilliputians tied down Gulliver.

#### It's only the house-builders that Nick Boles cares about

Has there ever been a bunch of ministers so fond of denigrating their own supporters? Planning minister Nick Boles, as we reported yesterday,

denounces those resisting inappropriate building in the countryside as "a comfortable elite". And Education Secretary Michael Gove accuses those, like The Daily Telegraph, who successfully fought to improve the Government's proposed planning free-for-all, of "standing in the way of helping our children to grow tall" by denying them bigger houses.

Again they peddle the convenient untruth that proper planning is stopping housebuilding.

But, as the Local Government Association pointed out last month, councils approve almost 90 per cent of planning applications, while housebuilders are sitting on undeveloped sites with permission for 400,000 homes. Meanwhile, ministers are enabling developers to flout undertakings to build affordable homes, while the Government's Help to Buy scheme, touted as a way of helping young people to get on the housing ladder, has instead drawn it up by increasing prices.

As all this, and much else, demonstrates, the Government's real priority has been serving not those desperately needing homes of their own but the developers that donate millions to the Tories. Now there's a comfortable elite.

#### 12.09.2013 RTE News

https://www.rte.ie/news/2013/0912/473777-wind-farms/

# Energy companies want no minimum distance between wind turbines and family homes

Bord Na Móna, Coillte and the ESB have all separately lobbied the Government to exclude any statutory minimum distance between wind turbines and family homes, as part of a review into the wind sector in Ireland, RTÉ News has learned.

Current guidelines state that turbines built more than 500 metres from a residential property are unlikely to pose problems such as noise.

The guideline is not binding but is used as a rule by many local planning authorities.

Two Labour Senators, John Kelly and John Whelan, have co-sponsored a Wind Turbine Bill, to introduce a statutory minimum setback from family homes of 1.5km, which is strongly opposed by the wind sector.

Minister for the Environment Phil Hogan is currently reviewing the 2007 guidelines with a view to updating them.

According to submissions made as part of the ongoing review, the semi-State energy companies have all said it would be a mistake to include any minimum distance in the new rules.

ESB Wind Development, the ESB's wind farm company, said the introduction of any "rigid separation distance" would lead to "perverse" outcomes in terms of what wind farms were accepted and what would be refused by planners.

Coillte said an "arbitrary" minimum distance would have a negative effect on the development of sustainable energy in Ireland.

Bord na Móna said that a "one size fits all" approach to minimum distances between wind turbines and residential homes would lead to the "suboptimal" development of the wind sector in Ireland.

A selection of the submissions were released to RTÉ News by the Department of Environment following a request.

Meanwhile, more than seven out of ten tourists holidaying in Ireland said that the presence of wind farms had either a positive effect or "no impact" at all on their likelihood to visit the country again.

New research carried out for Fáilte Ireland finds, by contrast, that 24% of tourists said wind farms would negatively impact on any future plan they had to holiday in Ireland.

The unpublished study also shows that tourists would prefer to see turbines built on bogland or near urban areas rather than along the Irish coast or near good quality farmland, RTÉ has learned.

Fáilte Ireland will use this research to decide what planning applications for wind turbines it may or may not object to on the grounds of whether they are perceived to pose a risk to Ireland's tourism industry.

The findings are contained in a study carried out for the national tourism agency into how tourists perceive Ireland's growing wind farm industry.

It is the first major study of its kind in more than six years.

Around 1,000 domestic and foreign tourists who holidayed in Ireland during 2012 were questioned by research company Millward Brown Lansdowne.

The study also found that, given the choice, tourists preferred to see a few large turbines rather than a significant number of smaller turbines.

More than half of the tourists surveyed said they had seen a wind turbine on their travels around the country but 42% said they had not seen any.

Of those tourists who did see a wind turbine, 21% said it had a negative impact on their sightseeing. However, 32% said it actually enhanced it, while 47% said it made no difference one way or the other.

The Fáilte Ireland study also noted that "noise is not an obvious factor for three out of four visitors who saw a wind farm in 2012, despite the fact that it is often posed as an argument against constructing them".

The research was submitted by Fáilte Ireland to the Department of the Environment as part of an ongoing consultation into wind energy guidelines.

Permission granted for Roscommon wind turbine development

Separately, An Bord Pleanála has given the go ahead for a 16 wind turbine development in Dysart in south Roscommon.

It rejected an appeal by Galetech Energy Developments and a campaign against the wind farm over a number of years.

The development is planned for the Cronin, Gortaphuill, Glenrevagh, Mullaghardagh, Tullyneeny and Turrock townlands in Dysart.

http://www.irishtimes.com/news/environment/why-bigger-isn-t-always-seen-as-better-in-ireland-s-expanding-wind-farm-industry-1.1536505

# Why bigger isn't always seen as better in Ireland's expanding wind farm industry

# As wind turbines get bigger, so too do promised payments to communities – and locals' concerns

by Lorna Siggins

Mayo County Council has backed a demand by north Mayo residents for substantial "community gain" payments by the ESB and Bord na Móna if their planned €600 million wind farm in Bellacorick is approved.

The ESB and Bord na Móna had offered €1,000 per megawatt (MW) in "community gain" payments to the residents for their 370 MW 112-turbine Oweninny Power Ltd project at Bellacorick, but Mayo County Council voted earlier this month to multiply that figure by 10.

If approved as part of planning, it could amount to a community contribution of more than €10,000 a day, index-linked for 30 years, when in production, according to local estimates.

"Community gain" involves giving a return to the community – rather than to individual landowners – for a particular development, and it had been an optional power afforded to planning authorities until it was specifically legislated for after 2006.

An Bord Pleanála can attach it as a condition to planning approval, and it has already done so for the last section of the Corrib gas pipeline where €8.5 million over five years has to be paid by the Corrib gas developers into a fund administered for the Erris locality by Mayo County Council.

However, under the legislation in section 37 g of the 2000 Planning Acts, the community gain contribution must not impede an applicant's ability to develop a project.

Mayo county manager Peter Hynes says the local authority is preparing a community gain policy in relation to wind farms generally, and has already forwarded the €10,000 per MW recommendation for Oweninny to An Bord Pleanála.

The Corick Power Group, comprising residents living in Bellacorick, Crossmolina, Keenagh and Bangor Erris, says it is not opposed in principle to the ESB/Bord na Móna project, which is on the site of the former Bellacorick peat-fired power station and what was then the State's first wind farm dating from the early 1990s.

#### Community benefit

The group's chairman Tom McHugh says it is concerned to ensure adequate community benefit is returned, in the form of a community gain that would be disbursed by an independent body and ring-fenced for the immediate area.

It is also concerned to ensure that there are employment opportunities for local people during construction and in maintenance of the project, he said.

"Most people are in favour of the project if it is a chance to regenerate the area," Mr McHugh said.

Oweninny Power Ltd has said that it expects that there will be up to 100 construction jobs during the initial development phase, with "further operations and maintenance roles" once the wind farm is operational and "additional benefits" to "local suppliers, service providers, local community projects and the local authority".

It also says that all 112 turbines are more than 1km from homes.

An Bord Pleanála, which received the application in July under strategic infrastructure legislation, has not yet decided if it will hold an oral hearing into the planning application.

Across the county border, there is growing concern among residents in the "gateway to Connemara" region about the impact of 370 wind turbines allowed for in the Galway wind energy strategy.

Residents say that about 60 per cent of areas zoned as suitable for wind farm development are in the second most densely populated areas of Galway county, and that many homes will be "negatively impacted", because much of Connemara was excluded due to its special area of conservation (SAC) status.

#### 'Low wind speeds'

East Galway areas were also excluded due to the "low wind speeds" in spite of proximity to the midlands where the 3,000 MW "Greenwire" project is planned.

About 103 of the 370 turbines earmarked for Galway have already been approved in an 8km radius between Moycullen, Barna, Furbo and Spiddal.

Knockalough Community Group chairwoman Yvonne Cronin says her group believes developers are "rushing in" with applications to local authorities before the guidelines on turbine distance from housing are revised by Minister for Environment Phil Hogan.

Current guidelines, which are not binding on local authorities, state that turbines built more than 500 metres from houses are unlikely to pose problems such as noise, but the guidelines were drawn up before turbines of 120metres in height and more – as tall as the Spire in Dublin – became standard in planning applications.

The Knockalough Community Group and residents in adjoining Lettergunnet and Shannagurraun areas between Moycullen and Spiddal have called for the immediate suspension of activity on several wind farm developments, following identification of endangered freshwater pearl mussels in the local Knock river catchment, the only listed population in south Connemara.

### Strategy review

The Knockalough group has also appealed to Minister of State for Environment Jan O'Sullivan to intervene to ensure that Galway County Council's planning department accepts a unanimous vote by county councillors for an immediate review of the wind energy strategy in the county development plan.

The local authority has stalled on immediate action, and has said it would take place within the normal county development plan review, which could take two-and-a-half years.

In nearby Knockranny, outside Moycullen, the developer of a project that was turned down by An Bord Pleanála last year on archaeological and potential peat slippage grounds has submitted a new application to Galway County Council.

# Residents object

The Oldtown and Knockranny residents are objecting to the new plan for 11 rather than 14 turbines of 140m height on Knockranny hill by Western Power Developments, as they believe this new plan is very similar to the previous application.

The residents point out that the integrity of a ring fort on the summit will be negatively affected, and one of the turbine sites proposed is on a cillín (children's graveyard).

A report prepared for the residents by NUI Galway archaeologist Maggie Ronayne says the developer's environmental impact statement (EIS) is "incomplete" and location of a turbine on the cillín site would "impact it directly".

They are also concerned about the proximity of the turbines to private housing.

Western Power Developments Ltd was unavailable for comment.

http://www.thejournal.ie/planning-ireland-1253224-Jan2014/

# Planning process criticised as Government publishes details of public consultation

Ireland has submitted its first report on the implementation of the Aarhus Convention which ensures public participation in environmental planning.

A NUMBER OF complaints about Ireland's implementation of the Aarhus Convention have been published by the Department of Environment, Community and Local Government.

The Aarhus Convention, which Ireland signed up to in 2012, ensures public participation in the decision making process on environmental planning.

As part of the report, the department has published submissions from 21 agencies who were involved in the first phase of consultation which began in June of last year.

They <u>can be viewed on the department's website</u> and include submissions from agencies such as An Taisce, Coillte and Eirgrid.

An Taisce <u>in particular was critical of the first draft</u> of the implementation report which it says was "a tick-box response approach detailing Ireland's legislative response to the implementation".

Other submissions include one from <u>Westmeath councillor Denis Leonard</u> who says that the consultation process needs to be "streamlined" for local individuals and communities to become more involved with planning issues.

"Communities should not be finding out about large infrastructural process through their local newspaper years down a company's planning process but should partner from the beginning to protect what is incumbent on all of us to protect," Leonard wrote.

A second consultation phase was completed in November 2013 with 12 further submissions received.

The report published today by the department outlined a number of the criticisms made by the various submissions and published official response to them. These responses are also available to read online.

Environment Minister Phil Hogan says that public participation is central to the Aarhus Convention and thanked those who made submissions.

"The level of public engagement in the development of the report illustrates the growing interest in this area in Ireland," he said.

http://www.donegaldaily.com/2014/01/31/residents-anger-as-developer-bids-to-erect-donegals-biggest-wind-turbine/

# RESIDENTS' ANGER AS DEVELOPER BIDS TO ERECT DONEGAL'S BIGGEST WIND TURBINE

by John2

Local residents are angry that the developer of a wind farm in Co Donegal has applied to increase the height of the turbines to become one of the highest in the whole of Ireland – and the biggest in the county.

The Inishowen Wind Energy Awareness Group says it will oppose the plans near Kinnagoe Bay.

"In his application the developers says it is a 'slight' increase. We don't call increasing the height of the hub from 69 metres to 85 metres 'slight'," said a spokesman for IWEAG.

"That is an increase of almost a quarter of the permitted height. It will be the height of a five story building. It takes the full turbine height to 132 metres. The highest turbine is in Greystones in Wicklow at 139 metres.

The developer is proposing to increase the height by 16 metres making them nearly forty metres higher than any building in Ireland. The highest building is St John's Cathedral in Limerick at 93.8 metres.

"It would make the turbines almost twice the height of St Eunan's Cathedral in Letterkenny," said a local resident.

Part of the reason all this is making people angry, is that after the first application for the two turbine wind farm was turned down by Donegal County Council Planning Authority the developer appealed to An Bord Pleanala.

In the appeal process, Donegal Council was asked by An Bord Pleanala to comment on the appeal and again DCC turned it down on the same grounds: wrong place for a wind farm.

An Bord Pleanala's inspector visited the site on Crockbrack Hill and also decided it was the wrong place for a wind farm.

As well as DCC Planning, the Inspector of An Bord Pleanala did not think, that if something is 'open for consideration for wind farms', it means it has to be done under any circumstances.

But the board of An Bord Pleanala decided to ignore their own inspector's report and recommendations, ignore the recommendations of the DCC planning department and ignore the submissions made by local residents and granted the appeal.

In An Bord Pleanala's Board Directions there is a set of 19 conditions for this development,

which are to be complied with by the developer.

It is stated in condition no. 5:

Prior to commencement of development, details of the proposed turbines, including design, height and colour, shall be submitted to and agreed in writing with the planning authority. The hub height of the proposed turbines shall not exceed 69 metres and the diameter of the rotary blades shall not exceed 94 metres.

"How can the developer now apply to increase the height? He has already successfully applied to have the road extended across the top of the hill and moved the substation to another location higher up on the hill," said the group spokesman.

"Is it really possible, even though An Bord Pleanala agreed to one application with strict conditions, (see An Board Pleanala, ref. No: 240394: Crockbrack Hill, Carrowbeg and Meenletterbale, Moville, Co.Donegal (12/70002)) that the developer can at a later date change everything in it. How can that be?"

"Our community is kept in the dark" says a local resident.

The developer advertised the 5 planning applications involved in this one development.

The first one was placed into the Irish Times and that's why it slipped past the attention of the local community. (See article in the Donegal Daily, March 9, 2012 – INISHOWEN RESIDENTS SNUBBED BY PLANNING APPLICATION FOR WIND FARM.

Thousands of residents across Inishowen couldn't object to a planning application for a wind farm – because they didn't know about the application.

The second, third and fourth advertisement for changes to the original application were placed in one of our local papers and because of this the local community was informed about it immediately. The fifth and current planning application was advertised (as the first one) in the Irish Times, and was seen by the local community.

If people want to object to the latest application (14/50014) to increase the height above the limit placed on him by An Bord Pleanala they have until 14th February to write in an objection to the Council.

02.02.2014 BBC News,

http://www.bbc.co.uk/news/world-europe-25966198

## Ireland's rural protests over wind energy

by Diarmaid Fleming

Ireland is short of money but not wind, which now forms a central plank of its energy policy.

But plans to develop wind power and export it to Britain are sparking a rural revolt, with local protest groups uniting through social media.

Some claim Ireland will become a wind farm for Britain.

Turbines up to 180m (590ft) tall - half the height of the Empire State Building - are cropping up as part of a drive to meet EU green energy targets and generate 40% of Ireland's electricity from wind.

Revenue, too, will flow by exporting power to Britain under inter- governmental plans.

More than 100 opposition groups have sprung up against new wind farms - all in rural areas - claiming the turbines will ruin the landscape, with noise and shadows blighting homes nearby.

Are we going to ruin our environment to save the UK's environment?

Ray Conroy, Laois Energy Awareness Group

Some have joined forces with groups opposing planned new electricity pylons to upgrade the national power grid.

Wind energy companies say they follow strict Irish planning guidelines, now under review due to new larger turbines and local opposition.

## 'Ruined landscape'

A country pub in County Laois is packed on a Monday night for a meeting of the Laois Energy Awareness Group.

Ray Conroy helped set it up, he says, after energy companies suddenly appeared, doing deals with some locals for turbine sites.

"The first we knew was when our local authorities and government announces 'wey hey wind farms are coming, and it's a boom for everyone'. It's nonsense," he says.

Some of the wind turbines reach 180m (590ft) in height

"Are we going to ruin our environment to save the UK's environment? There's nothing in it for the citizens of this island. The only winners are going to be multinational corporations

who are sucking subsidies from the UK taxpayers.

"They're ruining our landscape. There might be some tax revenue in it for our government but, overall, what price are we willing to pay?"

Another speaker wins applause after his account of an anti-wind turbine protest at Vinegar Hill in Wexford - site of a key defeat in a rebellion in

1798 but etched in the folklore of Irish history through song as a place of resistance.

#### 'Families divided'

The footprint of history is found too at the rolling estate of Stradbally Hall near the pub. Thomas

Cosby's family has been here since the 16th Century, part of the Anglo- Irish gentry.

Behind his stately home, the appearance of a giant mast heralds a wind turbine twice as high.

"It is incredibly beautiful, the hills and the valleys that carry on the whole way across the county," he says.

"For this industrial invasion to come in is going to be absolutely nuts."

He accuses energy companies of operating a "divide-and-conquer attitude" through secret deals with some locals despite the opposition, citing offers of more than 20,000 euros (£16,500; \$27,300) a year per turbine - big money in a country seeing hard economic times.

"It's very much a divisive issue, you do see cousins and brothers now falling out over it," he says.

"One fellow is looking at the turbine and getting nothing out of it - and the other is looking out at it and getting his 25,000 euros a year."

Dorothy and Michael Keane's retirement to remote County Roscommon turned to nightmare when wind turbines appeared on the hill nearby.

Noise from the rotating blades caused sleep deprivation and serious illness for both. Under doctors' orders, they abandoned their house.

"I remember coming into this room one day and I could hear this noise and it was driving me up the wall," says Dorothy Keane.

It's very much a divisive issue, you do see cousins and brothers now falling out over it

"I remember thinking there wasn't a single solitary room in this house, in our home, where I could go and sit quietly and rest. The absolute silence of your own mind didn't apply here - it was just gone."

## Cleaner energy

We're not in the business of trying to make life more difficult for people, not at all John Reilly, Head of Powergen at Bord na Mona

Far from any houses, turbines sprout up on the Bog of Allen, where turf harvested for fuel has run out in parts of the vast peat plain blanketing central Ireland.

The graveyard of one energy resource has become the cradle for another through the new wind farms, some for Ireland's power-sharing plans with Britain.

Those in charge here recognise mixed public feelings - but insist they fully consult the community.

"We've said to people that we will only be involved in locating wind turbines where it is deemed appropriate to do so," says the head of Powergen at Bord na Mona, John Reilly.

"We're not in the business of trying to destroy the landscape. We're not in the business of trying to make life more difficult for people, not at all."

Exporting energy helps boost Ireland's economy but is not the driving force for him.

"Our perspective as an energy company is about looking at the way we generate electricity today and the way we need to generate electricity into the future," he says.

"We're focusing on trying to contribute to the decarbonisation of our economy and the decarbonisation of the European economy as a whole."

The fact there was little public protest over the harsh austerity measures that followed the economic crash in Ireland earned IMF and EU praise for

the Irish people.

By contrast, the row over wind farms appears to be energising parts of rural Ireland in a campaign which may have taken the country's leadership by surprise in blowing its way to the centre of Ireland's political agenda.

#### 21.02.2014 Irish Examiner

http://www.irishexaminer.com/ireland/1100-people-sign-petition-opposing-wind-farm-plans-259476.html

## 1,100 people sign petition opposing wind farm plans

by Donal Hickey

More than 1,100 people have signed a petition opposing plans to erect wind turbines which would be taller than the Dublin Spire.

The North Kerry Wind Turbines Awareness Group has handed in the signatures to Kerry County Council, and 300 objections have also been lodged to a planning application for a 10-turbine wind farm in the Ballyhorgan area, near Listowel.

Stacks Mountain Windfarm Ltd has lodged the application for a site within an area identified for wind development in the Kerry County Development Plan.

However, a strong campaign of opposition is being mounted by local communities who have staged two protests outside the council's buildings in Tralee.

They claim the 156.5-metre turbines would destroy the character of the rural landscape, would devalue property and cause divisions in the community. A decision on the planning application is due next month.

Gerard Doyle, representing the group, yesterday said 80% of the people were against the "mass expansion" of turbine developments in north Kerry.

"People are realising that it's not just about ten turbines in Ballyhorgan, it's about 450 industrial turbines within a 30km radius of north Kerry and safeguarding our futures and the future of north Kerry," he said.

Turbines would surround Listowel, Ballyduff, Ballybunion, Lixnaw, Kilflynn, Abbeydorney, Kilmoyley, Duagh, Moyvane, Tarbert, Ballylongford and beyond.

The opposition group has threatened to take its case to the EU, if necessary.

Meanwhile, Stacks Mountain Windfarm Ltd said that in designing the wind farm proposal, extensive studies of the wildlife in the area, archaeology, hydrology and every aspect has been undertaken to compile a comprehensive environmental impact assessment.

The company, which has held an information meeting in Listowel, said it would be glad to deal with any issues individual house owners may have.

## 14.03.2014 Donegal Daily

http://www.donegaldaily.com/2014/03/14/tourism-wins-out-over-wind-turbines-in-inishowen-residents/

#### TOURISM WINS OUT OVER WIND TURBINES IN INISHOWEN - RESIDENTS

by John2

Local residents today welcomed the decision of the Council to refuse permission to increase the height of two wind turbines on Crockbrack Hill, near Kinnagoe Bay, by 24 % to an overall tip height of 132 meters.

The Council's refusal is based on the new national tourist development the Wild Atlantic Way.

The road passing Crockbrack Hill is now identified as a Scenic Driving Section, a fundamental element of the route, providing the visitor with opportunities to see and experience the best land and seascapes along the route.

Kinnagoe Bay is a Discovery Point, the third point on the Wild Atlantic Way when you start the route from Derry and the North. Kinnagoe Bay was selected on the basis that it provides an exceptional Wild Atlantic experience.

"One of the great joys of living here is the wild, unspoilt countryside and coastline. It is great that this new tourist route is now happening. It is the longest one in the world! People will come to see the wildness of it all. That is why it is called the Wild Atlantic Way not the Industrialised Atlantic Way" said a residents' spokesperson today.

"Now that the roads around Kinnagoe Bay have a special status as part of the Wild Atlantic Way, the Council's Tourism policy of 'not permitting development proposals which would detract from the visual quality/amenity on either the approach roads to, or the views to be had from significant tourist attractions (TOU - P - 3)' becomes more urgent.

"It is the natural progression now for the areas on either side of the Wild Atlantic Way to become areas 'not open for consideration' for wind farms. We are talking to our local Councillors to start this Variation Process immediately in relation to the rest of Crockbrack Hill. The Wild Atlantic Way is a multi – million Euro, international investment seeking to get tourists to Ireland. We need to protect the route so that they see Ireland at her best" the spokesperson added.

#### 03.04.2014 Irish Examiner

http://www.irishexaminer.com/ireland/warning-over-wind-turbine-syndrome-260636.html

## Warning over wind turbine syndrome

by Claire O'Sullivan

One of the most senior doctors in the Department of Health has warned the Department of the Environment that people at risk of the controversial wind turbine syndrome should be treated "appropriately and sensitively as these symptoms can be debilitating".

Following a review of international research on the health effects of wind turbine noise, the Department of Health's deputy chief medical officer concluded that wind turbines are not a threat to public health, but "there is a consistent cluster of symptoms related to wind turbine syndrome which occurs in a number of people in the vicinity of industrial wind turbines".

A letter seen by the Irish Examiner reveals how, in her review sent to the Department of the Environment last November, she said "there are specific risk factors for this syndrome and people with these risk factors experience symptoms. These people must be treated appropriately and sensitively as these symptoms can be very debilitating".

Experts differ on whether "wind turbine syndrome" really exists or whether it is a psychological response to unhappiness caused by not wanting to live near a windfarm.

Following the deputy CMO's review, the Department of Health's Food and Environmental Health Unit wrote to the Department of the Environment suggesting that they consider hiring experts to further examine the health effects of wind turbine syndrome.

However, the Department of the Environment is now dismissing the deputy CMO's literature review as only "a preliminary literature review and not a recommendation of the Department of Health".

The Department of Environment is currently conducting a review of the 2006 Wind Energy Development Guidelines.

Meanwhile, the Department of Health has said the deputy CMO's comments "did not constitute expert advice" but were "a general overview of the literature in this area".

The department confirmed that a "range of symptoms have been described by people living close to wind turbines mainly related to general environmental noise exposure".

"These symptoms include headache, irritability, difficulty concentrating, fatigue, dizziness, anxiety and sleep disturbance, and are often described in relation to annoyance," a spokesman said.

"Anyone who experiences such symptoms should seek medical advice from their family doctor, who may be able to prescribe suitable medication".

http://wicklowvoice.ie/anti-pylon-groups-join-forces-with-windfarm-campaigners-to-protest-governments-energy-policies/

# Anti-Pylon Groups Join Forces With Windfarm Campaigners to Protest Government's Energy Policies

Wicklow Against Pylons is planning to part-take in a National Protest March which is to take place in Dublin on Tuesday 15th April 11.30am. Men, women and children from across the country will converge on the Dail to highlight the flawed energy policies which has potential to severely impact people's lives and health in a manner which is wholly unacceptable.

Due to the unwillingness of this government to listen and engage sincerely with the communities affected by these issues and for the protection and preservation of our unique landscape and communities people are prepared to speak with their feet.

Because of the planned roll-out of the wind farms, Eirgrid (commissioned by the previous government) have embarked on an agenda through the Grid 25 project to litter the Irish landscape with substations and giant pylons 45-65m high which, research shows have detrimental effects on tourism, health and environment etc.

The demonstration organised by communities and groups nationwide who are affected by proposed and existing pylons substations and wind farms,

aims to facilitate people's concerns and exasperations of Ireland's energy policy direction, by marching in countrywide solidarity on the capital's streets and voicing their frustrations at the gates of the Dail.

One such group taking part is the Pylon Alternatives Alliance (PAA) which was formed in February of 2014 and represents an alliance of up to 50 representative groups from across nine counties including Wicklow Against Pylons and are potentially affected by Eirgrid's proposed Grid Link project. The Grid Link project is a proposal to construct over 750 45m high pylons carrying 400kv lines from Cork to Kildare via Wexford.

