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Dossier on the financial situation (insolvency) of Irish Wind farms June 2019. (Revised May 2021)

Part 1.

Summary of findings in easy to read form.

1) This report deals only on the financial outlook of Irish wind farms. We say nothing about the environmental, health, noise shadow flicker or property value impacts here because they are already well flagged. On their own Irish wind companies are technically insolvent. but there is a common trend in all of them in that once built they are sold one or more times and parent companies always forgive repayment of the capital cost.. There are currently at least 3,800 Megawatts (MW) of wind capacity installed in the state valued at about 6.5 billion Euros in their accounts. They are losing an average of 65,000 Euros per MW or 221 million Euros per year. If the government target of 4,000 MW is maintained over the life span of an average wind farm, the losses will amount to 5.2 billion Euros Nationally. (65,000 Euros X 4,000MW X 20 years) = 5,200,000,000. Still, new installations are continuing, the investment principal cannot be repaid.

2) Eirgrid promised wind farm electricity generating companies they could generate an average of 32.4% of their capacity from prevailing wind speeds over one year. They had no reason whatsoever to make such a claim. Now Eirgrid admits that wind farms are only generating 20% to 26%. (20% in 2018). Generation Adequacy Report 2010-2016 - Eirgrid (yumpu.com)

Here are the exact words from Eirgrid on the 27th February 2019 in response to a question from Val Martin to clarify comments in one of their reports published in 2019 showing 27% capacity factors in 2018.

"*Val*

In response to the query you have raised, the Estimated Capacity Factor for the period was 20% and this is based on actuals, while the "27%" is the forecast figure. Therefore what the report is saying is; the actual estimated capacity factor value of 20% was lower than the forecast capacity factor value of 27%.

Kind regards
Customer Relations "

Where wind farms are built using loans, there is enough income to pay the expenses and the loan interest, but not enough to pay the principle within the life span of the wind farm. Where a wind farm is built with share capital, there is

enough to pay running expenses and part of the capital, but it will take much more than the life span of the wind farm to repay the full capital investment. These wind turbines will be long gone for most of the repayment period of the capital cost, whether it's loans, shares or a combination of both.

3) All Irish wind farms we examined are technically insolvent right now. They are not a going concern and have little value being permanent loss makers. Every possible accounting trick is used to hide the true position, including **fair value adjustments,** debt forgiveness from parent companies