PAA Chairman Robert Duggan stated that "hundreds of community groups and concerned citizens from every county in Ireland will converge in Dublin on April 15th to send this government a strong message, — Our landscape our environment and our children's health are not for sale."

Members of the PAA and other groups encourage families across the country to take part in this peaceful protest to show the Government that their concerns need to be listened to, questions addressed and answered.

The catalyst of the growing concerns is the National Renewable Energy Action Plan which

makes the provisions for wind farm companies to erect thousands of wind turbines across the entire island, even though detailed research presented by groups to our elected politicians shows that wind turbines are an unsustainable and inefficient means of generating electricity and will only go to make Ireland an unattractive country for Foreign Direct Investment due to exorbitant energy costs, which will lead to job loses.

"Wind turbines won't stop climate change but they may distract politicians from taking real action to address climate change."

The protest will start on Parnell St., Dublin at 11.30am and march to the Dail.

For more information and updates visit:

www.wicklowagainstpylons.ie

www.pylonalternativesallaince.ie

## 13.04.2014 Sunday Post

https://www.sundaypost.com/news/scottish-news/wind-turbine-plan-at-trumps-irish-golf-course-withdrawn/

## Wind turbine plan at Trump's Irish golf course withdrawn

Written by Reporter

Plans for a giant wind farm close to Donald Trump's new golf course have been thrown out after the tycoon personally intervened.

The US billionaire recently bought a golf course on the west coast of Ireland for £12.4 million.

He made the investment after losing his fight to stop an off-shore wind farm near his course in Aberdeenshire

But he landed in a fresh battle after it emerged a planning application for a nine-turbine windfarm had been lodged just miles from Doonbeg, County Clare.

However, the application was mysteriously withdrawn shortly before it was due to go before the council's planners. Campaigners fighting the development have since revealed Mr Trump called them to offer his help in

opposing the bid.

Tony Lowes, director of Friends of the Irish Environment, said: "Mr Trump was very active. He called me up himself and said they were opposed to the windfarm and noticed the work we had done.

"It was certainly an unusual phone call to get. He just said he knew we were very active in the efforts to oppose it and if there was anything that could be done to let him know."

Mr Lowes had opposed the development, which was a scaled-down version of a larger wind farm turned down last year, over fears it would damage the area's delicate ecology.

He received a letter from Clare County Council which said the application would not go ahead and was now deemed "invalid".

## 13.04.2014 thejournal.ie

http://www.thejournal.ie/wind-turbines-height-increase-refused-as-it-will-impact-on-scenic-donegal-1361436-Mar2014/

## WIND TURBINES HEIGHT INCREASE REFUSED AS IT WILL IMPACT ON SCENIC DONEGAL

Donegal County Council said the turbines height would impact in a negative way on Kinnagoe Bay.

INCREASING THE height of two wind turbines near Kinnagoe Bay by up to 24 per cent has been refused by Donegal County Council who said the height would impact on the scenic skyline and driving section of the Wild Atlantic Way.

Local residents welcomed the decision of the council, stating that the tip height of 132 metres of the turbines would be too high.

## Wild Atlantic Way

The Council's refusal is based on a new national tourist development called the Wild Atlantic Way – which is Ireland's first long-distance touring route, stretching along the Atlantic coast from Donegal to West Cork.

The road passing Crockbrack Hill is now identified as a scenic driving section, a fundamental element of the route, providing the visitor with opportunities to see and experience the best land and seascapes along the route.

Kinnagoe Bay is a discovery point, the third point on the Wild Atlantic Way when you start the route from Derry and the North.

The council refused the height increase stating that the "subject site is located in a sensitive rural location and coastal environment", and if permission were granted would give a "visually unbalanced" view within the environment and give an "inappropriate spatial dominance".

They added that it is there policy "not to permit development proposals which would detract from the visual quality/amenity on either the approach roads to, or the views to be had from significant tourist attractions", concluding that it would visually "detract" from the ammenity that is the Wild Atlantic Way.

http://www.independent.ie/irish-news/politics/energy-trading-pact-with-britain-still-inevitable-insists-rabbitte-30182959.html

## Energy trading pact with Britain still 'inevitable' insists Rabbitte

by Anne-Marie Walsh

An energy trading pact between Ireland and Britain is "inevitable" despite the collapse of an €18bn wind-farm plan, the Government said.

There was relief and disappointment after Energy Minister Pat Rabbitte confirmed that plans to build more than 1,000 wind turbines across the midlands to supply the UK with power have been axed.

This comes a month after the Irish Independent revealed on March 7 that the project would be shelved.

Mr Rabbitte said talks with the British government on a deal had failed, but added that greater trade in energy between Britain and Ireland would happen.

"I believe that in the context of a European internal market and greater integration, greater trade in energy between Britain and Ireland is inevitable in the post-2020 scenario," he said.

He said the midlands deal was not "a realistic proposition" as the UK authorities had not made key decisions, and due to the "complexities involved", including economic, policy and regulatory issues.

#### **SCRAPPED**

News that the project – which it was estimated would create up to 30,000 jobs – has been scrapped comes as a major UN report reveals that boosting renewable energy production is crucial to halt global warning.

Thousands of turbines were set to be built across the midlands under The Midlands Energy Export Project by 2020, with experts saying the total investment could top €18bn.

It was due to deliver 5,000 megawatts of power to the British market.

The Green Party and wind developers warned that consumers would lose the opportunity of cheaper electricity, while the economy would suffer.

But locals in the midlands, worried about the noise and size and the effect on the value of their homes, were relieved.

The Green Party argued that the pullout would hit consumers in the pocket as it would have lowered the cost of electricity and boosted the economy.

Leader Eamon Ryan said the country was abandoning renewable energy on the same day

that a UN climate report said we needed a huge increase in wind and solar power.

"We need those clean power supplies to stop climate change, but also to create a more stable and efficient economy," he said.

He said the American, German and Chinese governments were racing to see who could deliver renewable energies fastest. In contrast, he said, the Irish political system was turning its back on the future despite having some of the best renewable resources in the world.

The National Offshore Wind Association of Ireland, representing offshore wind developers, said it was very concerned that the deal was off.

"It's very important to have the support of government when trying to develop an industry," said a spokesman.

"It is somewhat ironic in a week which has seen the first state visit from an Irish President to the UK, that the Irish Government has pulled back from a policy initiative which would have demonstrated the real benefits of partnership in both economies."

The Lakelands Windfarm Information Group, representing locals in Meath, Laois, Offaly and Kildare, gave the news a cautious welcome.

"Locals were worried about the noise mainly but also the size of these structures," said spokesman Andrew Duncan.

#### **ROLLOUT**

However, he said the fact that the rollout of a pylon project was going ahead, shows the government still intends wind farm penetration, possibly to mainland Europe.

The firm Element Power, which is proposing the Greenwire wind energy project, said it was continuing to engage constructively with both the Irish and UK governments regarding its plans.

Mike O'Neill, CEO of Element Power Europe, explained: "Notwithstanding this, Element Power understands the complexities involved in reaching what will be a unique and historic agreement between two European nations to facilitate trading of renewable energy."

He said there was rarely such a situation where both countries can derive so many benefits.

"Element Power can create thousands of jobs in the Irish midlands during both the initial construction phase and subsequently, the maintenance of approximately 40 wind farms," he said.

Irish Independent

## 03.06.2016 derrydaily.net

http://www.derrydaily.net/2014/06/03/derry-man-causing-outrage-at-beautiful-kinnego-bay/

#### DERRY MAN CAUSING OUTRAGE AT BEAUTIFUL KINNEGO BAY

by stephen

A Derry man has angered residents living along a strip of the North West's most picturesque coastline by going ahead with plans to erect two large wind turbines in the area.

Two turbines have been given the go-ahead to go up overlooking Kinnego Bay in Inishowen, the site of a Spanish Armada landing and popular with beach lovers from Derry.

Local people are angry at the proposals and fear more turbines could follow.

They believe that could lead to the proposed Atlantic Wild Way being "ruined."

Donegal County Council has vigorously opposed the turbine plans – but they have been given the go-ahead by An Bord Pleanala.

Council officials complained the turbines would ruin the vista along the Wild Atlantic Way.

Having been given planning permission, Derry man Declan Clarke wants to increase the height of the turbines to 132 metres.

Opposing the plans a council official wrote it was council policy "not to permit development proposals which would detract from the visual quality/amenity on either the approach roads to, or views to be had from significant tourist attractions."

"This is one of the most beautiful parts of the Wild Atlantic Way," said residents' spokesman David Simpson.

"It is a national scandal that turbines will now overlook not just Kinnego but the beautiful Long Glen on the approach road to it. I can't believe that anyone visiting our lovely wee part of Donegal would want to see these monstrosities," he said.

Mr Clarke said in his submission during the planning process: "It is not considered that the purpose of the Wild Atlantic Way is to sterilise all lands from future development along the western coastline of Ireland from Donegal to Cork and all places in between."

Mr Simpson praised the council for opposing the plans.

"They took a stand and unfortunately lost," he said.

"If these turbines go ahead, there is nothing to stop them appearing along the rest of the route being taken by tourists. It's incredible."

#### 08.08.2014 Irish Examiner

http://www.irishexaminer.com/ireland/court-grants-judicial-review-of-wind-farm-plan-278807.html

## Court grants judicial review of wind farm plan

by Dan Danaher

A group of West Clare residents became the first local opposition group to secure leave for a judicial review to overturn planning approval for a wind farm.

At the High Court, Ms Justice Marie Bake has granted members of the Coore-Shanaway Residents Group leave to seek a judicial review, on 10 points of law, to Bord Pleanála's decision to grant planning permission for four 85m-high wind turbines in the Miltown Malbay area of Co Clare.

According to court documents, the group will attempt to prove the board failed to carry out a proper environmental impact assessment, as well as an appropriate assessment as required under national and European law.

Objectors claimed that An Bord Pleanála failed to "properly record its determination and failed to give any proper reasons for its determination contrary to national and European law".

Others points include:

- The board failed to give any or any proper reasons for not allowing the recommendation of the inspector who recommended refusal of permission;
- The board failed to properly notify the public concerned of the significant further information and revised environmental impact assessment in accordance with the law;
- The board failed to have regard for the decision to refuse permission for the development by Clare County Council which had decided the development would contravene a large number of development objectives.

The outcome of the review could have major implications for wind farm developments nationwide.

The development by McMahon Finn Wind Acquisitions Limited in the town lands of Shanavogh East, Shanavogh West, and Coore, was refused permission by the county council three years ago.

However, in June, following an appeal, An Bord Pleanála granted permission with 22 conditions, including a reduction from six to four turbines.

The local objectors recently stated they were "appalled" by the board's decision to overturn the council's refusal.

It expressed concern about an "industrial development" in very close proximity to family

homes which would affect their health, especially that of their children and older community members.

Efforts to obtain a comment from one of the developers were unsuccessful.

A spokesman for Board Pleanála said the board received the legal papers on Tuesday and has begun work on its response which is only at the initial stages.

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## 10.10.2014 Irish Examiner

http://www.irishexaminer.com/ireland/kerry-windfarm-rejected-as-1000-voice-opposition-290682.html

## Kerry windfarm rejected as 1,000 voice opposition

By Donal Hickey

Kerry County Council has refused planning permission for a 10-turbine wind farm proposed for the Ballyhorgan area, near Listowel

More than 1,000 people signed a petition opposing plans, while objectors attended several public meetings locally as well as staging protests outside the council's Tralee headquarters.

Around 250 objections were lodged against the planning application submitted by Stacks Mountain Windfarm Ltd.

Giving reasons yesterday for rejecting the application, the council said the development would seriously injure the amenities of the area and would be contrary to wind-energy guidelines for local authorities.

Had they been allowed to proceed, the 156.5m turbines would be highest in the State and taller than the Dublin Spire by 30m.

The North Kerry Wind Turbines Awareness Group, which led the opposition, claimed the sheer size of the turbines would dominate the rural community, would destroy the landscape, devalue homes, and cause disruption to local life through noise and shadow flicker.

The group maintained that there were already too many turbines in the region, which includes towns and villages such as Listowel, Ballyduff, and Ballybunion.

Several postings appeared on the group's Facebook page welcoming the decision, with some posters saying it was a victory for common sense and logical thinking. The group had threatened to take its case to the EU.

Earlier this year, hundreds of signs were erected in the area saying homes would be offered for sale in the Ballyhorgan and Finuge areas if the windfarm was granted the green light.

In reaching its decision, the council said the windfarm on the scale proposed would create a "significant visual intrusion".

Enerco Energy, the parent of company of Stacks Mountain Windfarm Ltd, had argued the project would be in line with state policy to have 40% of our energy produced from renewable sources, chiefly wind, by 2020.

The company also said it carried out extensive studies of wildlife, archaeology, hydrology, and every aspect of natural life in the area as part of a comprehensive impact assessment.

The company has four weeks to submit an appeal to An Bord Pleanála.

## Planning refused

US billionaire Donald Trump has blown plans for a giant windfarm near his Irish golf resort off course — with a little help from a critical endangered pearl mussel.

Yesterday, Clare Co Council refused planning permission to Clare Coastal Wind Power Ltd to erect a nine-turbine 126ml windfarm within sight of Mr Trump's Doonbeg Golf Resort on Clare's coast.

Mr Trump had led the charge against the planned windfarm, which also attracted widespread local opposition groups and from Friends of the Irish Environment, while An Taisce and the Irish Peat Conservation Council also expressed concerns.

Twenty-three landowners in the area stood to receive an annual dividend from allowing the turbines be built on their lands.

— Gordon Deegan

#### 22.10.2014 Irish Examiner

http://www.irishexaminer.com/viewpoints/ourview/changing-eu-policy-on-wind-farms-293358.html

## Changing EU policy on wind farms - Cutting wind subsidies

The understanding that we must do as much as we can to reduce our dependence on imported energy and minimise carbon emissions has driven the development of alternative energy options. This acceptance has almost become one of the sacred orthodoxies of the age, unchallengeable and obvious. The most visible of these alternative energy sources, and often the most divisive, is wind energy.

Champions of wind energy see it as an ideal technology for an island on the Atlantic's eastern seaboard and that it represents one of Ireland's very best chances of making meaningful cuts to our carbon emissions.

Those opposed, especially those living close to wind farms, say turbines make homes uninhabitable and destroy communities without conferring any real advantage. They suggest they endure the unpleasant consequences while others enjoy the profits. advertisement

Some opposition is fuelled by the belief that wind farms dependent on subsidies seem yet another in a long line of schemes used by those with access to the substantial capital needed to build them to harvest grants from the public purse. Wind farms do seem another way to concentrate wealth rather than an opportunity to redistribute it.

The opposition to wind farms is widening and just last weekend economist Colm McCarthy suggested that we should abandon plans to build more wind farms to try to comply with failed European Union policies. Mr McCarthy suggested the EU is about to abandon its policy of supporting wind farms and that we already generate more energy than we need so it would be a waste of public money to build more. He pointed out that there has already been a significant cut in the renewable energy subsidies in Spain and in Germany, and another round of cuts is expected in Britain.

In light of this unexpected change in heart the very least we should do is quickly declare a suspension of subsidies and reappraise wind farms economically and environmentally. We simply cannot afford to be in the white elephant business. After all, we have monuments to a failed energy policy from another age all around our country — hydroelectricity schemes that make little or no meaningful contribution to national energy budgets standing like watchtowers on river systems destroyed by dams. How sad it would be, and what a waste of money it would be, if today's wind farms became the more or less redundant hydroelectricity schemes of tomorrow.

Any assessment of energy policies must also consider the suggestion that by doing no

more than changing the fuel used at Moneypoint — from coal to sustainable biomass in the form of wood pellets — we would meet obligations on our renewables and avoid the prospect of multimillion-euro fines imposed by the EU. It has been suggested that even though we would have to transport the wood pellets from the US, initially at least, carbon emissions would be cut by at least 80% compared to burning coal at Moneypoint.

The scale and importance of these issues suggest that an early and comprehensive energy review is warranted.

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## 02.02.2015 Irish Examiner

http://www.irishexaminer.com/ireland/special-report-wind-power-in-ireland-310135.html

## **Special Report: Wind power in Ireland**

by Noel Baker Senior Reporter

While the crashing to earth of turbines might have damaged wind energy's image, opposition is much more deep-seated and points to environmental, societal and health impacts and questions the economic benefits, writes Noel Baker

It's a little like the old line about the tree falling in the woods. If a wind turbine falls in a part of Co Donegal and no-one is there to hear it, does it still make a sound?

Yes, and the debris is pretty obvious as well, as was the case when a 75m turbine fell over in high winds at a windfarm at Loughderryduff near Portnoo nearly two years ago.

The incident came at a time when local opposition to another windfarm proposal for nearby Glenties was awaiting the outcome of an An Bord Pleanála oral hearing.

Inge Buckley, a co-director of North West Wind Ltd, the developer of the felled turbine at Loughderryduff, now attributes the incident to "human error".

A Dane with a longstanding interest in wind power here, she says while it was an ill wind that damaged the turbine that day, in general the gusts which blow across our island represents a large chunk of future energy production.

"We are at the end of a very long pipeline," she observes of Ireland's place in the European gas supply chain. "When the wind blows, it pushes the wholesale electricity price down."

According to Catriona Diviney of the Irish Wind Energy Association (IWEA), a recent IPSOS/MRBI poll showed widespread support for wind energy. She stresses that engagement with communities is central to any proposed development and it is right that people are "empowered to use their voice".

Admitting there is a "challenging landscape to development in Ireland", she says: "We have only got those small pockets of opposition in recent times for different reasons in each case."

Yet there are many groups around the country that have an issue with turbines and pylons. Among them is Rethink Pylons. Its main man, Paddy Massey, used to live and work in Cornwall. He remembers the large pylon near his house where he grew up in Cork, and says he now sees Cornwall "covered" in turbines. He is adamant he does not want the same thing to happen here.

"We are definitely in a situation where we are cutting off our nose to spite our face," he says, stressing that retrofitting of houses and use of biomass where possible — including converting Moneypoint Power Station in Co Clare — would achieve as much or more for less money. He maintains any potential financial benefits from exporting our wind energy is limited due to it being a "forced market"— would-be buyers know we have to sell it there and then, as it is more difficult to store.

"Peak demand is 5,000MW but we have capacity for 9,000MW," he says. "Why are we trying to put so much wind onto the grid? It is basically a gold rush."

Mr Massey also forecasts issues with the existing turbine stock which, in most cases, have a lifespan of 25 years but which he claims may actually not last that long. Replacing them will cost money, he says, while even if some turbines are removed you have the clean-up operation linked to the concrete bases.

It is a subsidised industry, he argues, which has attracted an artificial level of interest from investors and developers. And while every development requires an Environmental Impact Study, he queries whether or not the aggregate effect of turbines dotted around a county is fully taken into account.

"We will live in a country in 25 years time that will look like the back of a hedgehog," he says.

Arguably, wind has had something of an image problem in this country, and it has generally nothing to do with the uncommon crashing to earth of turbines or blades.

Some people feel they destroy the landscape. Others believe their environmental impact is overstated, and for larger projects point to the added eyesore of huge pylons required to ferry the electricity across the country.

Still others query the economic benefits of wind, making the argument that despite it being a natural resource which Ireland has in abundant supply, it is not necessarily blowing money our way.

While much of the debate surrounding the future role of wind is by its very nature speculative, there are some clear facts at play. Presented by Dr Paul Deane of the Environmental Research Institute at University College Cork, they are as follows:

Ireland is one of the most energy-dependant countries in Europe, spending €6.9bn on fuel in 2013 (source: CSO) importing over 89% of our energy (SEAI). Ireland is the third highest emitter of Green House Gases per capita in Europe (source: EPA).

Ireland has an ambitious mandatory target for renewable energy arising from the EU Renewable Energy Directive (2009/28/EC), and by 2020, we must increase the renewable energy contribution of overall energy use to at least 16%.

It is up to us how we achieve this, and Ireland's EU target of 16% in Renewable Energy by

2020 breaks out into 10% of energy in transport, 12% of energy in heating and 40% of energy in electricity must be renewable. Then there is the scale of the challenge.

In 2013, renewable energy in Ireland represented 7% of energy use, so we need to more than double our share in seven years.

As of last December, the 26 counties currently has 2,211 MW of installed wind capacity (and 7,383 MW of other power plant mainly thermal capacity) and will need to install approximately a further 1,600MW to meet the target.

Electricity generated from renewable energy (mainly wind energy,) reached 20.9% of electricity consumption in 2013. This was the second largest source of electricity in 2013 after natural gas generation.

Ireland's target of 40% of electricity consumed to be from renewables was informed by a detailed technical study undertaken in 2008, called the All Island Grid Study, jointly commissioned by the governments of the Republic of Ireland and Northern Ireland which examined the technical and economic feasibility of this amount of wind generation in the Irish Power System.

Moreover, while people opposed to wind energy might not necessarily make the distinction, there is a Premiership vs First Division aspect to wind. There are the smaller, cottage industry turbines that deal in KW; and then there are the large, utility-scale wind farms that deal in MW

They are two different tiers, in which the larger developments are the ones pumping energy into the grid, and the smaller ones are typically powering their immediate domestic/agricultural settings.

ESB Networks deal with the smaller operators, Eirgrid with the larger ones. And it is the larger developments that are the focus of Ireland's attempts to get close to its 2020 targets. And while sole trader-type turbine operators argue that there are insufficient grants and tariffs available to them, large-scale wind energy is subsidized through the REFIT mechanism (Renewable Energy Feed-in-Tariff).

It provides a guaranteed floor price (approximately 6.9c per KW hour) for the supplier and appears on all of our electricity bills as the PSO (Public Service Obligation) — a number of subsidy schemes designed by the Government to support its electricity policy objectives for renewable electricity (mostly wind power), indigenous fuels (peat) and security of supply.

More of the overall subsidy fund goes to peat, rather than wind, but it means if the price of electricity in the wholesale market goes below the floor price, wind operators still get the guaranteed price.

The Commission for Energy Regulation says: "While wind power contributes to the PSO

levy, wind power also tends to reduce the wholesale price of electricity. This is because wind energy is essentially free when the wind blows and it runs instead of fossil fuel plants such as gas or coal.

It especially reduces the wholesale price of electricity when fossil prices are high and associated fossil fuel plants are expensive to run. The CER has carried out analysis which suggests that wind can in fact reduce customer bills overall (even allowing for the PSO cost) when fossil fuel prices are at high levels."

The CER is also keen any future target for renewable energy should be at least total cost to the consumer, but says on some days more than a third of Ireland's electricity production comes from renewable generation.

However, not everyone believes that wind is an economic boon. Last autumn, economist Colm McCarthy delivered his sharply titled paper, 'Time to Tilt at Windmills', at the Dublin Economics Workshop, in which he addressed the fluctuating issues of demand and supply.

Peak demand required just over 5000MW in 2008, he said, and this level of peak demand will not be reached again until about 2019, yet construction of new capacity has continued at a rapid pace since the downturn, at a time when there was also three new CCGTs (Combined Cycle Gas Turbines), or modern gas units.

"Power systems need a capacity margin," he says. Dispatchable capacity is now 54% ahead of peak — allowing a small capacity credit for renewables, of maybe 60%. "This happened by accident," he said. "Nobody ever planned for capacity so far ahead of peak."

Prior to McCarthy's critique, Prof Richard Tol, formerly of the ESRI and now of the Department of Economics of the University of Sussex, had raised concerns. His views, expressed back in 2013, do not seem to have altered much in the interim.

"Wind energy is still more expensive than coal and gas," he tells this paper. "The cost of wind energy has been falling slowly. The cost of coal and gas has been falling rapidly. So it is simply not a wise investment at the moment. That may change in the future, of course.

"Ireland has a fantastic wind resource, but it is also far from the major electricity markets and transport is expensive. England lost its appetite for subsidizing Irish wind. There are jobs in manufacturing wind turbines, but setting up a big factory in Ireland is not economic: The demand for turbines in Ireland is too small, and shipping is expensive."

According to Dr Paul Deane, both Richard Tol and Colm McCarthy make valid points, but that is not the whole story. "Gas and coal and carbon emission are cheap today and this gives a strong competitive advantage over wind," he says. "However, if gas prices and coal prices go up (mainly gas) then wind becomes competitive again. I think most analysis would agree that the likelihood is that gas prices will increase over the next five to 10 years.

"From an environmental perspective wind does not create CO2 whereas gas and coal do, therefore carbon prices also have an impact. The economics, ignoring environmental benefits, of wind therefore can distilled down simply: If gas is cheap, wind is not cost-competitive and if gas is expensive then wind is cost-competitive.

"Colm McCarthy is correct, we have adequate capacity at the moment. Increased wind capacity will reduce the running of existing thermal plant; however, building extra thermal plant will not help us meet our EU targets or help us reduce our emissions."

There are challenges, including ensuring the system frequency stays stable, voltage is maintained and the benefits from wind are maximised at least cost at times when the wind is blowing. Some of these issues are due in part to the small size of the Irish system relative to the volume of wind generation due to be connected in the next few years in order to meet Ireland's 2020 renewables target. Countries such as Denmark, while having a larger volume of wind generation, are electrically part of the continental European system and so do not face the same technical difficulties.

The all-Ireland project is looking into how best to meet these challenges and as the CER puts it, "facilitating as much wind on the system at least cost".

Today, there is a system operational limit of 50% of demand being met by wind generation at any time to maintain system security, but the target is to increase this limit from 50% up to 75%. This would mean that during windy periods, up to 75% of electricity demand could be supplied by wind generation, says the CER.

"Because the marginal cost of wind generation is effectively zero, the more its electricity can be used when the wind is blowing, the greater the benefits to the consumer in terms of lower wholesale electricity prices. Maximising the use of wind also lowers carbon emissions and will help Ireland meet its 2020 renewables target."

Ultimately, Ireland has been set a target and while it is likely to achieve what it needs to from wind, falling short in transport and heat mean we are, ultimately, likely to fail to meet it. It is uncertain whether that will mean a penalty, in the form of a 'cost of compliance' sanction, but, irrespective of that, Dr Paul Deane believes that ultimately, wind is going to play a central role in our future energy provision.

"In terms of prices, gas is low now but we need to plan for the future rather than reacting to what the prices are today," he says. So, while everyone having a fully insulated attic and shining heat-retaining home is the ideal, in practice it is very hard to achieve — much like some of the other obstacles to utilising alternatives to wind.

"We need to make decisions in advance of perfect knowledge," Dr Deane adds.

Ms Diviney does not feel 2020 marks the end, with a fresh target for 2030 in the offing.

"People will see life after 2020," she says, although as ever, its size and shape is a little indistinct. Bob Dylan might have had it right all along: "The answer, my friends, is blowin' in the wind."

Or maybe not? Ireland is not exactly the sunshine state, but, says Ms Buckley: "Solar is gaining a lot — it is technically getting better and cheaper. It probably is where wind was in 1990 in Denmark and other states."

### 12.03.2015 Irish Examiner

http://www.irishexaminer.com/ireland/doctors-call-for-reductionin-turbine-noise-317947.html#.VWovn87UhHc.facebook

## Doctors call for reductioning turbine noise

by Conall Ó Fátharta

Leading doctors have called on the Government to reduce the noise levels of wind turbines — which they claim are four times that recommended by World Health Organisation (WHO) guidelines.

The Irish Doctors' Environmental Association also said the set-back distance of 500m is not enough, that it should be increased to at least 1,500m.

Visiting Research Professor at Queen's University, Alun Evans and lead clinical consultant at Waterford Regional Hospital Prof Graham Roberts have both expressed concerns over the current noise levels and distance of turbines from homes.

Environment Minister Alan Kelly is currently reviewing the wind energy planning guidelines and the group is calling for both issues to be examined closely in the interest of public health.

The association has called for the introduction of a maximum noise level of 30 decibels as recommended by the WHO and for the set-back distance from inhabited houses to at least 1,500m from the current 500m.

Prof Evans said the construction of wind turbines in Ireland "is being sanctioned too close to human habitation".

"Because of its impulsive, intrusive, and sometimes incessant nature, the noise generated by wind turbines is particularly likely to disturb sleep," he said.

"The young and the elderly are particularly at risk. Children who are sleep- deprived are more likely to become obese, predisposing them to diabetes and heart disease in adulthood. As memory is reinforced during sleep, they also exhibit impaired learning."

Prof Evans said adults who are sleep-deprived are at risk of a ranges of diseases, particularly "heart attacks, heart failure, and stroke, and to cognitive dysfunction and mental problems".

Prof Evans, attached to the Centre for Public Health at Queen's, said the Government should exercise a duty of care towards its citizens and exercise the 'precautionary principle' which is enshrined in the Lisbon Treaty.

"It can achieve this by raising turbine set-back to at least 1500m, in accordance with a growing international consensus," said Prof Evans.

In a statement, the Department of the Environment said that in December 2013 it published draft revisions to the noise, set-back distance, and shadow-flicker aspects of the

2006 Wind Energy Development Guidelines.

These draft revisions proposed: n The setting of a more stringent day and night noise limit of 40 decibels for future wind energy developments; n A mandatory minimum setback of 500m between a wind turbine and the nearest dwelling for amenity considerations; n The complete elimination of shadow flicker between wind turbines and neighbouring dwellings.

A public consultation process was initiated on these proposed revisions to the guidelines, which ran until February 21, 2014.

"The department received submissions from 7,500 organisations and members of the public during this period. In this regard, account has to be taken of the extensive response to the public consultation in framing the final guidelines," the department said in the statement.

"However, it is the department's intention that the revisions to the 2006 Wind Energy Development Guidelines will be finalised in the near future and will address many of the issues raised in that bill."

## 22.03.2015 Sunday Indo Business

http://www.independent.ie/business/irish/why-is-the-state-forestry-company-building-windfarms-31085032.html

## Why is the State forestry company building windfarms?

by Sarah McCabe

Three semi-state companies are competing with each other to build wind farms across the countryside. Why have Bord na Mona, Coillte and ESB all poured millions into the exact same activity?

Three separate State-owned companies currently own and operate windfarms.

Peat briquette maker Bord na Mona, forestry owner Coillte and ESB have all poured hundreds of millions into building vast rows of turbines, in direct competition with one another, while owned by the State.

Bord Gais Energy, until recently owned by the State, also built up a huge windfarm portfolio before it was sold last year.

All amassed large teams to do so, from planners to engineers to financiers to operators.

The ESB has the largest wind business. Run by UCD graduate Pat O'Doherty since 2011, it now controls about 10pc of the country's wind assets.

It operates 10 windfarms in the Republic and seven in the UK, two of them co-owned. It is installing many more, including what will become the country's largest windfarm at Oweninny in Co Mayo, which will not be finished until 2017. In total ESB wants to build enough facilities to produce 800MW of power by 2020.

It is also obliged to connect private windfarms to the grid, and has completed grid connections with a combined capacity in excess of 2,000MW in the UK and Ireland.

Bord Gais Energy built 17 windfarms in eight counties across the island while under State ownership, with an estimated value of around €700m, about 15pc of the market. Eddie O'Connor's Mainstream Renewables tried to buy its wind-energy business before it was sold to international group Brookfield Renewable Energy last year.

"That sale didn't make sense at all," says economist Colm McCarthy. "The State was selling windfarms on one side with BGE, and building them on the other hand with ESB, Bord na Mona and Coillte. Do they want to own these things or not?"

Coillte, the forestry company, is arguably the oddest member of the group.

It has a portfolio of projects totalling 550MW and a development pipeline of another 1000MWs. It is not clear who made the decision for Coillte to move into wind, or why it didn't simply hand its land over to the ESB for the development of wind projects rather than start from scratch itself.

Bord na Mona built the country's first windfarm in 1992, but its wind-energy activities have been largely dormant until recently.

Having endured years of downsizing as peat work fell away, the company recently revealed plans to reposition itself as a major player in the wind-energy space by building one windfarm a year for seven years on cutaway peat land.

It has just opened the first of these, at Mount Lucas in Offaly. The project cost €115m to build. It is developing another at Oweninny in Co Mayo with the ESB, which will be Europe's second largest.

"It makes sense to me that ESB, the State's energy company, would have a wind division but there is no obvious reason for Coillte and Bord na Mona to do the same thing," says Colm McCarthy.

He estimates that between €3 and €4bn has now been spent developing wind-energy assets.

On top of the multiplicity of State organisations building and running windfarms, the State has also heavily invested cash in the sector.

The National Pension Reserve Fund has amassed a huge wind portfolio. In 2012, it invested €300m into an enormous €1bn fund established by Irish Life Investment Managers, called the Irish Infrastructure Fund (NRPF), which has pumped money into wind-energy assets.

The fund's first investment was a controlling interest in a portfolio of 10 windfarms bought from Viridian, eight of them located in the Republic.

Late last year, the NPRF took part in a €60m loan awarded to Mainstream Renewables for expansion purposes. Mainstream builds windfarms all over the world, not just in Ireland. In 2013, the NPRF invested €30m in Gaeletric, also for expansion purposes.

When queried why so many different State-backed organisations were involved in the same activity, this was the Department of Energy said operational decisions at semi-states "are made on a commercial basis independent of Government."

The construction of windfarms, a spokesperson added, is necessary to meet EU renewable energy targets. Some 16pc of Ireland's energy to come from renewable sources by 2020, under EU Directive 2009/28 EC.

Heavy fines are threatened, estimated at between €100m and €150m for every 1pc Ireland falls below that 16pc target.

For this reason, the Government introduced subsidies for wind energy, including a guaranteed minimum price in 2007.

This is paid for by energy consumers, incorporated into electricity bills. Wind producers

also don't pay the full costs they impose on the transmission network; they pay only the immediate connection cost.

McCarthy argues that it is the lucrative nature of these subsidies, rather than any real demand, that has prompted redundancy-hit State companies to turn to wind energy. "Windfarms don't provide a lot of jobs beyond construction but they were highly lucrative. The basic truth is that if there were not subsidies, these organisations would not be building windfarms.

"Neither would the rake of private companies who are doing the same thing. Those subsidies are not real money - they are artificial charges that raise the cost of bills for consumers. And don't forget that the State is responsible for connecting windfarms to the grid, and energy consumers pay for that too, via their bills."

The price paid for energy produced from wind is high enough that Bord na Mona is predicting a return "in the high teens" on its Mount Lucas project, and expects the €115m raised to build it to be paid off "in seven or eight years", according to head of power generation, John Reilly.

But subsidies for wind projects are only guaranteed for those built before 2017. There is a review of the system already underway. Any attempt to renew it must be cleared with the EU Commission under state-aid rules.

Interestingly, despite being one of the biggest operators of windfarms in the country, the ESB, in a recent submission to a public consultation process on the matter, said it does not want them removed beyond 2020.

"It is because the ESB has such a diverse power generation portfolio that the company often has a more independent position on energy issues than other companies," says anti-windfarm campaigner Owen Martin.

Subsidies for wind and other renewables have discouraged traditional energy generators from investing, the ESB says. This is problematic because wind cannot be relied upon to provide security of supply - it doesn't always blow.

"Support for specific forms of generation, especially those that have zero marginal cost, has the inadvertent effect of undermining the investment economics for other forms of generation that remain necessary to provide back up to these intermittent renewables," says the ESB.

"It is a reality that the technology choices that Ireland and Europe need to make to arrive at a sustainable and secure energy system at a reasonable cost are not yet clear. For example, a sustainable form of generation that can be switched on and off as needed, and is not reliant on the weather or sunlight, is required," the ESB say.

One thing is certain: Irish consumers pay some of the highest energy costs in the world.

Figures from the EU's statistical service, Eurostat, show that for the first half of 2013, industrial consumers in Ireland paid 41pc above the EU average, while households paid 42pc more.

Virtually every expert and business person in the country agrees this is hurting competitiveness. Jobs minister, Richard Bruton, openly blamed Cadbury's decision earlier this month to close a Tallaght plant and cut a total of 200 jobs across its Irish business on our high cost base. "Unfortunately due to a cost base which is significantly out of line with competitor countries it appears likely that the company will proceed," he said.

Some jobs went to Poland, which has some of Europe's cheapest electricity. It has also been one of the slowest countries to introduce subsidies for renewable projects.

Sunday Indo Business

## 09.04.2015 Irish Examiner

http://www.irishexaminer.com/breakingnews/ireland/anti-wind-turbine-protestors-stage-demonstration-outside-an-bord-pleanala-offices-671008.html

## Anti-wind-turbine protestors stage demonstration outside An Bord Pleanála offices

Anti-wind-turbine protestors said today that the Government's energy policy is flawed, and are calling for a re-think.

Around 100 protestors from rural communities in Meath, the Midlands and Wexford gathered in Dublin earlier to highlight their opposition to Wind farms.

They say these 180-foot turbines will destroy the countryside, and question their ability to reduce carbon emissions in any meaningful way.

Wind Aware Ireland organised the protest outside the offices of An Bord Pleanála, as they feel locals' concerns are not being heard.

A number of cases are currently before the courts, and communities are calling on the Government to halt their renewable energy strategy.

Chairperson of Wind Aware Ireland Henry Fingleton says wind turbines should concern every taxpayer.

Fianna Fáil Senator Thomas Byrne, who was supporting the protestors, said the Government's energy strategy must be revisited.

http://www.irishexaminer.com/business/coillte-plans-to-build-six-wind-farms-in-next-three-years-345557.html

## Coillte plans to build six wind farms in next three years

by Geoff Percival

State forestry body, Coillte plans to build six wind farms over the nextthree years, which will ultimately have the capacity to provide electricity for 210,000 homes.

The company's burgeoning renewable energy arm will begin construction on the first of those projects this year, a joint-venture with the ESB in Co Wicklow, with it set to be fully operational sometime next year. Further joint-venture wind projects – with SSE Energy and Bord na Mona – areplanned for counties Galway and Roscommon.

Coillte recently launched a tender process, searching for a development partner for a number of planned solar energy projects. Chief executive, Fergal Leamy said yesterday that early interest levels have been high but management is yet to decide on a definite plan of action, regarding solar. Bord na Mona is planning a pilot solar farm project, in Co Offaly, next year; but Mr Leamy said Coillte has different challenges relating to the location and topography of its landbank.

He was speaking on the back of a strong set of annual results – showing a 46% jump in operating profits (before exceptional items) to €60.5m and an 8% rise in revenues to €262.3m; and a near €13m rise in post-tax profits to €38.3m. The results, according to Mr Leamy, show "important progress" made by Coillte in continuing to recover from the recession in the Irish and UK construction markets.

Despite the increase in renewable energy projects, however, Mr Leamy said that leg of the business will remain a secondary consideration and will continue to complement the core forestry side, rather than overtake it.

"We have 445,000 hectares of forestry land and the opportunity to build a world-class forestry company that can meet the huge international demand for timber and biomass," he said.

"Coillte's core business is forestry and we are encouraged by the strong demand we are seeing, globally, for the products we produce.

"We expect this demand to increase in the next few years with stronger demand from construction and growing bioenergy needs," he added. "In parallel, we are maximising the value of each forest hectare we own, by developing an exciting renewable energy portfolio," he said.

Meanwhile, Mr Leamy said progress is being made on the partial merger of Coillte with Bord na Mona, which by the end of next year will see the two firms overlap on green tourism, wind energy, shared services and biomass activity. "Good progress is being made in 2015 in looking at the areas of mutual benefit identified between the two companies," he said.

## 16.09.2015 The Law is my Oyster

https://the-law-is-my-oyster.com/2015/09/16/research-into-wind-turbine-infrasound/

## **Research into Wind Turbine Infrasound**

by Neil van Dokkum

The research is extensive and continuing, and it is not good news for the wind industry. Despite their tobacco-style advertising and "sponsorship" of tame academics and front organisations like Environmental Impact Assessment, there is now a sound body of research that confirms the dangers of infrasound emitted by wind turbines.

These include:

**Editorial: Wind turbine noise** by Christopher D Hanning and Alun Evans **British Medical Journal**, BM J2 012;344d oi: 10.1136/ bmj.e1527 (8 March 2012).

Christopher Hanning, BSc, MB, BS, MRCS, LRCP, FRCA, MD is an honorary consultant in sleep medicine Sleep Disorders Service, University Hospitals of Leicester, Leicester General Hospital, Leicester, UK Dr Chris Hanning is Honorary Consultant in Sleep Disorders Medicine to the University Hospitals of Leicester NHS Trust, UK. He retired in September 2007 as Consultant in Sleep Disorders Medicine.

His expertise in this field has been accepted by the civil, criminal and family courts. He chairs the Advisory panel of the SOMNIA study, a major project investigating sleep quality in the elderly, and sits on Advisory panels for several companies with interests in sleep medicine.

"Our very own" Alun Evans, is an epidemiologist, Centre for Public Health, Queen's University of Belfast, Institute of Clinical Science B, Belfast, UK, who has been leading the fight in Ireland against industrial wind turbines being located near dwellings because of the adverse health effects on their inhabitants.

The British Medical Journal is possibly the most respected medical journal in the world.

This is an excerpt from the BMJ web site:

"Seems to affect health adversely and an independent review of evidence is needed. The evidence for adequate sleep as a prerequisite for human health, particularly child health, is overwhelming. Governments have recently paid much attention to the effects of environmental noise on sleep duration and quality, and to how to reduce such noise. However, governments have also imposed noise from industrial wind turbines on large swathes of peaceful countryside.

The impact of road, rail, and aircraft noise on sleep and daytime functioning (sleepiness and cognitive function) is well established. Shortly after wind turbines began to be erected close to housing, complaints emerged of adverse effects on health. Sleep disturbance was the main complaint. Such reports have been dismissed as being subjective and anecdotal, but experts contend that the quantity, consistency, and ubiquity of the complaints constitute epidemiological evidence of a strong link between wind turbine noise, ill health, and

disruption of sleep."

http://nieuwerustnoisewatch.org/wp-content/documents/peer-reviewed-articles/15-B-M %20J-Noise.pdf

See also: http://www.irishmirror.ie/news/irish-news/politics/leading-professor-warns-health-dangers-5774430

The Problems With 'Noise Numbers' for Wind Farm Noise Assessment by Bob Thorne, in the Bulletin of Science Technology & Society 2011 31: 262. Bob is a professor at Massey University in New Zealand and he is an environmental health research associate in the Institute of Food, Nutrition and Human Health at Massey University.

Bob showed that the sounds emitted by wind turbines are unique and therefore to simply set ordinary noise limits (like one does for traffic or night clubs) fails to address the health problems caused by the sounds coming from wind farms.

See: http://nieuwerustnoisewatch.org/wp-content/documents/peer-reviewed-articles/01-swv symposium paper thorne problems with noise numbers.pdf

**Evaluating the impact of wind turbine noise on health related quality of life** by Daniel Shepherd, David McBride, David Welch, Kim N. Dirks, Erin M. Hill, **Noise & Health**, September-October 2011, 13:54,333-9.

See: http://www.noiseandhealth.org

The authors conducted an in-depth study of individuals living close to wind farms, and these were compared to residents living in similar circumstances but without wind farms. Statistically significant differences were noted in some HRQOL (Health-related quality of life) domain scores, with residents living within 2 km of a turbine installation reporting lower overall quality of life, physical quality of life, and environmental quality of life. Those exposed to turbine noise also reported significantly lower sleep quality, and rated their environment as less restful.

#### See:

http://nieuwerustnoisewatch.org/wp-content/documents/peer-reviewed-articles/02-Evaluating-the-impact-of-wind-turbine-noise1.pdf

Mitigating the Acoustic Impacts of Modern Technologies: Acoustic, Health, and Psychosocial Factors: Informing Wind Farm Placement by Daniel Shepherd and Rex Billington, Bulletin of Science Technology & Society (2011) 31: page 389. The authors both hold doctorates in psychoacoustics and health psychology. The authors identify key considerations for the development of wind turbine noise standards.

Alex White, are you listening? And your mate Alan Kelly?

http://nieuwerustnoisewatch.org/wp-content/documents/peer-reviewed-articles/03-Mitigating-the-Acoustic-Impacts-of-Modern-Technologies.pdf

Public Health Ethics, Legitimacy, and the Challenges of Industrial Wind Turbines: The Case of Ontario, Canada by Martin Shain, Bulletin of Science Technology & Society, (2011) 31: page 256. The author is an assistant professor at the Dalla Lana School of Public Health, Occupational and Environmental Health Division, University of Toronto

Martin convincingly shows that current methods used by governments to evaluate licensing applications for industrial wind turbines do not meet most public health ethical criteria. He also shows that they routinely violate established legal principles like the Precautionary Principle, the Least Impactful Means (Proportionality) Test, and the Neighbour Principle.

## Again, Ministers White and Kelly, and the Minister of Justice, Frances Fitzgerald, are you listening?

See:

http://nieuwerustnoisewatch.org/wp-content/documents/peer-reviewed-articles/04-shain public health ethics wind turbines.pdf

Infrasound From Wind Turbines Could Affect Humans by Alec N. Salt and James A.Kaltenbach Bulletin of Science Technology & Society (2011) 31: page 296.

Alec Salt has a PhD from the University of Birmingham, and has been researching the physiology of the ear for over 35 years. James Kaltenbach has a PhD from the University of Pennsylvania and specializes in the neurobiology of hearing disorders. The authors demonstrate how serious misconceptions about low-frequency sound and the ear have resulted from a failure to consider in detail how the ear works. Responses to infrasound reach the brain through pathways that do not involve conscious hearing but instead may produce sensations of fullness, pressure or tinnitus, or have no sensation, all of which disturb sleep.

http://nieuwerustnoisewatch.org/wp-content/documents/peer-reviewed-articles/05-Infrasound-from-Wind-Turbines-Could-Affect-Humans-SaltKaltenbach.pdf

The same Alec salt has also conducted research with T.E. Hullar, Department of Otolaryngology, Washington University School of Medicine, published as *Responses of the ear to low frequency sounds, infrasound and wind turbines* in **Hearing Research**(2010) Sep 1; 268(1-2):12-21, which shows that the outer hair cells of the ear are stimulated by sounds at levels below those that are heard.

See: http://nieuwerustnoisewatch.org/wp-content/documents/peer-reviewed-articles/06-Responsesof-the-ear-to-low-frequency-sounds-saltlichtenhan.pdf

A final example (there is only so much I can read!) of the extensive research being carried out into low frequency sound and wind turbines is by three of the most experienced researchers in the business: Robert W. Rand, Stephen E. Ambrose, and Carmen M. E. Krogh, who published Occupational Health and Industrial Wind Turbines: A Case Study in the Bulletin of Science Technology & Society(2011) 31: page 359.

... the other side of the coin...

The authors conducted an extensive and meticulous case study on industrial wind turbine workers.

See: http://bst.sagepub.com/content/31/5/359

As I said, these are the ones that I managed to read. There are **many more** peer-reviewed publications that all confirm the damage caused by industrial wind turbines:

Properly Interpreting the Epidemiologic Evidence About the Health Effects of Industrial Wind Turbines on Nearby Residents by Carl V. Phillips, Bulletin of Science Technology & Society (2011) 31: 303.

http://nieuwerustnoisewatch.org/wp-content/documents/peer-reviewed-articles/08-Interp\_Evidence\_re\_Wind\_Turbines.pdf

Toward a Case Definition of Adverse Health Effects in the Environs of Industrial Wind Turbines: Facilitating a Clinical Diagnosis by Robert Y. McMurtry, Bulletin of Science Technology & Society (2011) 31: page 316.

See: http://nieuwerustnoisewatch.org/wp-content/documents/peer-reviewed-articles/09-mcmurtry toward a case definition wind turbines.pdf

**Low-frequency noise from large wind turbines** by Henrik Møller and Christian Sejer Pedersen , **J. Acoust. Soc. Am**. 129 (6), June 2011 Pages: 3727–3744.

See: http://nieuwerustnoisewatch.org/wp-content/documents/peer-reviewed-articles/10-Low-frequency%20noise%20from%20large%20wind%20turbines.pdf

WindVOiCe, a Self-Reporting Survey: Adverse Health Effects, Industrial Wind Turbines, and the Need for Vigilance Monitoring by Carmen M.E. Krogh, Lorrie Gillis, Nicholas Kouwen, and Jeffery Aramini, Bulletin of Science Technology & Society (2011) 31: page 334

See: http://nieuwerustnoisewatch.org/wp-content/documents/peer-reviewed-articles/11-krogh etal windvoice wind turbines.pdf

Industrial Wind Turbine Development and Loss of Social Justice? by Carmen M.E. Krogh, Bulletin of Science Technology & Society (2011) 31: page 321.

See: http://nieuwerustnoisewatch.org/wp-content/documents/peer-reviewed-articles/12-krogh wind turbines and loss of social justice.pdf

Wind Turbines Make Waves: Why Some Residents Near Wind Turbines Become III by Magda Havas and David Colling, **Bulletin of Science Technology & Society** (2011) 31: page 414.

http://nieuwerustnoisewatch.org/wp-content/documents/peer-reviewed-articles/13-Havas-Colling-wind-article.pdf

**Literature Reviews on Wind Turbines and Health : Are They Enough?** by Brett Horner, Roy D. Jeffery and Carmen M. E. Krogh, **Bulletin of Science Technology & Society** (2011) 31: 399.

http://nieuwerustnoisewatch.org/wp-content/documents/peer-reviewed-articles/14-Literature-Reviews-on-Wind-Turbines-and-Health.pdf

There is a lot more where that came from. See: <a href="http://stopthesethings.com/2015/09/16/incessant-wind-turbine-infrasound-an-acoustic-page-15/09/16/incessant-wind-turbine-infrasound-an-acoustic-page-15/09/16/incessant-wind-turbine-infrasound-an-acoustic-page-15/09/16/incessant-wind-turbine-infrasound-an-acoustic-page-15/09/16/incessant-wind-turbine-infrasound-an-acoustic-page-15/09/16/incessant-wind-turbine-infrasound-an-acoustic-page-15/09/16/incessant-wind-turbine-infrasound-an-acoustic-page-15/09/16/incessant-wind-turbine-infrasound-an-acoustic-page-15/09/16/incessant-wind-turbine-infrasound-an-acoustic-page-15/09/16/incessant-wind-turbine-infrasound-an-acoustic-page-15/09/16/incessant-wind-turbine-infrasound-an-acoustic-page-15/09/16/incessant-wind-turbine-infrasound-an-acoustic-page-15/09/16/incessant-wind-turbine-infrasound-an-acoustic-page-15/09/16/incessant-wind-turbine-infrasound-an-acoustic-page-15/09/16/incessant-wind-turbine-infrasound-an-acoustic-page-15/09/16/incessant-wind-turbine-infrasound-an-acoustic-page-15/09/16/incessant-wind-turbine-infrasound-an-acoustic-page-15/09/16/incessant-wind-acous

... the other side of the coin....

#### invader/

Do your own internet searches and you will see the overwhelming evidence that industrial wind turbines are harmful to both humans and animals. Couple that with the fact that they are incredibly expensive, not environmentally friendly (no carbon savings worth mentioning), are pushing up the electricity prices, causing fuel poverty whilst making the rich even richer, and you must wonder why our government is determined to crowd the countryside with the damn things?

What is important about this research is that it is conducted by highly qualified and recognised **experts** and published in **peer-reviewed journals**. What that means is that it is scrutinised by an editorial board and a number of "blind" readers who look at things like research methodology, impartiality, etc. This would be exactly the opposite to the type of reports relied on by the Irish government which are generally written by a cowboy who used to do advertising jingles for the tobacco industry.

## Addendum:

Many thanks to Nigel de Haas of <u>"West Cork Wind"</u> for this further information

See http://www.westcorkwind.com/index.php/wind-issues/noise for full details.

M.A.Swinbanks defined health issues from low frequency noise (LFN) at the 6th International Meeting on Wind Turbine Noise Glasgow on 23 April 2015 http://www.epaw.org/documents/swinbanks-glasgow.pdf

Senior Surgical Pathologist Nuno A. Castelo Branco, M.D. presented a paper on LFN induced pathology at EuroNoise in Maastricht on 03 June 2015 <a href="http://docs.wind-watch.org/Euronoise2015-000602.pdf">http://docs.wind-watch.org/Euronoise2015-000602.pdf</a>

Dr. C. Koch of the German PTB characterised human perception of LFN at the 22nd International Congress on Noise and Vibration on 12 July 2015 http://en.friends-against-wind.org/doc/Full\_paper\_Koch\_V2.pdf

Ministers White and Kelly, are you listening, or perhaps more importantly, are you reading? Rather than spending money we do not have on some 'friendly' report, why not read the research out there already?

http://www.independent.ie/irish-news/no-wind-turbines-within-600-metres-of-homes-as-cabinet-clash-over-proposals-31547415.html

# No wind turbines within 600 metres of homes as Cabinet clash over proposals

by Philip Ryan

The Government's highly anticipated planning guidelines for the wind energy industry prohibit the construction of high-powered turbines within a kilometre of towns and villages, the Irish Independent can reveal.

The new rules will enforce a so-called 'setback distance' of 600 metres for turbines from any private residence - which is an increase on the 500m set out in the current guidelines.

Wind energy companies will be also be stopped from constructing mega-windmills higher than 170m, under the policy drafted by Environment Minister Alan Kelly.

However, it is unclear when the guidelines will be published or if these restrictions will be enforced due to an internal Cabinet row between Mr Kelly and Energy Minister Alex White.

Mr Kelly and his junior minister Paudie Coffey are said to be "hugely frustrated" with Mr White, who believes their guidelines will prevent the development of more onshore wind turbines.

Mr White insists this will result in Ireland missing EU renewable energy targets and will leave the country liable for huge fines.

Talks between the two departments have "broken down" and it is understood a decision may have to be taken at Cabinet to resolve the dispute.

It can also be revealed that any further delay in publishing the rules could result in local authorities being given the power to set distances themselves.

There is rising public frustration over the wind energy issue which is affecting many parts of rural Ireland - including Mr Kelly's homeland of north Tipperary - and it is likely to be a key issue when the country goes to the polls.

#### Guidelines

Protesters are planning to descend on the Ploughing Championships in Laois this week to voice their anger at the Government.

The Irish Independent understands the yet-to-be published guidelines from the Department of the Environment will propose a setback distance of a kilometre from towns and villages. There will be a maximum height of 170m on flat land and 150m in mountainous areas. It proposes a setback distance of 600m form any private residence and a similar distance from lakes or seashores.

The setback distance for high-powered turbines will be determined by a "height to distance matrix".

A spokesman for Mr White said the proposed guidelines would result in Ireland missing renewable energy targets and force the country to pay fines running into "hundreds of millions of euro".

"It is possible to revise the guidelines, but as they are currently drafted we would miss renewable energy targets and it would send a negative message to Europe which will damage our negotiating position on these issues," he said.

Meanwhile, there is a belief in the Department of the Environment that the current guidelines, which were drawn up almost a decade ago, may no longer be "legally robust".

This means power may soon have to be delegated to county councils as the legal planning authority to set their own distances for wind turbines.

Mr Kelly and Mr Coffey are understood to be open to giving local authorities the responsibility for the setback distances.

Meath-East Fine Gael TD Helen McEntee yesterday accused Mr White of "dragging his feet" and stalling the publication of "more appropriate and sustainable" guidelines.

Meanwhile, Labour Senator John Whelan, who has campaigned on behalf of anti-wind turbine protesters, said community groups were being forced to raise up to €100,000 to take legal challenges against wind energy firms.

Irish Independent

#### 09.10.2015 Irish Mirror Online

http://www.irishmirror.ie/news/irish-news/health-news/families-forced-move-out-homes-6598685

# Families forced to move out of homes due to industrial monster wind turbines by Henry Fingleton

Families forced to move out of homes due to industrial monster wind turbines

Prolonged exposure to this low frequency noise causes insomnia, headaches, nosebleeds, anxiety and a general inability to function normally

A war is taking place in rural Ireland. Not one with guns, bullets or bombs but with wind turbines and pylons.

Families are being forced to move out of their homes due to the negative health impacts of these giant industrial monsters.

The enormous turbines make so much noise, people who live near them cannot sleep.

Prolonged exposure to this low frequency noise causes insomnia, headaches, nosebleeds, anxiety and a general inability to function normally. Children are especially vulnerable.

Were you ever in the toilets of a night club and noticed how you could feel the base drum in your chest – that's low frequency noise.

Imagine your children trying to sleep with that sensation.

Shortly after a turbine was built 1.6km from their home, one Co Cork family noticed their kids falling asleep at breakfast. This quickly became a rush to hospital with severe headaches and nosebleeds.

This family was forced to move from their home.

Thankfully, once at a safe distance away, they eventually returned to full health.

The wind developers denied liability and are facing legal action.

Meanwhile, this family can't live in their home and can't sell it because once a windfarm is built near a home, the value plummets.

Families are effectively being evicted by these developers.

But who can they turn to for help? Who is protecting our families, our children?

Alan Kelly is Environment Minister and it is his department's job to make sure proper guidelines are in place to protect us.

But the wind industry is a cruel business and is forcing the Government to ignore the problem.

These turbines are so big – up to 185m. If you laid this out flat in Croke Park it wouldn't fit in the stadium.

Labour Minister Alex White certainly isn't helping.

He has been heavily lobbied by the wind industry not to publish guidelines so they have effectively blocked any measures that would help prevent this terrible situation where families all over the country are being made so sick they have to leave their homes.

Mr White says we can't put anything in place that might impinge on wind developers because it's the only way to meet renewable energy targets.

But opponents point to a fully-costed and assessed plan to convert Moneypoint power station in Co Clare from coal to sustainable biomass as a viable alternative.

If this was done, there would be no need for the massive grid upgrade with towering pylons snaking through the countryside to carry the power from the wind farms.

And we would save the country almost €3.5billion.

That's almost €2,000 for every single worker in Ireland – €2,000 of your taxes wasted on pylons we don't need.

But it gets worse. You also have to pay for the expensive electricity created by all these wind farms.

Look at your next ESB bill, see the PSO levy – most of it is meant for the wind developers.

Another way of taking money out of your pocket.

Converting Moneypoint could be done for a tenth of the cost of the Government's plans for all the turbines and pylons.

Mr White admits, incredibly, they've never even looked at this alternative.

Besides the tragedy of families having to move from their homes, all of us have to pay huge electricity prices.

We have the third highest in Europe, mainly because of the cost of wind energy.

Contrary to popular belief, it turns out wind farms are not even good for the environment, giving us tiny CO2 savings.

So much for the "green, clean" image – turns out it's a marketing slogan churned out by public relations gurus.

If there's one thing this country can be really proud of is our truly world-

class racehorses and stud farms.

Ann Marie O'Brien of world-renowned Ballydoyle racing stables says: "Wind turbines and pylons are incompatible with racehorses."

This energy policy will destroy our bloodstock industry which directly employs 15,000 people.

That would be a devastating loss for our country.

Government energy policy is to turn our beautiful country into a pin cushion of massive industrial wind turbines, pylons and power lines.

And LL for what?

No benefit for the economy, no benefit for the environment, and definitely no benefit for the ordinary working people.

It's time this Government called a halt to the marching terror these wind farms and pylons are bringing to all corners of the country.

Time to stop the war that is being waged on our landscape. Until that happens, nowhere is safe.

#### 07.02.2016 Sunday Indo Business

http://www.independent.ie/business/irish/turnover-doubles-at-gaelectric-but-operating-loss-widens-accounts-34429303.html

## Turnover doubles at Gaelectric but operating loss widens accounts

by John Mulligan

Turnover at renewable-energy firm Gaelectric more than doubled in its last financial year to €12.7m, but its operating loss widened to €7.3m, according to accounts just filed for the business.

The company posted a pre-tax loss of €8.6m after a large exceptional gain in the previous year was not repeated.

In its previous financial year, Gaelectric recorded a €16m exceptional gain from the sale of a financial asset.

With energy assets in Europe and North America, Gaelectric said that it generated €9.9m of its turnover last year from the sale of electricity and €2.3m from fee income. Those figures compared to €3.8m and €451,000 respectively in the previous financial year.

Gaelectric's net debt soared to €172m at the end of March last year from €68.7m a year earlier. It had net assets of €14m at the end of last March, compared to €26.4m at the end of the previous year.

"The directors believe that the group is well-placed to manage its funding requirements successfully," the accounts note. The company is headed by chief executive Brendan McGrath.

Last month, Gaelectric issued a €10m green bond to raise cash for its wind, solar and energy-storage operations.

That bond was issued via BCP Asset Management and offered investors a return of 28pc at the end of a three-year term, with a minimum investment of €25,000. Mr McGrath said the response to the bond was "very encouraging".

As well as renewable-energy generation, the company is also involved in a number of energy-storage projects.

It has signed a deal with Elon Musk's Tesla to work on a battery-storage project and last week filed for planning permission for a massive compressed-air energy storage project in Co Antrim. Storage projects enable energy produced from wind to power homes when wind levels fall.

The company hopes that the technology used in the Antrim project can be deployed elsewhere.

Gaelectric has been on an aggressive acquisitions spree in recent times as it aims to build a 400 megawatt portfolio by the end of 2017. One megawatt is enough energy to power

around 1000 homes.
As of mid-December, the company had about 175 megawatts of operational capacity and expected a further 95 megawatts to come on stream by September of this year.
expected a further 95 megawatts to come on stream by September of this year.

#### 26.03.2016 Irish Examiner

http://www.irishexaminer.com/business/gaelectric-raises-65m-for-growth-226490.html

## Gaelectric raises €65m for growth

by Geoff Percival

Renewable energy group Gaelectric has raised €65m in fresh loan funding, which will help finance the company's plan to meet the energy needs of 85,000 homes by 2017.

The Dublin-headquartered energy generation and storage group is investing about €250m in developing its portfolio of 13 onshore Ireland energy projects over the next five years.

This loan facility will underpin the 164-megawatt wind portfolio, which should create sufficient generation capacity to power the energy needs of 85,000 homes and displace 262,000 tonnes of carbon dioxide per year.

Provided by Swedish group Proventus Capital Partners, the latest funding round will specifically finance the construction of Gaelectric's 13.8-megawatt wind energy project at Carn Hill in Co Antrim.

"In our discussions with funders and investors, we have been able to provide clear visibility of a portfolio of projects which have been substantially de-risked and which will be commissioned by 2017," said Gaelectric's finance director Barry Gavin.

"This amount of generation capacity opens up a range of strategically important options."

"It will allow Gaelectric transition from being a pre-revenue, renewable energy development group to an energy development and operating group with significant assets in Ireland, producing renewable power, generating turnover and cash for the group and further returns for our shareholders and investors."

Gaelectric has also concluded a framework agreement with leading German wind turbine manufacturer Enercon, which will see the latter's technology deployed on all the Irish company's sites covered by the current funding round.

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#### 11.04.2016 Agriland.IE

http://www.agriland.ie/farming-news/resistance-to-wind-turbines-is-large-and-growing/

## 'Resistance to wind turbines is large and growing'

by Jamie Ball

Wind Aware Ireland has rejected claims made by the Irish Wind Energy Association(IWEA) that wind turbines don't negatively impact on property prices.

The IWEA had claimed that research carried out in the UK last year found that wind farms have no negative impact on the prices of property within a 5km radius of wind turbines.

Wind Aware Ireland is an alliance of community groups from 20 counties, which challenges the development of "industrial wind farms" and associated grid infrastructure across Ireland.

"To justify the roll out of thousands of wind turbines and associated grid infrastructure the benefits of wind should outweigh the costs," said a Wind Aware Ireland spokesperson.

"These costs are substantial and include the reduction of property values in proximity to wind farms."

In 2014 Stephen Gibbons from the London School of Economics authored a report, "Gone with the wind: valuing the local impacts of wind turbines through house prices," which estimated the effects of visible wind farm turbines on housing prices in England and Wales.

"This price reduction is around 5-6% for housing with a visible wind farm of average size (11 turbines) within 2km, falling to 3% within 4km, and to 1% or less by 14km, which is at the limit of likely visibility," the report concluded.

Wind farms with 20 or more turbines reduce prices by 3% at distances between 8-14km, and by up to 12% within 2km."

The report found that a household in England or Wales would be willing to pay around £600 per year to avoid having a wind farm of average size visible within 2km, or would be willing to pay around £200 per year to avoid having a large wind farm visible within 8-14km.

"The implied amounts required per wind farm to compensate households for their loss of visual amenities is therefore fairly large: about £12m for a typical 11 turbine wind farm, based on the average numbers of households with turbines currently visible within 4km," the report said.

"Contrary to IWEA's statement, the resistance to wind turbines is large and growing," the

Wind Aware Ireland spokesperson said.

75% of wind turbine applications in 2014 are now in court, while a recent Sunday Business Post ad was signed by over 200 community groups opposing these projects.

"We believe decarbonisation must happen but that there are better ways to reduce CO2 than intermittent wind energy, which by its nature cannot replace reliable baseload electricity and to date has reduced our CO2 emissions by about 3%."

#### **German Report**

In the report, "The Impact of Wind Farm Visibility on Property Values" Professor Reinhard Madlener, Chair of Energy Economics and Management at RWTH Aachen University in Germany, came to a comparable conclusion as the London School of Economics report.

Our results indicate that the properties that obtained an extreme-to-medium view due to the wind farm construction showed a decrease in price by about 10-17%.

"In contrast, minor and marginal changes in the property's views do not cause any statistically measurable adverse effect on its value," the report concluded.

According to the Wind Aware Ireland spokesperson, "Wind energy in Ireland represents the transfer of wealth from the people to the wind developers, with very little benefit to the environment because the overall reduction on CO2 emissions from wind is about 3%.

"Wind Aware Ireland calls for a moratorium on wind farm development pending planning regulation on set-back distance and proper analysis to justify their construction in the first place."

www.derryjournal.com/.../concerns-raised-over-wind-farm-development-1-7344935

#### CONCERNS RAISED OVER WIND FARM DEVELOPMENT

A campaign against the erection of wind turbines near Kinnego Bay is continuing to gain momentum, with Inishowen county councillors this week calling for a halt to the development.

An Bord Pleanala previously granted permission, with conditions, for the erection of the two turbines at Crockbrack Hill. The application had been refused by Donegal County Council.

At this week's Inishowen Municipal District meeting, Councillor Bernard McGuinness queried why a judicial enquiry into this decision by An Bord Pleanala did not take place. He said the wider community was "very much against" the development, adding it should be "stopped and a judicial enquiry held" into why it was given the go-ahead by the Board despite advice to the contrary from their own inspector.

Councillor McGuinness also queried if the Council could seek a court injunction to stop the development going ahead. This was widely supported by all councillors.

Donegal County Council confirmed to the 'Journal' that a warning letter in relation to certain aspects of the development "was clarified by the developer to our satisfaction and that particular matter is now closed and is no longer an issue." They added: "However, other separate matters continue to be investigated."

The 'Journal' contacted the developer but he did not wish to comment.

Last week, a 'trial run' of the 43-metre lorry used to transport the parts to the site took place, travelling through Muff and into Moville.

Councillor Martin Farren told councillors the lorry did not succeed in getting to the site, with difficulties at 'Bonner's Corner.'

Councillor Farren said he has "major concerns" the vehicles would not be able to go around the corner, adding he was worried "considerable damage" would be caused.

He said: "One of the things that stands out is the tree in Moville. This lorry had no blades on it and was empty so it could close the trailer. That can't happen when theres a load on it. I'd be scared not just of the length but of the width."

Donegal County Council confirmed that nine applications for Wide load/Abnormal permits have been submitted to Donegal County Council by Mar-train Heavy Haulage in respect of Crockbrack Wind Farm.

They said: "Six applications for short loads have been permitted and three further applications for long loads are still being considered and a decision on these applications will be made in due course."

#### 11.06.2016 Farmers Journal

http://www.farmersjournal.ie/engineer-loses-high-court-challenge-over-proposed-wind-farm-183051

## Engineer loses High Court challenge over proposed wind farm

John Callaghan, a Co Meath-based engineer, has lost his challenge made before the High Court over a proposal to develop a new 46 turbine wind farm near his home in Kells.

Mr Callaghan had claimed that the planning procedure for the wind farm is fundamentally unfair as it does not allow for public consultation during the environmental impact assessment after An Bord Pleanála granted the development status as strategic infrastructure.

Strategic infrastructure developments allows a planning application to be made directly to An Bord Pleanála instead of the local authority, without the need for public involvement in any environmental impact assessment.

Mr Callaghan claimed the development of the wind farm would have a negative impact on the environment as well as the health of his young autistic son.

In her ruling, Ms Justice Caroline Costello said Mr Callaghan had not presented a substantial case for overturning the decision by An Bord Pleanála to award the wind farm strategic development status. Justice Costello added that the developments status as strategic infrastructure would not affect the outcome of the environmental impact assessment or the planning permission application.

The proposed Emlagh wind farm, an investment valued at €240m, will be situated on the outskirts of the town of Kells, Co Meath comprising a total of 46 wind turbines that will individually reach up to 169 metres in height.

#### 19.07.2016 National Wind Watch

https://www.wind-watch.org/news/2016/07/20/no-third-wind-turbine-at-kinnego-bay/

#### NO THIRD WIND TURBINE AT KINNEGO BAY

Credit: INISHOWEN INDEPENDENT | Tuesday, 19 July 2016

An appeal seeking planning permission for a third turbine in Kinnego Bay has been refused.

Donegal County Council refused the decision to allow permission for a third turbine at Crockbrack Hill, Carrowbeg, Meenletterbale and Ballymagaraghy, in Moville, on February 19, this year.

But that decision was appealed by developers to planning watchdog An Bord Pleanála, who last week confirmed the council's decision and refused permission for the build.

In its order, An Bord Pleanála says that the construction of the turbine has been refused because it is located in close proximity to a number of designated views.

The order states: "The appeal site is located in a scenic coastal areas in close proximity to an Area of Especially High Scenic Amenity, as set out in the current Donegal County Development Plan, where the policy is to safeguard the natural landscape qualities and the environmental habitats of the county.

"The site is also located in close proximity to a number of designated views and prospects identified for protection in the said plan.

"It is considered that the cumulative impact of the proposed development would interfere with the character of the landscape and in particular the aforementioned Area of Especially High Scenic Amenity and the designated views and prospects, which it is considered necessary to preserve."

The decision has been welcomed by the Inishowen Wind Energy Awareness Group.



Picture by Enda Craig

#### 21.08.2016 Independent.ie

http://www.independent.ie/irish-news/is-answer-to-energy-crisis-really-blowing-in-the-wind-34977436.html

## Is answer to energy crisis really blowing in the wind?

by Lorraine Courtney

Last week, Scotland generated enough wind energy to power the whole country for a day. But with many in Ireland opposed to turbines, and wind energy ineffective at reducing CO2, is it something we should pursue, asks our reporter

A campaign has begun in north Kerry to raise €80,000 to fight plans for a wind farm that would house 10 of the country's biggest turbines. An Bord Pleanála granted permission for the 511ft industrial wind turbines in the Finuge area. The community is trying to understand why planning was granted after 369 objections were filed against the plans and An Bord Pleanála's own inspector advised against it.

"There is a terrible anger here," Gerry Doyle, chairman of The North Kerry Turbine Awareness Group, says. "This is a penal tax on my community despite the highest number of objections in the history of Kerry County Council. It is an absolute disgrace, and the question that we need to be asking is how much money did Ireland Inc get from the wind industry last year if you withdrew subsidies?" The action group plans on fighting all the way to the High Court.

All over Ireland, similar battles are taking place as the Government seeks to meet our binding EU 2020 targets. "Since 2003, in excess of 190 wind farms, connected across 24 counties, have been installed," according to the Sustainable Energy Authority of Ireland. "We are over halfway to meeting our heat and transport targets, and need to accelerate action in relation to energy efficiency measures."

Wind Aware Ireland is an organisation that represents around 45 community groups concerned about the current wind-energy strategy. "We set up Wind Aware two years ago because we felt there was a need for a voice to represent these communities," chairman Henry Fingleton tells Review. "Mainstream media was pitching opposition to wind farms as Nimbyism. The debate about wind energy here was focused only on social issues like community impact and noise. These are relevant and important, but the debate must first examine if wind energy is capable of reducing CO2 and, if so, at what cost?"

"Energy specialists Pöyry Consulting and Cambridge Econometrics carried out a total economic cost-benefit review of Wind Energy in Ireland," says Brian Dawson, head of communications at Irish Wind Energy Association (IWEA). "It found that Irish wind energy is bringing down (the price of) wholesale electricity, attracting inward investment, creating jobs, and contributing rates and development contributions to help fund our local authorities."

But an official cost-benefit analysis on wind and other sustainables has never been carried out. "This cost-benefit analysis would determine all the benefits, subtract all the costs and reveal if a net benefit to Ireland existed from wind energy. We have no idea what we are getting in terms of value for money," says Fingleton.

Presenting the two sides as climate-change denying Nimbies versus green crusaders confuses the real question: are wind farms effective at reducing CO2 emissions? Do the benefits they bring outweigh the costs they impose? Right now, wind energy is reducing CO2 by just 3pc. Some experts suggest the real figure is even less.

There has been significant continued investment in Ireland's wind-energy sector, with over €350m invested in wind infrastructure in 2015. We will see a further €410m investment on average annually over the next four years. Households and business electricity bills will rise from October when the Commission for Energy Regulation increases the public service obligation (PSO) charge by €76m to cover supports for the wind industry. The move means the charge imposed on each home will now be €72.28 over 12 months - a very substantial 20pc increase.

For all this investment, wind energy has saved Ireland €70m in foreign energy imports since the beginning of 2016, according to provisional new figures compiled by the IWEA. But Irish wind energy is also an attraction for big-name investment here, according to Dawson.

"The recent high-profile examples of Facebook choosing to locate a new data centre in Meath, and Apple choosing to locate a new data centre in Galway, both selected with an eye to their need for the high-energy-use facilities to be powered by 100pc renewable electricity," he says.

"We expect wind energy costs to drop further in the future as a result of continued technological advances, helping us to bring down electricity costs further for Irish consumers.

Wind energy employs over 3,400 people across the country, bringing income to Irish families as well as benefits directly to neighbouring communities. Working with farmers and rural communities, we in the wind industry want Ireland to benefit from the considerable opportunity that exists to power our homes, farms, factories, offices and lives using an indigenous resource that will continue to bring down electricity prices into the future.

"In terms of payback period, typically a wind farm would be paying back its capital costs over approximately 15-20 years, depending on how the financing is structured," he adds.

This might work if we could store electricity for when it is needed, but we cannot, at least not in large quantities. The power companies still have to generate it at exactly the moment you want to use it.

Unfortunately, the wind might not be blowing when you want your morning shower. If it only starts blowing when you've gone to work unshowered, that is no good, so wind requires constant back-up from conventional, fossil-fuel power. These back-up plants operate at 50pc of normal efficiency and produce more CO2 per megawatt of electricity than if they were running at full capacity, doing nothing to reduce global warming.

One Irish study, A Cost Benefit Analysis of Wind Power by Eleanor Denny, found that "the carbon dioxide reduction benefits of a carbon price can be completely outweighed by the added cycling costs. When a carbon price and wind generation are combined, the cycling costs are increased further and it was found that even with 3000MW of installed wind generation, the cycling costs can still exceed the value of the saved carbon dioxide emissions".

"Wind energy is based on the premise that at some stage, somewhere, we'll find a storage means. Right now, all we can do is pump water from one lake to another, but this is incredibly expensive to build and you lose lots of efficiency," says Mr Fingleton.

"Reducing energy usage is something we should be looking into. That's something that everybody likes talking about, but nobody likes doing. If we had done a cost-benefit analysis on wind energy, the merits of reducing usage would have been evaluated as well as the pros and cons of other sustainable energy sources like biomass and solar power. Instead, what we've got is very much an Irish-style policy."

Indo Review

#### 05.09.2016 stopthesethings

https://stopthesethings.com/2017/05/21/swedish-study-proves-pulsing-low-frequency-wind-turbine-noise-causes-sleep-deprivation/

## Physiological effects of wind turbine noise on sleep

by Smith, Ögren, Thorsson, Pedersen and Waye

# Swedish Study Proves Pulsing Low- Frequency Wind Turbine Noise Causes Sleep Deprivation

The reason they can't sleep just became clearer.

For those unfortunates forced to live with incessant turbine generated low- frequency noise and infrasound, the cause of their inability to sleep is no mystery.

Following the same trail being blazed by the Max Planck Institute in Germany which found infrasound exposure as the scientific cause of stress, sleep disruption and much more – Wind Farm Victim's Smoking Gun: German Research Reveals Infrasound Exposure Causes Stress, Sleep Disruption & More – a Swedish research group is working on proving the obvious connection between wind turbine noise emissions and sleep problems in the lab – problems which are universally experienced by wind farm neighbours around the globe, including farmers paid hundreds of thousands a year to host turbines

STT hears that the Swedish group has recently met with Australian sleep/noise researchers and that the results of further and more detailed work by the Swedes is due to be published soon. Here is last year's conference paper with their preliminary results.

#### Physiological effects of wind turbine noise on sleep

Michael Smith, Mikael Ögren, Pontus Thorsson, Eja Pedersen and Kerstin Persson Waye 22nd International Congress on Acoustics; Buenos Aires 5-9 September 2016

#### **Abstract**

In accordance with the EU energy policy, wind turbines are becoming increasingly widespread throughout Europe, and this trend is expected to continue globally. More people will consequently live close to wind turbines in the future, and hence may be exposed to wind farm noise. Of particular concern is the potential for nocturnal noise to contribute towards sleep disturbance of nearby residents.

To examine the issue, we are implementing a project titled Wind Turbine Noise Effects on Sleep (WiTNES). In a pilot study described in this paper, we performed an initial investigation into the particular acoustical characteristics of wind turbine noise that might have the potential to disturb sleep. Six young, healthy individuals spent 5 nights in our

sound exposure laboratory.

During the final 3 nights of the study, the participants were exposed to wind turbine noise, which was synthesised based on analysis of field measurements. Exposures involved periods of different amplitude modulation strengths, the presence or absence of beats, different blade rotational periods, and outdoor LAEq,8h=45 or 50 dB with indoor levels based on the windows being fully closed or slightly open.

Physiological measurements indicate that nights with low frequency band amplitude modulation and LAEq,8h=45 dB, slightly open window

(LAEq,8h=33 dB indoors) impacted sleep the most. The presence of beats and strong amplitude modulation contributed to sleep disturbance, reflected by more electrophysiological awakenings, increased light sleep and wakefulness, and reduced REM and deep sleep. The impact on sleep by these acoustic characteristics is currently the focus of interest in ongoing studies.

#### Introduction

According to the European Wind Energy Association, there was almost 13 000 MW of wind power installed across the EU in 2015. This represents a 6.3% increase over the previous year. Annoyance from wind turbine noise has previously been evaluated, primarily in cross-sectional studies. However, long term health consequences, including sleep disturbance, have not been studied and the physiological effects are not known.

Present debate on one side argues that "sound from wind turbines does not pose a risk of... any adverse health effect in humans". On the other side, there have been claims for symptoms including impairment of mental health. Studies such as have been subject to criticism, both in terms of the conclusions drawn from the data and the experimental design itself. Whilst many claims of adverse effects are anecdotal, sleep disturbance is one of the issues most frequently reported and supported by previous crosssectional studies.

There is ample evidence illustrating that adequate sleep is necessary for maintaining good health. Disturbed sleep can hence be of consequence for immediate and long-term health. Night time noise has the potential to adversely affect sleep, which has been recognised by the World Health Organisation and reflected by their publication of night time noise limits.

The Environmental Noise Directive (2002/49/EC) recognises that community noise is potentially harmful and so requires that all EU member states map the noise exposure of their populations.

Despite this, wind turbines are often erected in quiet rural areas, where

sleep disturbance due to wind turbine noise is reported more frequently. However, reported effects of this noise on sleep may be biased by perceived annoyance and so objective

measures of sleep structure and other physiological response, for instance cardiovascular effects, are clearly needed.

Although objective measures have been made on the human effects of numerous environmental sources, particularly traffic noise, the majority of studies on the effects of wind farm noise have used only subjective means, and only using calculated equivalent sound levels in dBA at the façade based on simplified sound radiation and propagation models.

A notable recent study has however examined wind turbine noise using wrist actigraphy. Compared to traffic noise where much research has been performed, little is known regarding how noise from wind turbines objectively influences sleep. The aim of the current project is therefore to determine whether noise from wind turbines can impact on human sleep, and how any such impacts are manifested.

#### **Discussion**

In this study, the effects of wind turbine noise on sleep were investigated using physiological measures. There is some evidence that compared to control nights with no noise, sleep during nights with WTN had a reduced amount of SWS, more time spent awake, increased sleep latency and a reduction in sustained SWS and N2 sleep.

The amount of REM sleep, SWS and WASO were affected by sound characters with strong amplitude modulation. N1 ("light") sleep was more prevalent during noise with beats. SWS in particular has been identified as important for declarative memory in humans. Furthermore, SWS is considered to be important for physical restoration and is accordingly prioritised after sleep deprivation. REM sleep is believed to be important for cognition. Despite the observed physiological disruptions, it is unclear at present whether the size of these effects of WTN on SWS and REM would interfere with any associated biological processes.

During sleep, the body reacts more strongly to an abrupt change in acoustic environment than a gradual change. For instance, awakening probability is linked with noise rise time. As such it was hypothesised if WTN had negative effects on sleep, such effects would manifest during high rotational speeds, strong amplitude modulation and the presence of beats.

The indication, albeit non-significant, that the frequency of SSCs was lower during periods of high RPM, lower during periods of strong amplitude modulation and lower during periods with beats could therefore appear surprising. However, during periods of strong amplitude modulation and periods with beats there seems to be a higher frequency of awakenings, which do not include changes to a wake stage. In other words, rather than the participants simply changing sleep stage, full awakenings seemed to occur instead during these periods.

Although the frequency of awakenings and sleep stage changes were influenced by the strength of AM, the total number of awakenings and sleep stage changes did not differ between across any of the experimental nights, including the control. This means that in order for these reactions to occur at a higher rate during certain times, they are not occurring during other times when they may have spontaneously appeared as part of the natural rhythm of sleep. These awakenings and SSCs are being redistributed throughout the night, which may have implications for certain neuronal processes performed during sleep, such as the clearance of waste products that accumulate during wakefulness that has been demonstrated in animal studies.

This small-scale experiment served as a pilot study, and was therefore limited by a number of factors. The participants cannot be considered as representative of the population who are exposed to WTN at home. Together with the small sample size, the conclusions drawn should not be taken outside of the context of the work; to provide input for future work with a more appropriate study sample, size, and exposure design.

The chosen noise levels were higher than those recommended in Sweden, but were not unrealistically high for other countries, in order to increase the likelihood of inducing a physiological response. The rationale for this decision was to increase the expected effect size so as to better detect what elements of the sound character contributed to response in this small pilot study. An ongoing study has the aim of examining sleep under the influence of noise from wind turbines at more commonly occurring levels.

#### **Conclusions**

Physiological measurements indicate that nights with low frequency band amplitude modulation and LAEq,8h=45 dB, slightly open window (LAEq,8h=33 dB indoors) impacted sleep the most. In particular, amplitude modulation and the presence of beating were important constituents of the wind turbine noise contributing to sleep disruption.

Download the full paper here: Physiological effects of wind turbine noise on sleep ICA2016-0440

http://www.ica2016.org.ar/ica2016proceedings/ica2016/ICA2016-0440.pdf

## Smith, Ögren, Thorsson, Pedersen and Waye

While recreating wind turbine noise in a laboratory setting has its limitations, what is clearly evident is that it's the pulsing element of low-frequency noise (ie amplitude modulation) that is causing a whole lot of totally unnecessary suffering.

Liability for those causing that suffering is inevitable and, with each new piece in the scientific jigsaw puzzle, the noose is tightening. For many, stringing up their tormentors can't come soon enough, but it will.

http://www.windaction.org/posts/45739-wind-turbine-noise-and-human-health-a-four-decade-history-of-evidence-that-wind-turbines-pose-risks#.WS1FYTOX-V7

# Wind Turbine Noise and Human Health: A Four-Decade History of Evidence that Wind Turbines Pose Risks

by Jerry L. Punch, i Richard R. Jamesii

## Hearing Health Matters - Jerry Punch, PhD and Richard James, INCE, BME

This important peer-reviewed paper examines 15 years of the authors' combined experience with wind turbine noise issues. The authors respond to the various responses by the wind industry regarding turbine noise and explain why audiologists, particularly those interested in community noise, should embrace the notion that all forms of noise, if sufficiently intense and prolonged, can be detrimental to public health. They also encourage audiologists to be sensitive to the non-auditory aspects of acoustic energy, including the dynamically modulated infrasound and low-frequency sound emitted by modern wind turbines. The background information about the paper is provided below. The link(s) to download the paper are included on this page.

Editor's Note: Today Hearing News Watch brings readers a special post, written by contributors Jerry Punch, PhD and Richard James, INCE, discussing the publication of their new article published at the HHTM Journal.

We authored an earlier three-part series of articles on the topic of the effects of wind turbine noise on health on the HHTM website in the fall of 2014, with links provided below:

Adverse Health Effects from Industrial Wind Turbines
The Negative Health Impact of Noise from Industrial Wind Turbines:

The Evidence

Adverse Health Effects of Industrial Wind Turbine Noise: How the Ear and Brain Process Infrasound

#### Wind Turbine Noise and Human Health

The primary aims of the linked article are to provide our reference sources for much of the information in that earlier series, as well as to update that information. We do so by addressing 12 specific position statements frequently made by the wind industry, its trade associations, and other surrogates. We address these position statements, many of which are revealed to be little more than unfounded talking points, by a comprehensive review of the literature, including that from industry proponents and from those who are independent of the industry.

We are hopeful that this information, which we believe to include some of the most reputable science on the subject, will be instrumental in highlighting the evidence needed

to refute those positions and ultimately to advocate for those who are being harmed by industrial wind turbines.

This article is the culmination of about 15 years of our combined experience with wind turbine noise issues. We first submitted an article resembling the current one to an international journal, Noise & Health, where it received multiple reviews by a single reviewer. We addressed all but two of that reviewer's criticisms, namely that the manuscript was too lengthy for publication in the journal and the reviewer's insistence that we accept the notion that infrasound at levels produced by wind turbines cannot cause adverse health effects. Underlying that reviewer's position was the belief that "What you can't hear, you can't feel."

In fact, decades of research have shown that the dynamically amplitude- modulated short bursts of energy, or pressure pulsations, area characteristic of all modern industrial wind turbine emissions. These pressure peaks can be perceived by humans at levels far below the commonly accepted thresholds of perception and can lead to adverse symptoms such as sleep disturbance, headaches, tinnitus, ear pain, vertigo,

and nausea.

The editor of Noise & Health offered an additional review cycle by a second reviewer. We chose instead to withdraw the manuscript from consideration because we were unwilling to either shorten it considerably or to mischaracterize the literature on the subject at hand.

We are grateful to HHTM for allowing us to share this information through its widely accessible website.

#### **Peer Reviewed Paper**

This paper has been reviewed both by the anonymous Noise & Health reviewer and by three other reviewers who have substantial professional experience in the area of wind turbine noise. We gratefully acknowledge the helpful contributions of Keith Johnson, Esq., Michael Nissenbaum, MD, and Daniel Shepherd, PhD.

Mr. Johnson provided a review from the perspective of an attorney who represents interveners in wind turbine siting cases. Dr. Nissenbaum provided a review from the perspective of a medical professional and expert in how ionizing and non-ionizing radiation affects humans. Dr. Shepherd provided a review from the perspective of a psychoacoustician with experience in how wind turbine sound affects people. Each of these reviewers' comments on earlier versions of our manuscript led to the final document. The opinions or assertions contained herein, however, are the personal views of the authors and are not to be construed as reflecting the views of Michigan State University or Central Michigan University.

The article's unusual length stems not only from the number of topics covered, but also from our desire to quote literally and liberally from researchers and others on matters

related to some of the key points in support of the link between wind turbine noise and adverse health effects. Given the length, interested readers will likely require multiple sessions to read the article in its entirety.

Although the article has been reviewed by four qualified professional peers, we believe that it can stand largely on the merits of its contents, which can be judged and fact-checked by readers.

Even though wind turbine noise does not normally cause hearing loss, we believe that audiologists, particularly those interested in community noise, should embrace the notion that all forms of noise, if sufficiently intense and prolonged, can be detrimental to public health. Audiologists should also be sensitive to the non-auditory aspects of acoustic energy, including dynamically modulated infrasound and low-frequency sound.

It is worth noting that two of the seven co-authors of the original white- paper report of the American Wind Energy Association (AWEA) and the Canadian Wind Energy Association (CanWEA), which promoted the idea that wind turbines were harmless, were audiologists. We believe that the basic conclusions of that paper, which was not peer reviewed and written by a panel hand-picked by wind industry trade associations, unjustifiably favored the wind industry. It is particularly noteworthy that those major wind industry associations have acknowledged the audiology profession as having a credible say on the issue of wind turbine noise.

Interestingly, now that the tide is turning against the wind industry in many ways and in many places, its advocates are trying to discredit the views of audiologists, physicians, acousticians, and others who speak out in opposition of wind-energy development in populated areas. Concerned audiologists, especially those with expertise in cochlear and vestibular responses to noise and vibration, need to be heard on this issue.

Finally, let it not be said that either of us believes in making any less than the best possible effort to develop clean and efficient sources of energy. Rather, we hope that our article will be instrumental in promoting public health through a better understanding of the issues underlying the potentially harmful effects of audible and inaudible noise from industrial wind turbines when the turbines are sited too close to where people live and work.

Jerry Punch; Richard James; September 23, 2016

Read the full article at the HHTM Journal:

Wind Turbine Noise and Human Health: A Four-Decade History of Evidence that Wind Turbines Pose Risks

#### BIOs:

Jerry Punch, PhD, is an audiologist and professor emeritus at Michigan State University in the Department of Communicative Sciences and Disorders. Since his retirement in 2011, he has become actively involved as a private audiological consultant in areas related to his long-standing interest in community noise.

Richard James, INCE, BME, is an acoustical consultant with over 40 years of experience in industrial noise measurement and control. He served as an adjunct instructor in Michigan State University's Department of Communicative Sciences and Disorders from 1985-2013 and currently serves as an adjunct professor in Central Michigan University's Department of Communication Disorders. *Source:* <a href="http://hearinghealthmatters...">http://hearinghealthmatters...</a>

#### 19.10 2016 Irish Times

http://www.irishtimes.com/business/energy-and-resources/chinese-bidder-wins-race-for-gaelectric-wind-farms-1.2836010

#### Chinese bidder wins race for Gaelectric wind farms

by Joe Brennan

China General Nuclear Power is preferred bidder for majority stake in 230-megawatt portfolio

Gaelectric has selected China General Nuclear Power Corp (CGN) as preferred bidder for a majority stake in a 230-megawatt portfolio of wind farm assets, having beaten off rivals including Viridian's new owner.

The Chinese company, which raised \$3 billion (€2.7 billion) almost two years ago in an initial public offering in Hong Kong, has been diversifying in recent times into renewable energy. Sources said on Wednesday evening that the company has entered exclusive talks to buy a controlling stake in the assets.

Gaelectric had been looking for some months for a partner or outright buyer of the assets. It is open to developing a long-term relationship with the CGN, according to Sparkspreads, an industry publication, which first reported news of the preferred bidder.

Gaelectric targets having 400 megawatts of assets in operation by the end of next year. While financial details of the Chinese group's bid is not known, Gaelectric's entire portfolio, including wind farms in development, has reportedly been valued at as much as €690 million. A spokesman for Gaelectric declined to comment on the process.

#### Other bidders

US investment firm I-Squared Capital, which bought Northern Ireland energy group Viridian in April for about €1 billion, was also among bidders circling the assets. Viridian owns gas and energy supplier Energia in the Republic.

News of the preferred bidder comes weeks after Gaelectric picked Barry Gavin (50) as its next chief executive, succeeding fellow co-founder of the company, Brendan McGrath. Mr McGrath (68), whose brother Eamonn is the third founding shareholder of the group that was established in 2004, will remain with the company and head up "a number of special project areas", the company said in a statement last month.

Gaelectric counts Wexford beef baron Bert Allen among its main shareholders, while US private equity firm Lone Star took a significant minority stake earlier this year.

The three co-founders reportedly continue to own more than 40 per cent of the company, with further shares held by staff. The company's other divisions include an energy storage business as well as bio-energy and solar energy units.

#### 15.11.2016 Farmers Journal

http://www.farmersjournal.ie/esb-and-coillte-secure-funding-for-co-cork-wind-farm-236407

## ESB and Coillte secure funding for Co. Cork wind farm

by Thomas Hubert

"As a result of a co-development agreement between the two companies, the project will be financed with long-term debt from Bank of Ireland," ESB and Coillte said in a statement this Tuesday.

The €64m project received planning permission from An Bord Pleanála in 2013 for the construction of 14 wind turbines on 16.5ha of Coillte's forestry land in the Ballyhoura mountains near Charleville. Each turbine may measure up to 126m and the project includes construction of a transformer station and an underground cable to Charleville.

ESB and Coillte expect to complete construction next summer.

Residents and environmentalists raised concerns about the visual impact of the wind farm on the landscape and its effect on endangered birds

during the planning process, and An Bord Pleanála attached conditions to the planning permission.

According to the ESB and Coillte, the turbines will generate 33.1MW, which is enough power for approximately 17,000 households annually.

The companies said that the project would contribute to their respective wind power generation objectives of 1,600MW for the ESB and 400MW for Coillte.

Read more

Planning permission approved for €320m Mayo wind farm

http://www.independent.ie/business/gaelectric-sells-wind-power-assets-to-chinese-nuclear-firm-in-a-deal-worth-350m-35275877.html

# Gaelectric sells wind power assets to Chinese nuclear firm in a deal worth €350m

by John Mulligan

The sale of 230MW of wind power assets by Irish firm Gaelectric to the renewable energy investment arm of the China General Nuclear Power Group (CGNP) has been finalised today.

The assets are thought to have an equity value of up to €350m, with associated financing bringing the enterprise value to as much as double that.

The terms of the deal weren't disclosed, however.

The assets being sold by Galectric to CGNP's CGN Europe Energy arm (CNGEE)include 10 operating wind farms with total output of 184MW, and a further four windfarms generating a total of 46MW that will be

operational by mid-2017. Seven windfarms are located in Northern Ireland and seven in the Republic of Ireland.

"CGN Group is focussed on becoming a global leader in clean energy," according to Wei Lu, chief executive of CGN Europe Energy. "These high quality wind energy assets will make an important contribution towards this objective for CGN Group."

Gaelectric will continue to manage the windfarms on behalf of CNGEE, and provide power take-off services to the group. Galectric has other windfarm projects that are in development that do not form part of the sale.

"This agreement allows us to support the Group's balance sheet, paying down debt and creating the foundations for our other operational and development interests in the renewable energy sector, including a near term development pipeline across wind, solar, biomass and energy storage, including our 330MW CAES storage project in Northern Ireland," said Gaelectric chief executive Barry Gavin this morning.

Gaelectric's CAES storage project is being developed in Larne.

The project involves the creation of two vast storage caverns more than 1.4km beneath the Antrim coast.

The scheme, which uses compressed air, will be able to generate up to 330MW of power for up to six hours, and will create demand for 200MW of power during its compression cycle.

Mr Gavin said Gaelectric's contract with CGNEE for trading and asset management "will

form the basis of a continuing relationship with a very significant new player in the Irish,
European and international energy market".
Online Editors

http://www.independent.ie/business/irish/gaelectric-sells-350m-wind-farms-to-chinese-35277433.html

#### Gaelectric sells €350m wind farms to Chinese

by John Mulligan

The renewable energy investment arm of the China General Nuclear Power Group (CGNP) has finalised the acquisition of 230MW of wind farm assets from Irish firm Gaelectric.

The transaction comes as another major wind farm deal looms in Ireland.

UK private equity group HgCapital and Cork company Craydel Group are seeking buyers for 220MW of wind farm assets here that are owned through their joint venture, Invis Energy.

The Gaelectric assets - which include 14 operational and in-development wind farms - are thought to have an equity value of up to €350m.

Terms of the deal have not been disclosed, however.

"CGN Group is focused on becoming a global leader in clean energy," said Wei Lu, ceo of CGN Europe Energy.

"These high-quality wind energy assets will make an important contribution towards this objective for CGN Group."

The sale of the Gaelectric assets to CGNP's CGN Europe Energy arm (CNGEE), is the culmination of a year-long sales process.

The assets being sold by Gaelectric include 10 operating wind farms with total output of 184MW, and a further four wind farms generating a total of 46MW that will be operational by mid-2017. Seven of the wind farms are located in the North and seven in the Republic of Ireland.

Gaelectric will continue to manage the wind farms on behalf of CNGEE, and provide power take-off services to the group.

Gaelectric has other wind farm and energy projects that are in development that do not form part of the sale.

Gaelectric ceo Barry Gavin said the company's contract with CGNEE for trading and asset management "will form the basis of a continuing relationship with a very significant new player in the Irish, European and international energy market". Proceeds from the sale will be used to further develop Gaelectric's other renewable energy assets and projects, and reduce its debt.

The company is involved in a number of solar, biomass, wind and storage energy projects.

The planned Invis Energy sale will include three operational wind farms and two that are under construction, according to industry publication 'Sparkspread', which first reported the planned sale.

Indo Business

#### 12.12.2016 Irish Times

http://www.irishtimes.com/news/politics/wind-farm-guidelines-delayed-due-to-european-ruling-1,2902008?utm\_source=morning\_digest&utm\_medium=email&utm\_campaign=news\_digest

## Wind farm guidelines delayed due to European ruling

# Court found that the public must be informed before energy policy is implemented

by Harry McGee

The Government has deferred a decision to issue new guidelines for wind farms following a European Court ruling which imposed duties on the State to inform the public fully.

Minister for Communications, Climate Action and the Environment Denis Naughten will bring a memo to Cabinet tomorrow asking for a deferral on the guidelines.

The new guidelines will lay down rules on how far wind turbines should be set back from residential dwellings, on noise aspects, as well as light and shadow "flicker" from the rotating blades.

In late October, the European Court of Justice (ECJ) issued a ruling that the Walloon government in Belgium acted unlawfully when it created a sectoral policy aimed at facilitating the deployment of wind energy without properly informing the general public.

In light of the decision, Mr Naughten is understood to be of the view that the guidelines cannot now be published by the end of the year, as envisaged.

Instead, a further process of public consultation will be required before the guidelines are issued.

The Minister's legal advice is that the ECJ judgement requires the public to be fully informed about the guidelines and their implications.

The issue of how far wind turbines should be from residents has been a running controversy for almost three years, since the Government published "draft" revisions to noise, setback and shadow flicker limits.

The original 2006 wind energy development guidelines still apply. However, they set no minimum distance between turbines and nearby houses.

As the industry has developed, local communities have increasingly objected to the development of wind farms .

#### **Draft revisions**

The draft revisions published in 2013 (which have never taken effect) set more stringent levels, including a mandatory minimum setback of 500 metres, noise limits, and the complete elimination of "shadow flicker" for nearby dwellings.

The Department received more than 7,500 submissions on the issue.

When Alan Kelly became minister in 2014, he initiated a further review, with suggestions that he was going to increase the setback distance to 1km or more. He never confirmed such suggestions.

The government's term expired before the guidelines could be published.

The new Minister, Mr Naughten, said the new guidelines would be ready by the end of 2016.

There has been extensive lobbying on this issue by the industry and also residents' groups opposed to wind energy in their areas.

While several developments (some major) have gone ahead during the period, climatechange campaigners believe the controversy and uncertainty over the guidelines has deterred further developments.

Green Party leader Eamon Ryan said he found it hard to see how the guidelines could be further delayed because the process has already dragged on for three or four years.

"There is a looming crisis in the renewable sector. We are looking at a lot of future projects that are stalling.

"That decision to delay is going to make that worse," he said.

#### **03.01.2017** mothersagainstturbines.com

https://mothersagainstturbines.com/2017/01/04/enercon-admits-liability-in-high-court-ireland/

#### **Enercon Admits Liability in High Court Ireland**

#### High Court order for families forced from homes due to noisy wind turbines.

by Wind Aware Ireland

The High Court has issued its order regarding the seven families from Cork who were impacted by noise pollution from a nearby wind farm. A number of the families had to abandon their homes because of the severity of the noise and some lived up to a full 1km from the wind farm.

The defendant, Enercon Wind Farm Services Ireland Ltd., has admitted liability and the case is listed for ten days in the High Court commencing 25th April 2017 to deal with damages and costs. The outcome of the April court case could be a watershed for existing and planned wind farms as well as for investor confidence in, and government plans for the future of on-shore wind in Ireland. Many families, similarly affected by noisy wind turbines are anxiously awaiting the outcome and it is expected that more cases will now follow.

There has been a failure of successive governments to regulate the wind industry. Minister Denis Naughten is the latest minister to delay the introduction of regulation. This despite his promise to regulate the distance turbines can be placed from homes within 3 to 6 months of his taking office. Instead, yet another lengthy period of consultation is planned, despite previous consultations on the matter attracting over 7,000 submissions. A spokesperson from Wind Aware Ireland has stated "This further delay has indicated how far this government are prepared to allow the continuation of a free-for-all in the construction of wind farms, to the detriment of rural communities who are bitterly opposing their construction." Ireland's embarked on an all-wind strategy in 2007 under Minister Eamon Ryan in conjunction with Brendan Halligan (chairman of SEAI), who was also a director and shareholder in Mainstream Renewables, one of Ireland's biggest wind farm developers. No cost benefit analysis (CBA) or strategic environmental assessment (SEA) was ever carried out on the plan. Both of these legally required analyses were sidestepped. To date, these analyses have not been carried out and Ireland proceeds with this expensive experiment. Ireland's 1400 wind turbines have reduced our CO2 emissions by a paltry 3-4%.

https://stopthesethings.com/2016/12/17/irish-high-court-finds-wind-turbine-maker-liable-for-noise-nuisance-7-irish-families-to-get-millions-in-punitive-damages/

# Irish High Court Finds Wind Turbine Maker Liable for Noise Nuisance – 7 Irish Families to Get Millions in Punitive Damage

Punitive Damages: UPDATED 8.1.2017

In a case before the Irish High Court, German wind turbine manufacturer, Enercon has just conceded liability in noise nuisance in a claim pursued by 7 families whose lives and livelihoods have been thoroughly and mercilessly destroyed by incessant turbine generated low-frequency noise and infrasound.

A report on the case follows below, but first we'll start where it all started back in 2013.

## Families bid to sue wind farm operator

Irish Examiner Michael Clifford 19 March 2013 By Michael Clifford

A group of families in a north Cork village are suing a wind farm operator in a landmark case, claiming the huge turbines are adversely affecting their

health.

The seven families from Banteer claim they have been severely impacted, particularly through noise pollution, since the turbines began operating in Nov 2011.

If the action is successful, it is expected to lead to a number of others on similar grounds. Already, cases are being prepared by householders in Wexford and Roscommon.

The Banteer action is being taken by the "Shivnen family and others", and includes households where there are families with children, couples, and, in one case, a single occupant.

The case is listed for the High Court and has already come before Judge Kevin Feeney. It is currently at the discovery phase, with a likely hearing date in the autumn.

The turbines were manufactured and are operated by a German company, Enercon Services, which has a base in Tralee, Co Kerry. The company has been installing turbines in this country since 1998.

The key factors in the legal action are expected to be planning regulations under which wind farms are installed and evidence of any alleged ill health effects.

So far, no legislation has been passed in relation to wind turbines. Planning is governed largely by guidelines that date from 2006, but which are based on technological capabilities dating from 1998.

The guidelines are being reviewed by the Department of the Environment, which is expected to report in the coming months.

The Banteer action is the first of its kind in this country, and comes at a time when the exploitation of wind energy is coming to the fore in public policy.

One such case has been recorded in the UK, concerning homeowner Jane

Davis, who sued on the basis of the adverse impact from a nearby farm on her home and her health. That case was settled out of court and included a confidentiality clause.

The setting of EU targets for renewable energy rather than fossil fuels is driving moves towards wind energy, and most new developments are onshore rather than offshore due to cost.

A major development in the Midlands is under way in which 2,000 turbines are due to be installed to generate electricity which will be exported to Britain. The plan, undertaken by two energy companies, has caused uproar in some quarters, but dozens of farmers are believed to have signed up to allow their land to be rented out to house the turbines.

A number of public meetings have been called across the Midlands by residents and concerned interests about the proposal.

At a recent meeting in Bloomfield House, it emerged that a couple living near Roscommon town were forced to leave their home because of the effect a nearby turbine was having on their health.

Tim Cowhig, CEO of one of the developers, Element Power, said there is no scientific evidence to link wind turbines to ill health. "My view is that people need proper information and a proper national debate. We haven't had that to date," he said.

Last year, the Noise and Health journal published results from a US survey which compared sleeping patterns between a group living within a mile of a wind farm, and another beyond that distance.

The study suggested that the former group's sleeping was directly impacted by the operation of the turbines. It is believed to be the first study to show a relationship between the wind farms and what the journal calls the "important clinical indicators of health, including sleep quality, daytime sleepiness, and mental health".

#### Irish Examiner

In what STT understands has been a long and grueling battle for the families involved, for three-and-a-half years Enercon fought them all the way, until the latest hearing when it informed the Court that it would not contest the question of liability. Undeterred by Enercon's recalcitrance, the plaintiffs pressed on and, after the concession on liability, emerged from Court victorious.

The plaintiffs will return to Court in April for an assessment of their damages; reasonably expecting to recover millions in general and punitive damages for five years of pain and suffering, maliciously inflicted on them and their young families by Enercon. (STT is in touch with the plaintiffs' legal team and hopes to post details of the case in the New Year.)

Here's the Irish Examiner on the case that has left the wind industry rattled, not only in the Emerald Isle (the Irish Wind Energy Association forced the Irish Examiner to pull the story below from its website) but around the world.

#### Families forced from homes due to wind farm noise win court case

Irish Examiner

11 December 2016

The case was taken against wind turbine manufacturer Enercon who has accepted full liability for causing nuisance to seven families who live up to 1 km from the wind farm.

A number of families in Co Cork who were forced to leave their homes because of noise from a nearby wind farm have won a significant case in the High Court this week.

The families claim they have been severely impacted by noise since the wind farm began operating in 2011.

This is the first action of its kind in Ireland and may now open many wind farm developers to the prospect of legal challenges from families in similar situations.

The case was taken against wind turbine manufacturer Enercon who have accepted full liability for causing nuisance to seven families who live up to 1 km from the wind farm.

The case will return to the High Court in 2017 to discuss punitive damages.

Promises in Government over the last four years to introduce planning regulations regarding wind turbines have failed to materialise.

According to out-dated guidelines, turbines may be built 500m from homes. In many cases, including this, wind turbines have been built closer than 500m.

A spokesperson for Wind Aware Ireland said: "There now is a possibility for multiple legal actions against wind farms right around the country.

"The legal implications for the wind industry are significant. The use of inadequate and outdated planning guidelines may come back to haunt the industry, planning authorities and the Department of Communications, Climate Action and Environment (DCCAE)."

On election, Minister Naughten promised that new planning guidelines would be in place within 3 to 6 months of the formation of the new government.

#### Irish Examiner

### **UPDATED 8 January 2017**

## Wind company admits nuisance damage to neighbours

Irish Farmers Journal Paul Mooney 5 January 2017

## High Court to determine compensation for seven families in April hearing.

A County Cork based wind energy company has accepted in the High Court that its wind farm has caused nuisance damage to seven neighbouring families. The High Court has now set aside ten days in April 2017 to determine what if any damages should be paid by the company to the families.

The Farmers Journal understands that the cases taken by the families claim that the wind farm caused them nuisance as a result of excessive noise. The wind company is Enercon Wind Farm Services Ireland Ltd and it formally admitted liability to the Court.

The damages hearing for the seven cases have been consolidated by the High Court on the basis that the cases are related. It will start on Tuesday 25 April.

Pressure group Wind Aware Ireland claimed this week that the outcome of the case could be a watershed for existing and planned wind farms and investor confidence. "It is expected that more cases will now follow," spokesperson Paula Byrne said in a statement.

It is alleged that a number of families had to abandon their homes because of the severity of the noise from the wind farm.

#### Irish Farmers Journal

Ireland's High Court delivers justice for 7 tortured families, at long last.

#### 22.01.2017 Wordpress.com

https://antonfloyd.wordpress.com/2017/01/22/claiming-west-cork-back-from-developers-a-long-read/

#### We need to claim it back!

by Anton Floyd

What is at stake when a mega wind farm is proposed for an area of outstanding natural beauty, full of ancient monuments and sites, and home to living communities? My wife, Carole Anne, and I believe that this will despoil this area of West Cork for all time. Numerous phases of the proposed mega wind have been granted permission by An Bord Pleanála, the national planning authority, and are now subject to judicial review (always an expensive undertaking). We are one of seven families seeking a judicial review in the high court for the Carrigarierk Wind farm (phase 5 in the map below). The action is being supported by the local community. Developers with deep pockets are confident that small rural communities cannot afford to continue paying for these repeated legal proceedings at around €100,000 each. They are relying on that fact and that, eventually, we will throw in the towel and the turbines will go up. If ever there were a David and Goliath scenario this is it. If this mega wind farm development goes ahead in our part of West Cork then, not only will this ancient and beautiful landscape be lost forever but it will also set a precedent for anywhere in the country to have these structures sprout up, effectively making areas of Ireland massive industrial zones. The turbines we are facing are 140 metre high and they're getting unimaginably higher – 185m and up to 200m with a blade area span the equivalent of seven GAA pitches. At the same time, it appears that all of Co. Cork is open for consideration for wind turbine installations. It's time to say enough is enough. The irony is that we have always been supporters of green and sustainable energy and go as lightly as we can on the planet. We are not Luddites nor is this a simple case of nimbyism. We ask only that wind energy farms be sited appropriately and in accordance with guidelines that follow international best practice. Guidelines which take into careful consideration current scientific research findings regarding noise levels, shadow flicker, infrasound disturbance and the impact these giant structures have on wildlife and the environment.

#### **Development by Stealth**

Given the scatter gun approach that is the apparent strategy of developers, it would be naïve to think some places are protected from these giants congregating on our landscape. A small notice nailed to a telegraph pole near your home may not be a simple domestic planning application. This is what happened in our case. This practice should be called for what it is: 'development by stealth'. It only pays lip service to public consultation and is a real example of the democratic deficit that applies in these kinds of cases. The report of the Cork County Council planning department refusing permission for the wind farm at Carrigarriek was comprehensive and sensible:

Having regard to the relative close proximity to numerous dwellinghouses within 1km of the proposes turbines, the excessive height of the turbines coupled with incongruous siting, it is considered that the proposed windfarm development would be excessively domineering from very many vantage points over a wide area, including when viewed from scenic routes S29, S32 and S34. The proposed development would, therefore, provide for

a visually intrusive and domineering form of development that would fail to respect the landscape, would seriously injure the visual amenities of the surrounding landscape and would set an undesirable precedent for similar inappropriate development.

Upon appeal by the developer, An Bord Pleanála overruled the decision, citing national energy policy and Co. Cork's own developmental wind energy strategy! Going to court is the last, drastic and expensive recourse for an ordinary community to have its voice heard.

### The importance of credible guidelines

Thinking people are aware that the landscape is not frozen in time but in constant evolution. Solutions must be found to combat the problem of global warming. Solutions are not only technical but societal too and their success depends entirely on public acceptance. This will come if the framework used to devise the solutions is respected from the beginning as being coherent, just and understandable. This is why guidelines are so important.

The quality of the studies and the public consultation currently carried out by the wind energy industry and policy makers in Ireland is not sufficient to ensure confidence in the development process. The existing guidelines are known to be unfit for purpose yet developers and the professionals they employ justify their applications on these guidelines. Unconscionably, planners appear not to be concerned by this practice and continue to function with them. Instead of a truthful engagement with the public, the wind energy industry subjects us to constant spin.

#### There's too much to lose

Few areas in West Cork have as special a place in the hearts of Munster people as the Shehy mountains and the Gearagh. Yet it's precisely this area of West Cork, rich in ancient monuments and marked with scenic routes for hiking and cycling, that is being targeted. The Shehy More, Carrigarierk, and Barnadivane wind farms are one connected project, stretching from the Shehy mountains along the south ridges of Lough Allua and continuing through the catchment area of the Gearagh. Other wind farm developments have been granted permission throughout the upper Lee Valley, meaning Gougane Barra is to be ringed round by turbines! It's unbearable to think that these heart-stoppingly beautiful places will lose their pristine quality.

We love this entire area. We have celebrated it in poems and paintings. We have lived here for over 20 years. For my son, Daryl, a landscape architect living in Provence and whose photographs are a superb record of his thinking eye, it was this ancient, magical landscape that instilled the appreciation of place that first spurred his development and still informs his practice today. The link above to Daryl's website samples some of his photos of Gougane Barra, in many ways the spiritual heart of Cork. With hand on heart and for all its attractions, we wouldn't have settled here if it were a mega wind farm. I wouldn't even think to visit it as a tourist nor would I wish to urge friends or strangers to come here on holiday. Would you? Perhaps people would come if only to see how a beautiful county, one of the few places in Ireland where Irish is spoken as a first language, has been despoiled by these stalking giants and weep. Looking north and east to Kerry, I can already see at least 40 of these turbines from my home.

## People live in the countryside too!

Unless we, together, act urgently to put the brakes on this exponential growth we may well end up like Denmark where there are 17 turbines for every 10 square miles. People

coming home after a time abroad will be shocked by what is happening to the landscape here. You might also wake up one morning to find these giants in the field 500 metres from your door, sacrificing your well-being for the national interest and paying for the privilege by contributing to the lucrative subsidies the developer receives.

This is not as outlandish as it sounds. People have already left our community because of the threat of these wind farms. The 'non-mandatory' 500 metre setback distance recommended in the 2006 Wind Energy Development Guidelines is woefully inadequate for the protection of public health from the hazards of wind turbine noise. As Nigel de Haas, our friend and neighbour, points out in letter published in the *Southern Star* (June 18, 2016):

Ten years have passed since the Irish guidelines were issued, ten years during which the size of wind turbines has increased exponentially, and during which the international knowledge of the public health hazards of low frequency noise and infrasound have been well researched, peer-reviewed and published. Unknown no longer washes.

A recent High Court ruling found in favour of a number of households in North Cork who had to leave their homes because of intolerable noise levels (see the *Irish Examiner* report of 11 December, 2016, archived here). This does not augur well for rural Ireland which is already under severe pressures. The 2015 documentary 'Downwind' examines, amongst other things, how households were adversely effected by noise, infrasound and shadow flicker and were forced to leave their homes by the rush to wind power in Ontario. Ordinary people in rural communities recount their stories and frustrations with a system that favours the industry at every turn despite accumulating evidence for serious risks involved to health and the environment. The film also catalogues the haemorrhaging of the economy due to lucrative subsidies paid to developers. What has happened in Canada is reproduced worldwide and is happening now in Ireland. Policy makers here are ignoring the warning signs and consistently downplaying any risks in terms of securing health and amenity. Predictably, the policy has been to shoot first and not answer the questions. We feel our area of Co. Cork is being treated like a laboratory – we are told by An Bord Pleanála that after the turbines are built, they will be monitored and measured over time for noise, infrasound and shadow flicker and so on, as if this resolves the problems they present in the first instance!

#### Who will cry halt if we don't?

This is not some impractical quixotic exercise. We're not tilting at harmless windmills. Who in his or her right mind would choose to live 500 meters from a turbine? By not alerting ourselves to this issue and not demanding responsible decision-making we are giving a free hand to the developers and the powers that be to make this more of a reality for others and ourselves. Politics aside, Senator John Whelan cautioned against the indiscriminate development of wind farms in Ireland in his blog post, 'Wind farm claims amount to outrageous hot-air' (2nd February, 2013). Wind farm development on the industrial scale now being pushed by developers, he writes, 'is neither economically or environmentally sustainable'.

Experts have warned of the increased likelihood of flooding in the Lee and Bandon River systems with direct consequences for the people and businesses in Cork City and Bandon – no strangers to the repeated distresses of flooding in recent years. Flash floods and increased run-off also threaten the destruction of the fragile ecosystem of the Gearagh – an area of special scientific interest and, speaking for the poet in me, an area of special artistic inspiration! More than a nature reserve, it is a biogenetic reserve, a

European protected habitat and, as one of only four inland alluvial forest systems in the world, a designated 'Ramsar site' or wetland of international importance. Kevin Corcoran, expert on the Gearagh, has stated that the environmental degradation of the upper reaches of these rivers has already reached the 'tipping-point'. Upland development for forestry and the removal of mountain bogs for massive wind farms has far-reaching consequences, resulting in erosion damage and associated siltation within river catchments:

If you remove the bogs and their function of flood control, and add in climate change, you are creating a recipe for disaster... The engineers who say that dykes and ponds and silting areas can replace the bog's anti-flooding function say so with such audacity that they remind me of the Titanic's designers claiming, 'This boat can't be sunk.' 'The Gearagh: the River Lee's ancient inland empire' Irish Times (2nd July, 2016)
Green energy is supposed to protect our environment, not push it over the edge.

## Who benefits from wind energy?

The guidelines currently used in Ireland are out of date and not fit for purpose. New guidelines, under revision since 2013 and promised by the government in 2016, have not materialised and are postponed for at least another year. This means that wind farms are still going up in County Cork and elsewhere according to guidelines that have been discredited and acknowledged as such in the Dáil by the minister responsible! The general population in countries like Denmark and Germany, much vaunted as pioneers of wind energy in Europe, have long since had enough. The Der Spiegel article, 'Mutiny in the Land of Wind Turbines' (12th July, 2013), brilliantly shows how wind turbines have lost their novelty and curiosity value. The public in Denmark has said no more turbines on land. If (and that's a big if) they are to be part of the energy system, then they must be sited at sea. Problems with wind power were being raised 7 years ago in relation with the Danish model but decision makers in UK and now Ireland are still not listening. In fact, the limits of wind energy technology to meet European energy needs is rapidly becoming apparent; renewable energy in the forms of biomass, biogas and solar is being actively explored. For the renewable sector to be more efficient, more sustainable and less obtrusive the mix and context is all important. As the economist, Colm McCarthy, argues in the newspaper article 'Why is the State forestry company building windfarms?' (22nd March, 2015), the major incentives for investment in wind energy are the lucrative subsidies available to investors. Subsidies which are making the cost of electricity for residential customers in Ireland as much as 42% higher than the average cost in Europe but not as expensive as Denmark! Naïve then to believe that these developers are doing it because they're green warriors fighting to save the planet. More like greed camouflaged as green.

#### And if development is not thought through...

As a family, we have lived more than 25 years in Cyprus, a beautiful Mediterranean island, before moving to West Cork. Due, not least, to extraordinary circumstances resulting from the 1974 Turkish military invasion of the island, the governments of the day adopted policies which strongly argued that it was in the national economic interest to develop its tourist infrastructure in order to replace areas lost to war, such as the beautiful resorts of Famagusta and Kyrenia which are located in the northern Turkish occupied area. Progress and mass tourism was so rapid and unbridled that islanders can now only with difficulty find pockets of wilderness where they can enjoy the natural attractions of their own

country. Development was so extensive that precious water resources had to be diverted from local communities to service hotels, tourist zones and agriculture necessitating water rationing in other residential areas. Some coastal parts to the east of the island drew so much water that sea water encroached, salinating the water table, rendering the water unpotable, unfit even for irrigation. This caused real problems for farmers in a formerly rich agricultural area. The solution was the very expensive Southern Conveyor Project, a system involving dams, tunnels and open canals created to bring water from the southwest of the island to the east heavily dependent on rain and snow falls, and augmented by desalination and water treatment plants.

I give this as an example of what happens and can happen guickly when short-term gains trump the long-term interests of a country (and certainly, some few people became immensely wealthy on the back of this development). A similar kind of short-term thinking is being foisted on us here in Ireland. We have obligations to the 2020 Paris Agreement on Climate Change, which require that national policy issues be debated and critically evaluated. Instead, we have a situation where wind energy strategies are developed independently by local authorities at county level in spite of being advised to pause doing so by the Department of Environment, Community and Local Government, pending the adoption of the Revised Wind Energy Guidelines (see unpublished Circular PL20-13). The revised guidelines remain only an aspiration in the current Department's own plans. The protection it itself aspires to develop remains on indefinite hold. The European Court of Justice ruled in October 2016, that the guidelines must be subject to a Strategic Environmental Assessment – a process that, the minister admitted last December, has yet to be put in place. So, in the meantime we have regulation with no teeth and a basis in planning law that is vague at best. The result of all this is that there is no consistency in the decision making across the country which in turn is generating uncertainty and confusion and a well-founded sense of grievance

In this light, it is a facile argument to say that it's in the national interest that Ireland must become a green energy economy. No right-thinking person would dispute that last point but the issues are necessarily complex and the risks involved crudely underestimated and unfair. Ireland has come very late to the green energy table with the financial crisis, amongst other things, being cited as the reason for this delay but there's a rush to 'do something and i' the heat.' And that's the nub of the question. We should never take what we have for granted and allow unchecked development and excessive zeal to damage irreparably our natural heritage and, importantly, to seriously undermine our rights.

#### A dramatic wake-up call!

Dr Liam Lysaght of the National Biodiversity Data Centre in the RTE magazine programme Eco Eye (broadcast on 10th January, 2017), stated that between a quarter and a fifth of all Irish wildlife species for which they have measurements is under direct threat of extinction. The reason for this he says is because

We're not making enough space for wildlife. We're not managing the countryside to give this wildlife the space for it to thrive... across all aspects of government policy and public policy we need to have measures in place that will actually nurture and help wildlife to thrive.

Habitat loss has tragically become the norm in this country. Intense exploitation of the landscape is in direct competition with the urgent need for conservation and 'rewilding'. For birds and bats, the impacts from construction and operation of wind farm developments are direct and deadly. Only last year, three white tailed eagles were killed by wind turbine

blades of Ireland's largest wind farm on the Cork-Kerry border and reported in the Irish Times (31st July, 2016). In Norway, there has been many such confirmed kills of eagles in the years since 2005. Research in California has shown that sea eagles can range over vast distances of 100 miles and more. Nesting close to turbines is not the only telling factor as far as the danger to birdlife is concerned which is as developers would have it. As Clive Hambler writes in 'Where eagles dare – the wind farms gamble', proponents of wind farms appear not to understand that 'numerous small projects have cumulative effects...[and] even single sites can do regional damage.' There can be no mitigation if in the wrong place. Adding wind farms to the threats from poisoning and shooting will hardly improve the prognosis for raptors. Re-introduction efforts for the white-tailed eagle in Ireland are sadly met with an exponential investment in subsidised slaughter.

The time has come to realise that 'the inconvenient truth' does have inconvenient truths. That wind energy, one of the means of saving the planet, has an environmental cost and might, if not properly thought through, recklessly exacerbate rather than prevent the impacts of climate change is surely something to address. A patrician dismissal of this inconvenient conflict on the part of successive Irish governments is no longer tenable. Prioritising one measure (to reduce greenhouse-gas emissions) over another (i.e. implementing sustainable nature and landscape management schemes) is not safeguarding either our upland habitats or the future of rural communities. Mother nature is complex and we must have by now learned that we tamper with her at our cost. If this enthusiasm is driven by greed then, we must ask, what are we prepared to sacrifice?

http://www.irishexaminer.com/ireland/relief-as-wind-farm-refused-planning-permission-again-441622.html

## Relief' as wind farm refused planning permission again

by Christy Parker

Bord Pleanála has refused planning permission for a wind farm in east Cork for the second time in two years.

A community spokesman in the Ardglass area, near Midleton, said the Bord Pleanála decision was "one of relief".

Prior to the appeal Cork County Council had modified the proposals by Ardglass Windfarm Ltd to construct seven 110KV turbines, 140m high at Hogan's Wood, Ardglass.

The location is between the villages of Dungourney, Castlelyons, Lisgoold and Ballynoe on the outskirts of Midleton. The council had granted a 10- year permission for five of the seven turbines.

The company, an associate of Lissarda-based Enerco Energy Ltd, appealed the council's modified approval but the Bord dismissed the entire project.

The planning appeals' body ruled the development "would seriously injure the visual and residential amenities of the area, set an undesirable precedent for other such development and would be visible from a designated scenic route".

It also said the proposed development "would seriously injure existing residential amenities".

The application followed a review of a 2013 proposal to construct 11 turbines, 156.5m high which would have been the highest land-based turbines in Ireland or Britain. A second proposal was modified.

Community group Ardglass Wind Turbine Awareness Action group had mounted a fouryear campaign against turbines.

Spokesman Stephen Doyle said: "It was obvious from the outset the area was totally unsuitable for turbines.

"Outside of the proximity to a very large local population, it is basically a raised plateau with the Blackwater valley on one side and little or no landscaping to offset the presentation of such huge structures.

"They would have been visible from Co Waterford."

He also believed noise from the turbines would have impacted significantly.

Mr Doyle called for an upgrading of noise guidelines, laid down in 2006, which he described as a joke and a 'one-size-fits all' approach.

"You can't just impose huge developments like this on top of rural communities like ours. Guidelines need to be more specifically tailored."

http://www.thatsfarming.com/news/wind-developers-riot

## Wind Developers Running Riot Over Communities Due to Lack of Regulations by Tom Jordan

Ireland's out-dated wind guidelines are causing massive upset among communities across the country, as wind companies take advantage of generous subsidies by planning large developments close to family homes. Some companies are project splitting, creating numerous subsidiaries and applying for separate mini-developments across a large area, thus masking the true scale of their overall plans. Each planning application must be fought in the courts at an estimated cost of €100,000 for one High Court injunction.

Even if an injunction is granted by the High Court the company often re- applies, sometimes increasing the scale of the proposed wind farm. This has happened in the case of Cleanrath Wind Farm, which was successfully halted in the High Court last year by local residents Hanna Heubach and Klaus Balz. Cleanrath have since re-applied for a larger wind farm than their original proposal entailed. Local environmentalist Kevin Corcoran said many of the proposed developments for this area are in sensitive locations. Some overlook the Toon valley which feeds the Gearagh, a Special Area of Conservation. They threaten the river systems with disturbance from unstable upland bogs. He has taken a petition to Europe against the company for project-splitting.

Meanwhile, residents must fight each and every case or it's all for nothing. Planning authorities have been accused of constantly favouring the wind companies, despite growing evidence of health impacts from turbines

located too close to people's homes. For example, another west Cork development was turned down by Cork's county planners. In the words of the County planners, the proposal failed, given the "relative close proximity to numerous dwellinghouses within 1km of the proposed turbines, the excessive height of the turbines coupled with incongruous siting, it is considered that the proposed wind farm development would be excessively domineering from very many vantage points over a wide area..." Their decision was over-ruled by An Bord Pleannala who granted permission based on the national energy plan.

Ireland's guidelines are out of date, as reported by That's Farming and the whole area is mired in acrimony. Where one set of landowners are benefiting from generous rental agreements, neighbours are left fighting desperate cases in the courts. Clearly the wind strategy being followed at present is chaotic and divisive and in dire need of clarity. Regulations governing wind developments must be brought forward as soon as possible so that people living in rural Ireland can get on with their lives, without the worry and anxiety of poorly placed industrial wind farms.

## Wind farm being sued by families admits its liability

by Claire O'Sullivan

Seven Cork families could be on course to receive damages after a wind farm operator admitted liability in a High Court action over noise pollution.

The case is next listed for hearing on April 25, and will be closely observed by many of the families living in close proximity to wind farms and who claim that there should be a greater distance between homes and turbines.

The case against Enercon Windfarm Services Ireland Ltd and Carrigcannon Wind Farm Ltd was taken by the Shivnen family and another six households in Banteer including couples, families, and one single occupant.

The householders had claimed their health had been affected by the noise emanating from the turbines since they began operating in November 2011.

Planning regulation around wind turbines remain governed by 2006 guidelines which allow companies to build turbines within 500m of private dwellings.

Updated guidelines stipulating how far wind turbines should be set back from residential homes are three years overdue.

These guidelines will also deal with noise and 'shadow flicker' from the turning blades. Up to 7,000 submissions were made in the public consultation process that followed the issuing of draft guidelines by the then minister for housing Jan O'Sullivan, which set down a mandatory minimum setback of 500m "for amenity considerations".

The draft guidelines also set a maximum day and night noise limit of 40 decibels for future wind energy development, measured outdoors at the home nearest to the wind turbine. The guidelines also stipulated that there should be no shadow flicker at home within 10 'rotor diameters' of a turbine.

The Shivnen case appeared before Mr Justice Gilligan on December 6 where the Court recorded that liability had been admitted by the defendants.

A spokesman for Enercon was unavailable for comment.

A spokesman for the Department of Housing, Planning Community, and Local Government said that, due to the programme for government, ongoing policy, and legal developments, the Department is continuing "to advance work on the guidelines and related matters in conjunction with the Department of Communications, Climate Action and the Environment, in order to bring the various issues to a conclusion as early as possible".

"It is expected that a statement on the matter will be made in the coming weeks, outlining the timelines for implementation of the various elements," said the spokesman.

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http://www.irishtimes.com/opinion/wind-energy-is-not-the-answer-to-ireland-s-emission-problem-1.2998386

## Wind energy is not the answer to Ireland's emission problem

Government failed to look at other options before opting for industrial-scale wind power

Claims by the Government and the Sustainable Energy Authority of Ireland (SEAI) that wind power can be used to de-carbonise our energy system are not justified by the available evidence. A rudimentary cost benefit analysis (CBA) to examine ways of decarbonising would have shown how deeply flawed this policy is.

Moneypoint power station, alone, produces 4.7 million tonnes of CO2 annually by burning cheap imported coal, twice the amount our collective 1,500 turbines save. Wind turbines spread over some of the most beautiful parts of Ireland save a paltry 3 to 4 per cent of overall CO2 emissions according to the SEAI (2.4 million tonnes) and less according to other analysts.

If a CBA had been undertaken, it most likely that converting Moneypoint to sustainable biomass or clean gas would have emerged as a better option than wind, saving billions of euros, with better environmental outcomes. Likewise, upgrading our present stock of badly insulated homes may have been identified as another viable option. A Green minister and a powerful lobby group meant that no CBA was carried out and none of these options properly explored before industrial wind was rolled out.

Because the wind doesn't always blow, wind turbines produce about 30 per cent of their maximum potential output. Electricity is very difficult to store and to date no feasible, cost effective, grid-scale storage technology suitable for Ireland has emerged. Consequently, intermittent electricity must always be backed up by conventional generation to provide power on demand – a basic expectation in Ireland. No conventional generation has been closed down because of wind.

The Public Spending Code mandates the appraisal and evaluation of any project with capital expenditure of more than €20 million by means of CBA. Furthermore, projects and plans with environmental implications must be evaluated according to the European Strategic Environmental Assessment Directive, which provides a high level of protection to the environment as well as giving citizens the right to participate in environmental decisions. Both assessments require consideration of alternative methods of achieving the objective of CO2 emission reduction, yet neither has been carried out.

The social impacts of wind energy in rural Ireland are enormous. The wind industry continues to operate a ruthless cloak-and-dagger, divide-and-conquer strategy. "Community gain funds" and payouts have resulted in disharmony and disagreement

among neighbours, sometimes causing major family fallouts.

Turbine construction is governed by out-dated planning guidelines – described by the Minister for Communications, Climate Action and Environment, Denis Naughten, in Dáil Eireann as "unfit for purpose" – which allow them just 500m from homes, sometimes resulting in devastating consequences for families. The issue of noise from turbines recently made the headlines when Enercon Wind Farm Services Ireland Ltd admitted liability for nuisance caused to seven families who abandoned their homes in 2011 due to noise. Other affected families will probably take similar court actions.

The Department of Communications, Climate Action and Environment has known since 2015 that the minimum setback distance of a turbine from a house required to protect human health from noise is far greater than that currently recommended. This information, which emerged from an Access to Environmental Information enquiry, was kept under departmental wraps and publication of updated planning guidelines promised by the Minister within six months of this government's formation have been repeatedly postponed.

Currently wind turbines are reaching heights of 160m and heading for 250m. The devastation of our landscape is happening and accelerating, affecting communities forced to live in this industrialised landscape, tourists visiting Ireland and natural habitats.

Wind energy generation is heavily subsidised. The Public Service Obligation paid to the wind industry reached€240 million this year. The dispersed nature of wind farms and their intermittent output requires the electricity grid to be upgraded at an estimated cost of €3.5 billion, another unaccounted-for subsidy to the industry borne by consumers. In addition, the government forgoes revenue by allowing tax breaks to wind-farm investors.

The Minister continues to support a misguided and uncosted policy that delivers little for the environment at enormous cost to our economy and landscape, and which threatens the health and well-being of rural dwellers upon whom these industrial developments are forced. Promises were made to rural Ireland before the last election; the Minister and this government have broken them.

The continued failure to ask basic questions and the unwavering support for wind energy without even a rudimentary CBA is reminiscent of the politics that mismanaged the Irish economy into bankruptcy in 2008. It would seem that we are doomed to repeat the exercise in the field of renewable energy.

Paula Byrne is spokesperson for Wind Aware Ireland

http://www.irishtimes.com/news/crime-and-law/courts/high-court/eu-court-to-decide-issues-in-co-laois-wind-farm-row-1.3013325?utm\_source=dlvr.it&utm\_medium=twitter

#### EU court to decide issues in Co Laois wind farm row

High Court judge says he will refer case on Coillte project to the Court of Justice of EU by Mary Carolan

A High Court judge is to ask the Court of Justice of the EU (CJEU) to decide issues concerning Coillte's environmental responsibilities in relation to grid connection works for a wind farm in Co Laois.

The issues concern whether mitigation measures can, as a matter of law, be considered at the screening stage of a particular development.

Their determination will involve considering requirements of Article 6.3 of the European Commission Habitats Directive.

Speaking in the High Court on Thursday, Judge Max Barrett said objectors to the Co Laois wind farm had argued that the future of the Nore freshwater pearl mussel, a species thought to be unique to Ireland and the River Nore region, may be threatened by the proposed development.

He said it was difficult to think of an instance where the objectives and provisions of the Habitats Directive "could be more fully engaged, and require more carefully to be observed", than where extinguishment of a species may be at stake.

Coillte previously secured permission for 18 wind turbines and associated development on lands at Cullenagh, close to the villages of Timahoe and Ballyroan.

That permission was challenged by People Over Wind, but was upheld by the Court of Appeal in 2015.

People Over Wind campaigner and environmentalist Peter Sweetman has now challenged a July 2016 determination by Coillte, made under 2011 regulations giving effect to the Habitats Directive, that grid connection works to connect the wind farm to an ESB substation in Portlaoise did not require a stage-two appropriate assessment.

The applicants argue that such an assessment is required for reasons including the grid connection works, individually or with other plans or projects, are likely to have a signficant effect on a European site.

They also claim the proposed mitigation measures were not clearly defined and do not form part of an enforceable development consent condition.

Coillte argues its determination complies with the Habitats Directive and, given the outcome of a stage-one screening assessment, there is no requirement for a stage-two

#### assessment.

It also maintains that protective measures applied at the design stage of a proposed development can be taken into account in the stage-one assessment.

#### CJEU's views

In a judgment on Thursday, the judge said he believed the CJEU's views on the Article 6.3 issues raised by the case were necessary before he could give

his determination.

He said no conclusive view had been reasoned by the High Court on the issue of whether mitigation measures can generally be considered as part of a stage-one screening assessment done under Article 6.3.

Given the centrality of that issue to resolution of this case, he said the court must ask the CJEU to decide issues concerning whether avoidance and/or mitigation measures forming part of a project can, as a matter of law, be considered at the screening stage.

http://www.laoistoday.ie/2017/03/29/planning-permission-wind-turbine-near-fossey-mountain-rejected/

### Planning permission for wind turbine near Fossey mountain rejected

by Alan Hartnett

A proposal for a wind turbine near Fossy Mountain has been rejected

An application to erect a wind turbine in Laois has been rejected by An Bord Pleanala.

This was an appeal by Andy Dunne of 7 Kellyville Park, Portlaoise, Laois against the decision by Laois County Council to refuse permission on July 28, 2016.

He had proposed to construct a 500kW wind turbine with a hub height of 65 metres and an overall height of 93.5 metres.

The planning permission would also have covered an electrical switch room, control facility, an access track, and associated infrastructure such as crane hard standing area, underground cabling and all ancillary site work to take place at Knocklead, an area between Timahoe, The Swan and Wolfhill.

However, An Bord Pleanala decided to reject his appeal on two grounds – the precedent it would set and it its proximity to a property.

In handing down their decision, the body said: "It is considered that the proposed development would constitute a piecemeal and ad hoc approach to the development of lands that are designated as being Open for Consideration for the development of wind energy, as set out in the Wind Strategy in Appendix 5 of the Laois County Development Plan 2011-2017.

"In the absence of a demonstrated need for the turbine at this location, the Board is not satisfied that the proposed development, by itself and by the undesirable precedent that it would set, would not prejudice a coordinated approach to the development of wind energy in this area.

"Having regard to the proximity of the nearest dwelling in the north, neither is the Board satisfied that that the effect on the amenity of this residential property from noise or shadow flicker have been satisfactorily addressed.

"The proposed development would, therefore, seriously injure the residential amenities of the area and be contrary to to the proper planning and sustainable development of the area."

READ ALSO – Councillors vote to zone Laois a wind turbine-free county

http://www.irishtimes.com/news/crime-and-law/courts/high-court/high-court-judge-refuses-appeal-to-his-decision-over-wind-farm-site-1.3059766

## High Court judge refuses appeal to his decision over wind farm site

Cork residents' concerns included the environmental impact of the development

by Mary Carolan

A High Court judge has refused to allow a number of local residents appeal his decision rejecting their challenge to permission for a wind farm development in Co Cork.

The residents' concerns included the environmental impact of the development and noise from the turbines.

They had disputed An Bord Pleanála's June 2016 permission for a six-turbine wind farm, substation, underground cables and associated development in the town lands of Derragh, Rathgaskig and Lack Beg at Ballingeary.

The High Court had in 2014 quashed an earlier permission by the board to Framore Ltd for the development after finding an environmental impact assessment (EIA) of the proposed development had to be considered as part of an overall assessment of how the turbines will be connected to the national power grid.

Rejecting arguments by the board and Framore the turbines and grid connection were separate projects, the court said an EIA of the 100m turbines could not be considered separately from the grid connection which could involve overhead or underground power lines.

Framore had argued it could not include the grid connection in the EIA for the turbines because proposals had not yet been formulated by ESB Networks for design of such a connection.

Following that High Court decision, Framore revised its planning application to relocate one turbine some 50m away from its original proposed location so as to ensure all turbines were a minimum 500m away from all residences. The application was also revised to provide for underground cabling between the site substation and the national electricity grid substation near Kilgarvan, Co Kerry. After the board granted permission in 2016 for the revised application, the families challenged that second decision.

#### **Dismissed**

In a reserved judgment last January, Mr Justice Brian McGovern dismissed their case. He found the board did what the previous High Court decision required it to do and he also dismissed arguments the EIA carried out by the board was inadequate.

The residents sought to appeal that decision to the Court of Appeal but, in a judgment on

Monday, the judge refused the necessary certificate to allow them appeal.

He found they had failed to show his January 2017 judgment had raised a point of law of exceptional public importance entitling them to an appeal and also held an appeal was not necessary in the public interest.

The judge said he disagreed that there was some uncertainty arising from his finding an adequate EIA had been carried out after the matter was remitted to the board. The fact the applicants disagreed with his finding on the EIA did not mean there was any uncertainty on that issue, he said.

http://www.leinsterexpress.ie/news/home/246591/laois-kilkenny-wind-farm-refused-after-mass-objections.html

## Laois-Kilkenny wind farm refused after mass objections

## Plans rejected by council for bi-county project

by Ryan Dunneryan

Laois County Council has refused permission for a proposed wind farm situated across Laois and Kilkenny following huge opposition from residents of both counties.

Pinewood Wind Limited had applied to build 11 wind turbines, each with a maximum height of up to 136.5 metres, and all associated site development and ancillary works, including a 110kV electricity substation.

The development would have spanned Knockardugar, Boleybawn, Garrintaggart, Ironmills and Graiguenahown, County Laois. The proposed development was part of a larger development which also extends onto lands in the townland of Crutt, County Kilkenny.

However, the plans attracted mass objections from residents of the proposed areas and elected officials, who raised numerous concerns including fears over health, noise and visual amenity.

Cllr Catherine Fitzgerald, Portlaoise, said the proposed development was not a sufficient distance from houses and could have had a health impact on humans and bloodstock.

Cllr Padraig Fleming, The Swan, and Cllr John Joe Fennelly, Abbeyleix, both said that the development should be at least 1.5km from houses, and raised concerns over the potential impact on the environment.

And Cllr John Brennan, Castlecomer, Kilkenny, raised concerns over noise and the threat to wildlife.

Among submissions made by local residents, David Malone, Environmental Action Alliance Inc. St Joseph's Terrace, Portarlington, said the development was not in line with the proper planning or sustainable development of the area.

Kieran Brophy, Spink, Abbeyleix, pointed out that the developer had been offering every house within 1,030m of the development €500 off their electricity costs, which he described as "bribery".

Aine English, Ironmills, Ballinakill, said the development would have "a catastrophic impact" on her business, Mount Nugent Stud.

"Due to the nature and fragility of the thoroughbred, no client will want their mares and foals and racehorses adjacent to a wind farm," she said.

And Martin Gorman, Moate, Ballinakill, said the proposed development would impact

negatively on buildings on his land, which include a cottage dating back to the 1800s.
The council has now refused the planning application.

#### 25.04.2017 Wordpress.com

https://ajmarciniak.wordpress.com/2017/04/25/damages-costs-for-families-forced-to-abandoned-their-homes/

## DAMAGES & COSTS FOR FAMILIES FORCED TO ABANDONED THEIR HOMES

by Andreas Marciniak

Ireland's wind industry has been put on notice. Damages and costs will be decided for the families adversely harmed by the noise emitted from wind turbines. The implications for the industry will no doubt reverberate worldwide. (Read prior court ruling by following link below)

### **Enercon Admits Liability in High Court Ireland**

## Court Case Has "Serious Implications" For Wind Farms – Local Campaigner

The future of wind farms in Ireland could be called into question this week.

Seven families from Cork, who claim they had to leave their homes five years ago due to noise levels, will have damages and costs decided by the High Court tomorrow.

It is the first action of its kind in this country and may open industrial wind developers to further legal challenges.

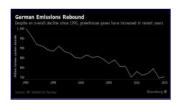
Laois woman Paula Byrne, PRO of Wind Aware Ireland, outlines the significance of the case.

**END** 

http://instituteforenergyresearch.org/analysis/europe-little-output-show-wind-solar-investments/

## **Europe Has Little Output to Show for Its Wind and Solar Investments**

By 2014, the European Union had spent over a trillion dollars on large scale renewable energy. Yet, that investment has provided little in terms of generating capacity and output. Out of about a total of 1000 gigawatts in the European Union at the end of 2014, renewable capacity totaled just 216 gigawatts.[i] Germany, for example, invested 427 billion Euros (\$467 billion) on renewable energy, installing more renewable energy capacity than any other country in Europe (78.7 gigawatts through 2014), but still relies on coal for about 42 percent of its power.[ii] According to the BP Statistical Review of World Energy, Germany's carbon dioxide emissions increased in 2015 by 0.8 percent.[iii] The country blames the increase in 2015 on cold weather and vehicle emissions.

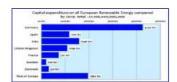


Source: <a href="https://www.bloomberg.com/news/articles/2017-04-26/germany-calls-rick-perry-s-push-to-rework-paris-accord-absurd">https://www.bloomberg.com/news/articles/2017-04-26/germany-calls-rick-perry-s-push-to-rework-paris-accord-absurd</a>

Europeans have spent over \$5 billion Euros per gigawatt of wind and solar PV capacity, while natural gas capacity could have been obtained for about 1 billion Euros per gigawatt. Thus, Europe's entire fleet of capacity of 1000 gigawatts could have been replaced by natural gas-fired capacity for what Europeans spent on wind and solar capacity. Further, the natural gas capacity is dispatchable by the grid operator and is able to run 24/7 while wind and solar generating capacity are dependent on outside forces, i.e. the wind and the sun.

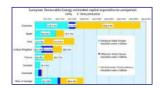
#### Renewable Investment by Country

The 1.1 trillion Euros that the European Union spent on large scale renewable energy through 2014 is distributed among a number of countries as shown in the following figure. The countries with the highest percent shares are as follows: Germany (38 percent), Italy (14 percent), Spain (10 percent) and the United Kingdom (10 percent).



Source: http://principia-scientific.org/failed-economics-renewable-energy-facts/

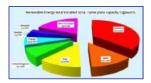
The capital expenditures that each country spent on solar photovoltaic (PV) and wind, onshore and offshore, are shown in the following figure. Germany and Italy have spent a greater share of their renewable investment on solar PV, while Spain and the United Kingdom have spent more on wind.



Source: <a href="http://principia-scientific.org/failed-economics-renewable-energy-facts/">http://principia-scientific.org/failed-economics-renewable-energy-facts/</a>

Renewable Capacity by Country

Over 80 percent of Europe's wind and solar capacity is concentrated in seven European countries: Germany, Spain, Italy, the United Kingdom, France Sweden, and Denmark. (See chart below.)



Source: http://principia-scientific.org/failed-economics-renewable-energy-facts/

Though 216 gigawatts of renewable capacity was on-line in Europe through 2014, the output effectiveness was measured at only 38 gigawatts, yielding an effective capacity factor of only 18 percent, which compares to 87 percent for natural gas-fired capacity. In other words, natural gas power in Europe is five times more efficient than wind and solar power. When taking the low capacity factor for wind and solar into account, Europeans are paying over \$29 billion Euros per gigawatt of renewable capacity (rather than the \$5 billion Euros per gigawatt noted above).

The following figure indicates that the effective capacity factors differ by country, ranging from a low of 13 percent for Germany to over 25 percent for Denmark. The variation in capacity factor among the seven countries is due to the amount of solar vs. wind power since wind's capacity factor is about half that of solar, and the country's location since solar power is significantly less effective in Northern Europe. Nevertheless, as shown in the figure, these combined capacity factors for wind and solar are far less than those for the dispatchable technologies—natural gas, coal, and nuclear.

Source: http://principia-scientific.org/failed-economics-renewable-energy-facts/

Taking capacity factors into account, the actual electricity output generated compared to the nameplate installed capacity is shown below by country.



Source: <a href="http://principia-scientific.org/failed-economics-renewable-energy-facts/">http://principia-scientific.org/failed-economics-renewable-energy-facts/</a>

#### Conclusion

Through 2014, about 1 trillion Euros have been spent on wind and solar technologies for electricity generation in Europe. In most countries, the investment was obtained by levying extra costs on utility bills. This is essentially a regressive tax because poorer people are least able to afford the additional cost compared to wealthier people. It also burdens European industries with large energy costs, making them less competitive compared to their non-European counterparts. These regressive "green taxes" have resulted in more Europeans in fuel poverty and businesses moving offshore.

As a means of producing useful electrical power, wind and solar are very expensive generating technologies because of their low capacity factors and because of their non-dispatchability and intermittency.

#### 09.05.2017 Economic & Social Research Institute

https://www.esri.ie/pubs/RB20170209.pdf

#### IRISH RESIDENTS' VIEWS OF ENERGY- RELATED TECHNOLOGIES

by Valentin Bertsch (ESRI, TCD), Marie Hyland (ESRI, TCD) and Michael Mahony (ESRI, TCD)

ESRI Research Bulletins provide short summaries of work published by ESRI researchers and overviews of thematic areas covered by ESRI programmes of research. Bulletins are designed to be easily accessible to a wide readership.

## Investment in electricity generation and network infrastructure is needed to reach climate targets

The European Union (EU) has put in place ambitious targets to reduce greenhouse gas emissions and to increase the use of energy from renewable sources. The transformation of the current electricity system will play a significant role in reaching these targets. This is true in all EU member states, but none more so than in Ireland where the goal is to have 40 percent of electricity generation coming from renewable sources by 2020. Reaching this target will require significant investments in renewable generation technologies, with accompanying development of the electricity grid to bring the electricity which is generated in often remote locations, to the homes and businesses where it is needed.

Experience has shown that while people generally hold positive opinions of electricity generation from renewable sources, there remains a significant degree of local opposition when it comes to infrastructure siting decisions. Local opposition can lead to project delays, unhappy citizens, and frustrated investors and policy makers. Moreover, delays to infrastructure development may result in missed targets down the line resulting in fines, reputational damage and environmental consequences.

So how can we reduce opposition to local infrastructure development? An important first step is to conduct a comprehensive survey of people's opinions, coupled with a detailed analysis of the drivers thereof.

1 This Bulletin summarises the findings from: Bertsch, V., Hyland, M., and Mahony, M., "What drives people's opinions of electricity infrastructure? Empirical Evidence from Ireland", *Energy Policy*, Vol. 106, 2017.

Available online: http://dx.doi.org/10.1016/j.enpol.2017.04.008

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## PEOPLE ARE GENERALLY POSITIVELY DISPOSED TOWARDS RENEWABLE GENERATION TECHNOLOGIES, MOTIVATED, IN PART, BY ENVIRONMENTAL POLICY CONCERNS

We conducted a survey of Irish residents and found that they are generally positively disposed towards renewable generation technologies (see Fig. 1 left). 75 percent of respondents stated that they held "positive" or "somewhat positive" opinions of biomass generation, increasing to 77 percent for wind power and 91 percent for solar. When it comes to the expansion of the transmission grid necessary to bring renewable generation online; people were positively disposed if the proposal was to put the wires underground, but there was significantly less support for expansion of the grid above ground.

A number of socio-demographic variables are related to people's opinions of these technologies, in particular, age, education and income, albeit to varying degrees. The relative importance people assign to energy policy objectives also matters. For example, people who place relatively more importance on national environmental as opposed to economic policy priorities are more likely to have a positive opinion of wind powered generation. Looking at the considerations specific to the individual technologies, people who expressed concern regarding the impact on the landscape are less positively disposed towards wind farms.

Looking at the drivers of opinions towards above-ground and under-ground grid expansion, many of the drivers of opinions for above-ground grids were in direct contrast to those for underground grids. For example, people who placed a high importance on security of supply in national energy policy had more positive opinions of above-ground expansion, whereas a prioritisation of environmental objectives was related to positive opinions of underground grid expansion.

#### DESPITE POSITIVE VIEWS, LOCAL OPPOSITION CAN STILL ABOUND

While our survey showed that 77 percent of people were generally positively disposed towards wind powered generation, only 36 percent of respondents indicated that they would be happy to have a wind farm constructed within five kilometres of their place of residence (see Fig. 1 right). Even fewer people (20 percent) would be accepting of the local siting of a biomass generation facility. Solar power, on the other hand generally has high support and high local acceptance.

Looking at the drivers of local opposition, in general, socio demographic variables do not appear to be significant with the exception of gender; male respondents were less likely to oppose the local siting of any of the technologies examined. Similar to the drivers of overall opinions, prioritisation of national energy policy objectives was related to people's likelihood of expressing opposition to local infrastructure development. People who place a high importance on environmental concerns were less likely to express opposition to proposed development of wind, solar or biomass power generation plants.

It is interesting to note that we do not find any evidence supporting the commonly-held view that opposition may be driven by NIMBYism (the "Not In My 2Back Yard" phenomenon). For instance, concerns regarding local landscape do not drive local opposition to energy infrastructure development.

#### Using these insights to reduce opposition and reach our EU targets

How can policy makers use these insights? Understanding the drivers of opinions and framing policy proposals in such a way that the characteristics that matter to residents are highlighted may go some way towards reducing local opposition to infrastructure siting. Policy makers should take note of the views of Irish residents towards each of the technologies considered. While Irish residents are generally supportive of the need to move towards an energy system more heavily reliant on renewable sources, there is a clear reluctance towards building additional transmission lines, needed to facilitate this transition, above ground. On the other hand people are generally positively disposed towards underground grid expansion. Given that constructing grid cables underground is much more costly and technically challenging, policy makers may be interested to know what factors might explain such contrasting views.

There are a number of positive takeaways for policy makers. Firstly, when it comes to the drivers of acceptance of local infrastructure development, socio- demographics, over which policy makers have little to no control, play a minor role. This suggests that policy makers may be able to get additional buy-in from citizens by better communicating the environmental and other energy policy considerations behind infrastructure development. Furthermore, we do not find any evidence that reluctance among Irish residents to have energy infrastructure developed close to their place of residence is driven by a selfish "NIMBY" motivation. Concerns regarding health and local environmental impacts take precedence; again this highlights the role that could be played by improved communication.

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#### 11.05.2017 CommonWealth Magazine

https://commonwealthmagazine.org/environment/the-downside-of-renewables/#.WR3hmWmxsjY.facebook

#### The downside of renewables

### Germany is experiencing rising costs, more coal use

by Michael Sununu

**MUCH HAS BEEN WRITTEN** about New England's electricity markets and the distortions caused by policy makers. There are many lessons that elected officials and bureaucrats can learn by looking overseas at several countries that are going "all in" on renewable power. The results are not good, at least if you are a major employer, manufacturer, or a residential ratepayer – or frankly anyone who uses electricity.

Let's start with Germany, a favorite example for many renewable advocates. Germany embarked on its Energiewende ("Energy Transition") in 2010. They established huge renewable energy targets, to be accomplished through the imposition of electricity tariffs and massive subsidies. In addition, Germany was determined to concurrently phase out its nuclear power. The result of this government imposed pricing and energy scheme has been massive deployment of wind and solar generation, but skyrocketing electricity costs.

Germany, like other European countries such as Denmark and Spain that embraced solar and wind, now faces some of the highest electricity prices in the world, at around 30 cents per kilowatt hour. These renewable generation resources require high upfront capital costs, very large investments in additional transmission infrastructure to move the power, and extensive investments in "backup" resources in case the sun doesn't shine or the wind doesn't blow. And when these renewables fail to produce, utilities and end users are usually paying higher prices in the spot market for electricity imports or fuel.

Of course, the bigger irony here is that in order to provide backup power, Germany has been building more coal plants. That's right. Coal. Much of

its natural gas generation has been mothballed because natural gas supplies in Europe are far more expensive and less reliable than coal supplies. As a result, Germany just issued a report on meeting its CO2 emissions goals and indicated it is unlikely to make its 2020 target, which may put its entire Energiewende endeavor in jeopardy.

Germany isn't the only country that has taken this dangerous policy path. Australia has been gifted with incredible natural resources and energy supplies, especially in relation to its rather small population. Yet that hasn't prevented elected officials in Australia from choosing policies that may wreck its energy infrastructure, raise electricity prices, and impair its economy.

Consider the state of South Australia. The local government decided to get rid of almost all

its traditional baseload generation and rely on wind, solar, and two transmission interconnections to supply electricity to the region. What could go wrong? Well, in the past six months, South Australia has encountered a series of major blackouts due to the intermittency of the wind generation and grid instability when they suddenly stop producing electricity. The demands on the interconnections are too great and in some cases the entire state suffers power outages. Such an unreliable electricity infrastructure is unacceptable for a major manufacturer and should not be acceptable to anyone in a country blessed with massive energy supplies.

As if to emphasize this problem, in Queensland, Australia, there are fears that major electricity users such as smelters, mines, and manufacturers are shutting down because of the high costs of electricity. These high costs are not being driven by a lack of supply of fossil fuels, but by the growing incorporation of renewables and demands to shut down traditional baseload power. Virtually everywhere aggressive renewable mandates occur, higher (not lower) electricity prices are the result. While Australia has had relatively low unemployment rates over the past 20 years (just like New England) there are growing concerns that losing hundreds of jobs when an aluminum plant shuts down, or a mine closes, or a manufacturer moves overseas is due to expensive and unreliable electricity supplies.

Does this sound familiar? For the past 15 years, New England has been treading this same path. Our elected officials are pushing renewable energy policies which distort electricity pricing markets, push inexpensive baseload power out of the market, and make us more reliant on generation that does not have fuel on site. Wind and solar are at the mercy of Mother Nature. Natural gas supplies are limited by our refusal to expand pipeline capacity. As coal and nuclear plants shut down, we are becoming more like Germany and Australia. Their present may be our future.

If you use electricity, if you are a manufacturer, if you are a homeowner, and even our grid operator ISO-NE, be warned. When someone claims that more renewable power means cheaper electricity, remember the lessons we should be learning from overseas. Germany and Australia have shown that renewable energy is in fact expensive, threatens grid stability, and can create risks to businesses. The costs of high rates and unreliable power will be paid in jobs moving elsewhere and slower economic growth.

Michael Sununu is the owner of Sununu Enterprises LLC, a consulting firm focused on water, telecommunications, and energy infrastructure located in New Hampshire.

https://stopthesethings.com/2017/05/12/germanys-wind-power-debacle-worsens-too-much-power-one-day-none-the-next/

## **Germany's Wind Power Debacle Worsens:**

## **Too Much Power One Day, None the Next**

by Pierre Gosselin



It doesn't just look chaotic, it is ...

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Like South Australians, Germans are attempting to run on sunshine and breezes and in both places the results have been an unmitigated disaster. When power output depends on the weather and whether the sun is up and the sky isn't clouded up, results can, as they say in marketing blurbs, 'vary'.

During January of this year, wind and solar power output totally collapsed for days on end and pushed the German grid to the brink of collapse. The <u>Daily Caller reported</u> at the time that:

Germany's power grid almost collapsed in January due to poor performance from wind turbines and solar panels, according to data from a major trade union.

Wind and solar power plants under-performed in January, 2017, because of cloudy weather with little or no wind, setting the stage for massive blackouts.

A major blackout almost occurred Jan. 24 and was only prevented when German energy suppliers "also took the last reserve power plant," Michael Vassiliadis, head of the union which represents power plants IG Bergbauchemie Energie, told reporters. The country's power grid was strained to the absolute limit and could have gone offline entirely, triggering a national blackout, if just one power plant had gone offline, according to Vassiliadis.

"The renewables could not even offer five percent [of total power demand.] Coal, gas and nuclear power kept the country almost in the first place under the electric current," Vassiliadis said.

Germany was forced to recommission coal power plants to simply keep the lights on.

From famine to feast and back again, Germany's renewables rush has not only threatened to plunge the Country into the Dark Ages, the chaos being caused in the power market is sending power costs through the roof. Here's NoTricksZone.

Engineering PhD Calls Germany's Renewable Energy Drive "A Disaster" And "A Debacle"

Firstly, wind energy protest organization vernunftkraft.de posted a chart showing the sheer absurdity of relying on the haphazard electricity supply that wind and solar energies are.

Last Sunday Germany saw windy and sunny conditions, meaning the country's installed wind and solar systems were running at high capacity. This however led to excess power flooding into the German grid, and thus a plummet in exchange electricity prices.



Market exchange price of electricity on the EEX Leipzig exchange. On April 30 and May 1st 2017, wholesale prices went deeply negative.

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Market exchange price of electricity on the EEX Leipzig exchange. On April 30 and May 1st 2017, wholesale prices went deeply negative. Source: EEX Marktdaten Strom, by Rolf Schuster. <a href="http://www.vernunftkraft.de/uploads/Ahlborn.pdf">http://www.vernunftkraft.de/uploads/Ahlborn.pdf</a>

The chart above shows that electricity was in fact sold at negative prices, dipping to an astonishing low of almost 75 euros per megawatt hour.

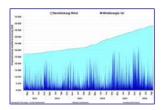
Unfortunately the money to pay people to "buy" the electricity never gets paid to the consumer. Rather it gets paid mostly to foreign wholesalers. Yet, the German grid operator needs to recoup the money it paid to have the wholesalers to accept the power. In the end, the domestic consumers in Germany wind up with the bill.

How much did the negative prices seen over the past weekend end up costing the German consumers? One reader calculated it and came up with the figure of over 41 million euros! And because May 1st was a national holiday, the demand for German power was low, and there was no use for all the extra power flooding into the grid. It's like cooking dinner – after everyone has already eaten. And because there is no fridge, the garbage man has to be called and paid to dispose of it. So far electricity cannot be stored on a meaningful scale.

#### Wild supply variability

Continuing on the folly of Germany's renewable energy, engineering expert Dr. Detlef Ahlborn authored a post at the European Institute for Climate and Energy (EIKE), declaring the transition to renewable energies a failure and that it will remain so as long as a solution for storing the energy is not found.

Again the huge problem is the extremely erratic, uncontrolled supply of the power, as the following German wind energy supply chart clearly illustrates:



Wind power production Germany from 2011 to 2016. Installed rated capacity rose from about 27 GW to about 48 GW. However the power that was actually produced (dark blue) is in fact often only a tiny fraction. Overall, Germany's demand hovers about 70 GW.

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More variable than rolling a die

Dr. Ahlborn describes the extreme variability of wind power in Germany as follows:

The variability of German wind power production is about 70% greater than the numbers you'd see rolling a die. If German power providers ran their plants like throwing a die, the power would flow more uniformly.[1]

Of course wind energy proponents like to say that the solution is a European-wide integrated network where if the wind is not blowing in one region, then excess power in another region can fill in the gap. After all, "the wind is always blowing somewhere in Europe" they like to say. However, the following chart plainly illustrates that this is far more a fallacy than a truth.

Very often when there's plenty of wind in Germany (or very little), the case is the same in the rest of Europe. With that kind of supply, good luck trying to balance any grid that is overly dependent on wind energy.

Ahlborn writes that combining the power grids to form one large one only serves to add up the variability and not reduce it. "Unworthy" for Germany

Summarizing Ahlborn calls the total result of wind energy so far "bitter":

This Energiewende [transition to renewables] is unworthy for a country with such a tradition in science and technology. We could have known if we had just given it a bit of thought. But who wanted to know?

We'll find out at the latest when we start looking for those who are responsible for this debacle, and policymakers attempt to run from taking responsibility for this disaster. Our former economics minister has already taken the first step.

Bundesverband Windenergie (Federal Association for Wind Energy). There was also criticism that the wind turbines were shut down instead of the state's nuclear plants.

BR24 adds that "many wind turbines in Bavaria had to stop for hours because no one wanted to take the power" and that this was the first time this had ever happened in Bavaria.

According to the Fraunhofer Institute, "two thirds of Germany's conventional power production was switched off" on Sunday in order to prevent the grid from turning into a giant toaster.

And because the base load (the grid's backbone) cannot be adjusted rapidly or taken offline line to meet the rapid changes, the BR24 adds:

But the coal power plants continued to operate – despite the negative power prices of minus ten cents per kilowatt-hour.

It's not possible to turn off the coal plants because once you do, the critical baseload disappears and the grid risks becoming an uncontrollable wild bronco.

And when you are forced to sell your very own product at a negative price (minus ten cents per kilowatt-hour) just to get rid of it, then you get a pretty good idea of just how obscenely distorted the market has become because of wind and solar.

Yet the energy masterminds of Germany and Europe intend to double or even quadruple this folly in the future.

So what about the losses incurred from the negative prices? You guessed it! They will be passed along to the German consumers, who already pay among the highest electricity rates in the world.

https://www.spectator.co.uk/2017/05/wind-turbines-are-neither-clean-nor-green-and-they-provide-zero-global-energy/

# We urgently need to stop the ecological posturing and invest in gas and nuclear

by Matt Ridley

The Global Wind Energy Council recently released its latest report, excitedly boasting that 'the proliferation of wind energy into the global power market continues at a furious pace, after it was revealed that more than 54 gigawatts of clean renewable wind power was installed across the global market last year'.

You may have got the impression from announcements like that, and from the obligatory pictures of wind turbines in any BBC story or airport advert about energy, that wind power is making a big contribution to world energy today. You would be wrong. Its contribution is still, after decades — nay centuries — of development, trivial to the point of irrelevance.

Here's a quiz; no conferring. To the nearest whole number, what percentage of the world's energy consumption was supplied by wind power in 2014, the last year for which there are reliable figures? Was it 20 per cent, 10 per cent or 5 per cent? None of the above: it was 0 per cent. That is to say, to the nearest whole number, there is still no wind power on Earth.

## Matt Ridley and climate change campaigner Leo Murray debate the future of wind power:

Even put together, wind and photovoltaic solar are supplying less than 1 per cent of global energy demand. From the International Energy Agency's 2016 Key Renewables Trends, we can see that wind provided 0.46 per cent of global energy consumption in 2014, and solar and tide combined provided 0.35 per cent. Remember this is total energy, not just electricity, which is less than a fifth of all final energy, the rest being the solid, gaseous, and liquid fuels that do the heavy lifting for heat, transport and industry.

Such numbers are not hard to find, but they don't figure prominently in reports on energy derived from the unreliables lobby (solar and wind). Their trick is to hide behind the statement that close to 14 per cent of the world's energy is renewable, with the implication that this is wind and solar. In fact the vast majority — three quarters — is biomass (mainly wood), and a very large part of that is 'traditional biomass'; sticks and logs and dung burned by the poor in their homes to cook with. Those people need that energy, but they pay a big price in health problems caused by smoke inhalation.

Even in rich countries playing with subsidised wind and solar, a huge slug of their renewable energy comes from wood and hydro, the reliable renewables. Meanwhile, world energy demand has been growing at about 2 per cent a year for nearly 40 years. Between 2013 and 2014, again using International Energy Agency data, it grew by just under 2,000

terawatt- hours.

If wind turbines were to supply all of that growth but no more, how many would need to be built each year? The answer is nearly 350,000, since a two-megawatt turbine can produce about 0.005 terawatt-hours per annum. That's one-and-a-half times as many as have been built in the world since governments started pouring consumer funds into this so- called industry in the early 2000s.

At a density of, very roughly, 50 acres per megawatt, typical for wind farms, that many turbines would require a land area greater than the British Isles, including Ireland. Every year. If we kept this up for 50 years, we would have covered every square mile of a land area the size of Russia with wind farms. Remember, this would be just to fulfil the new demand for energy, not to displace the vast existing supply of energy from fossil fuels, which currently supply 80 per cent of global energy needs.

Do not take refuge in the idea that wind turbines could become more

efficient. There is a limit to how much energy you can extract from a moving fluid, the Betz limit, and wind turbines are already close to it. Their effectiveness (the load factor, to use the engineering term) is determined by the wind that is available, and that varies at its own sweet will from second to second, day to day, year to year.

As machines, wind turbines are pretty good already; the problem is the wind resource itself, and we cannot change that. It's a fluctuating stream of low–density energy. Mankind stopped using it for mission-critical transport and mechanical power long ago, for sound reasons. It's just not very good.

As for resource consumption and environmental impacts, the direct effects of wind turbines — killing birds and bats, sinking concrete foundations deep into wild lands — is bad enough. But out of sight and out of mind is the dirty pollution generated in Inner Mongolia by the mining of rare-earth metals for the magnets in the turbines. This generates toxic and radioactive waste on an epic scale, which is why the phrase 'clean energy' is such a sick joke and ministers should be ashamed every time it passes their lips.

It gets worse. Wind turbines, apart from the fibreglass blades, are made mostly of steel, with concrete bases. They need about 200 times as much material per unit of capacity as a modern combined cycle gas turbine. Steel is made with coal, not just to provide the heat for smelting ore, but to supply the carbon in the alloy. Cement is also often made using coal. The machinery of 'clean' renewables is the output of the fossil fuel economy, and largely the coal economy.

A two-megawatt wind turbine weighs about 250 tonnes, including the tower, nacelle, rotor and blades. Globally, it takes about half a tonne of coal to make a tonne of steel. Add another 25 tonnes of coal for making the cement and you're talking 150 tonnes of coal per turbine. Now if we are to build 350,000 wind turbines a year (or a smaller number of bigger

ones), just to keep up with increasing energy demand, that will require 50 million tonnes of coal a year. That's about half the EU's hard coal–mining output.

Forgive me if you have heard this before, but I have a commercial interest in coal. Now it appears that the black stuff also gives me a commercial interest in 'clean', green wind power.

The point of running through these numbers is to demonstrate that it is utterly futile, on *a priori* grounds, even to think that wind power can make any significant contribution to world energy supply, let alone to emissions reductions, without ruining the planet. As the late David MacKay pointed out years back, the arithmetic is against such unreliable renewables.

The truth is, if you want to power civilisation with fewer greenhouse gas emissions, then you should focus on shifting power generation, heat and transport to natural gas, the economically recoverable reserves of which — thanks to horizontal drilling and hydraulic fracturing — are much more abundant than we dreamed they ever could be. It is also the lowest- emitting of the fossil fuels, so the emissions intensity of our wealth creation can actually fall while our wealth continues to increase. Good.

And let's put some of that burgeoning wealth in nuclear, fission and fusion, so that it can take over from gas in the second half of this century. That is an engineerable, clean future. Everything else is a political displacement activity, one that is actually counterproductive as a climate policy and, worst of all, shamefully robs the poor to make the rich even richer.

#### **Annotation:**

IWEAG choose this article despite the fact that IWEAG is strictly against nuclear power plants.

#### 28.05.2017 The Law Is My Oyster

https://the-law-is-my-oyster.com/2017/05/28/going-going-gone/

## Going, going, gone (with the wind).

by Owen Martin

The excellent blog produced by Owen Martin makes a very valid point: even if you don't give a damn about the environment, you do care what is being pinched out of your pocket to keep the Great Wind Swindle alive.

Irish taxpayers paid upwards of €21 Million in curtailment fees in 2015 to wind farms which produced enough usable electricity to power a small bar fridge. God knows how much taxpayer money was spent in the EU as a whole.

Can you imagine where this money could have been spent? For example, in Ireland we could have avoided having to cut the hospital cleaning budget which was desperately needed by hospitals to deal with recent deadly Superbug outbreaks. Or we could have made up the €15 million shortfall in the post office pension funds (or keep the rural post offices open in the first place, so that people can collect their pensions). Again, these stories are repeated all over the EU − there are needs which are not being met because the government holds out its hands and says: "No money, sorry!"

There are a host of other more useful uses for this huge sum of money instead of being shovelled into the pockets of sWINDlers. What is even scarier about these 2015 figures is that these curtailment fees might have doubled since 2015 given the huge increase in installed wind turbines over the previous two years.

#### 31.05.2017 FORA

https://fora.ie/electricity-costs-ireland-2797453-May2016/

## Power prices are about to be hiked for everyone to pay for more renewable energy

Proposed changes are expected to add €20 to the average yearly household bill and €65 for businesses.

by PAUL O'DONOGHUE

ELECTRICITY PRICES COULD jump by almost €20 a year for residential customers and €65 for small businesses as a tax used largely to fund renewable energy development looks set to rise.

In a consultation document published today, the Commission for Energy Regulation (CER) proposed a more than 35% increase in the Public Service Obligation (PSO) levy during the 2016/2017 period.

The PSO is a subsidy charged to all electricity customers that is mainly used to fund the development of renewable energy and peat. The rate is set at the start of October and runs until the end of September the following year.

The tax is expected to take in just over €325 million during the 2015/2016 year. The bulk of this, €181 million, will be spent developing renewable energy while €122 million will be spent on peat.

It is proposed that the levy be raised to take in €441 million during the 2016/2017 year, which runs from 1 October until the end of September 2017.

The CER has calculated that if the new rate comes into effect, the PSO will cost domestic customers an average of nearly €80 per year – up from around €60 in 2015/16.

Small business customers would be expected to pay an average of almost €280 annually, up from around €215 the year before. It is anticipated that large, commercial users would pay around 35% extra for their consumption.

The average price for household electricity in Ireland was the third-highest in the EU in the second half of last year, according to the latest figures from Eurostat, although the share that came from taxes and levies was relatively low compared to many other countries.

#### Power tax

Despite the proposed increase, the PSO levy will still make up a relatively small percentage of most people's bills. The average household is currently spending about €1,900 a year on electricity, depending on the provider.

The CER said that the levy is set at a proposed rate and is likely to change between now and the decision date of 1 August due to several factors, such as changes in the wholesale price of electricity.

The energy watchdog gave a few reasons for the proposed increase. The first was a fall in wholesale electricity prices, which are down by about 28% compared to last year.

Because wholesale prices are down, the electricity being produced by companies supported through the PSO is less valuable, which means that they need more support from the levy to make up the difference.

The second reason is an increased drive towards renewable energy. Just under one-third of Ireland's electricity is produced by renewables, mostly through wind turbines, however this figure needs to rise to reach 40% by 2020 in order to meet targets set out by the European Commission.

Most of Ireland's renewable energy is provided by wind turbines

It is proposed that renewable support through the PSO would rise from €181 million to €334 million. A CER spokesman told Fora that the 2020 targets are a factor behind the proposed hike.

There were also some factors pulling the price of the levy down, such as the fact that several traditional power plants, such as the Tynagh gas plant in Galway, were being supported through the PSO to the tune of €47 million for "security of energy supply".

Although these plants will no longer receive support through the levy, the increased spend on renewables more than offsets the savings.

Last year the CER proposed a PSO rate of just under €305 million, which was then revised upwards slightly to €325 million. The commission has the final say on what rate will be set.

#### 01.06.2017 independent.ie

http://www.independent.ie/business/irish/coillte-seeks-partner-for-renewable-energy-shift-35775765.html

## Coillte seeks partner for renewable energy shift

by Colm Kelpie

Coillte is looking to establish a joint venture to help develop its renewable energy ambitions and strategy.

The State forestry agency said it is looking for a partner to work with it on its land over the next 10 years to help realise its potential.

The commercial semi-state has identified around 1,000 megawatts of development for wind and renewable energy projects on its land. But it believes that to press ahead on its own would take considerable equity and "unbalance" the business.

It wants a partner to come in and prop up its plans with finance, and potentially skills and knowledge to enhance Coillte's own offering.

Fergal Leamy, Coillte CEO, said the agency is looking to have financial advisers in place by September and the partnership done by the first three months of next year.

He estimates that to develop 1,000 megawatts would cost between €300m and €400m.

"It's a sizeable portfolio, when you think about the cost of developing each megawatt, and the debt financing," he said. "As a board, we have made a decision that this is not something that we feel that we should be doing on our own.

"We feel that the opportunity is huge here. To partner with somebody, we're going to maximise the value but we're also going to manage the risk from our company perspective as well."

Coillte is tendering for financial advisers for the plans. As part of this, Coillte may also look to sell one or more wind farms in its portfolio.

"Longer term we don't see ourselves as a utility company, we see ourselves as a developer of wind assets," Mr Leamy said. "Part of this process, one way of financing might be to sell down one of the farms that we have already, and then reinvest it, because there are quite attractive yields out there at the moment."

Results reported by the agency last month showed that the amount of cash generated by Coillte surged 130pc last year to just over €15m.

The commercial semi-state is aiming for an operating cash flow of just over €60m by 2019.

Indo Business

#### 02.06.2017 laoistoday.ie

http://www.laoistoday.ie/2017/06/02/rust-never-sleeps-neither-greed-part-1/

## Rust never sleeps ... and neither does greed

by John Whelan

Laois and Offaly County Councils have to put their heads together to make the Slieve Bloom Mountain Bike trail project go ahead

The king is gone
But he's not forgotten This is the story
Of a Johnny Rotten It's better to burn out Than it is to rust
The king is gone
But he's not forgotten

(Neil Young, 1979)

In over 40 years of being engrossed in newspapers one of the more abiding articles I have read was a simple and straightforward profile in the people

section of the Sunday Times magazine. It was of a middle-aged miner who was coping with the closure of the collieries across Britain, with coal-fired power plants to follow in their wake.

This burly lad with stubby fingers was dominating the foreground in the accompanying photo standing in a poly-tunnel replete with light, in stark contrast to a mine shaft.

I noticed his chubby fingers because of the awkward incongruous manner in which this man who had spent most of his working life underground held a tiny terracotta pot. The pot contained a cactus. A classic looking mini-version of the ones you see out in the desert in westerns.

I was totally impressed and inspired by the manner in which this miner had become a successful horticulturalist, propagating cacti from seed and had managed to turn it all not just into an enjoyable pursuit but a profitable business.

It had all come about through an enlightened strategy by the mining company and its workers who had prepared for the likely lay-offs five years in advance. They did this through planning for the difficult transition by retraining, mentoring, counselling and saving for that rainy day in the miners' credit union, so as to have in this case, literally seed capital. Happy days.

If only our own semi-state companies could show such foresight and a smidgeon of consideration for their staff, their families and their communities. I have learned recently of Bord na Mona workers being offered retirement planning, after they were made redundant.

#### A terrible shame ...

It's a terrible shame, as companies like Bord na Mona, the ESB and Coillte were pioneering and proud contributors in our economy and communities as they forged new ground, created great opportunities and worked with the locals in the early years and decades from their inception. They held a critically important and highly-regarded place in the country and the

countryside where their workers resided and retired making way for the next generation. Housing estates in the shape of horse shoes grew up around the employment opportunities as if to celebrate our good luck.

But all that has changed. Changed for the worse and it's a forlorn hope that they might yet show some of the insight and foresight that is demonstrated in the example of the miner above.

The Boards of these semi-States are now well removed from their origins and the ideals of their founding fathers. This is not harking back to 'the good old days' but rather searching for the values and precepts that underline their foundation.

These companies were designed to serve communities, to create employment opportunities and to breathe life into the rural heartland. Today, those at the helm seem far more interested in their fat cat pensions, pension funds and the short-term bottom line than serving their stakeholders rather than a banking like shareholder worldview.

You and your family own these companies. They are supposed to be held in trust and run on your behalf and your best interests, long-term and for the next generation too. But we are being short-changed by them and they are selling us out. In another extraordinary display of short-term greed they seem more content in collusion with some of their political masters of turning the country into one big wind farm – a metaphor for the ages if there ever was one as these companies swap their community-centred focus for a new corporate worldview.

Mark you, this is to fund their windfall pensions, to justify their bonuses and to leave communities carrying the can because there are no meaningful jobs for rural Irish workers in windfarms. The technology, the equipment and even the management, maintenance and monitoring of windfarms is all imported and very often conducted remotely, at arm's length.

Their ultimate owners will be international investors and pension funds,

once they are sold on and sold off, as they always are. There is a good return for investors in heavily subsidised wind farms with a guaranteed income running to multiples of their initial outlay over a 20-year period, which is even more attractive now than ever, with finance on deposit in banks losing money.

#### Don't be fooled ...

However, don't let anyone fool you by suggesting there are jobs, benefit or a bounce for local communities in this strategy being pursued by the semi- states. It is selfish, short-term and short sighted; will generate no jobs and will never re-energise Mountrath or Mountmellick, Ballyroan, Ballybrittas or Borris-in-Ossory and open up the relish of new ideas and chances for young people in Rosenallis or Camross.

Coillte and Bord na Mona between them are the biggest landlords in the country and right now are getting away with the biggest land grab in our history since Cromwell.

They are too lazy and too greedy about their own career prospects and pensions to be arsed unless we sit up and kick-up and make them take stock of what is best for Laois and the Midlands. It's certainly not to sell us out and sell it off; it's certainly not to tell us that the best use of this massive resource and State asset is for wind farms and data centres.

They might look good initially to local authorities for their rates revenues and sweeten the deal with some local sponsorships as they try to buy friends. But they offer no significant alternative employment to the thousands of jobs being shed and certainly no sustainable social, economic and environmental dividend. When's the last time you met a tourist looking for directions to the wind farm or the data centre?

The latest example of the great sell out of the regions by the state agencies was the startling and shocking revelation at Monday's Council meeting that it now emerges that there are no funds to proceed with the long-heralded and much-lauded Slieve Bloom Mountain Bike Trails.

This is nothing short of an outrage and you should express yours if you care at all about our county and community. This is an excellent idea. A fantastic project which has been well over six years in gestation. It finally gets planning permission recently and only then Failte Ireland and Coillte maintain they don't have the money to proceed.

This is an ideal project on so many levels, with the capacity to attract over 50,000 visitors annually to this locality – real local jobs, rural based, eco- friendly, long-term sustainable, healthy and it feeds right in to our burgeoning leisure tourism market.

Laois and Offaly County Council really have to get together on this one and knock heads together to make it happen on a co-funding joint venture. There has to be more to Coillte than wind farms and there as to be more to the questionable moniker, Ireland's Ancient East, than fancy new road signs. (Seeing the wood from the trees and all that ...)

Instead of forging ahead with this magnificent idea for mountain bike trails across the Slieve Blooms this week, there was much talk instead of the midlands becoming the 'rust-belt' of Ireland. The only thing left rusting on the landscape will be the giant industrial wind turbines, for as soon as the subsidies run out, so too will the investors.

That need not and should never be the case. There are so many other constructive options and alternatives open to us. The managements and boards of these semi-states

are too windy in their cushy numbers to pursue these options as they require courage, creativity, ambition and vision, forward planning and a long-term perspective in the interest of the social sustainability of the communities they are supposed to serve.

They need to think more like the enlightened company that helped a miner to become cactus world news one weekend on the back page on The Sunday Times.

Become immersed once again in their host communities and seek more holistic solutions to the inevitable decline of their traditional sectors.

Think next generation.

Not rust.

Not greed.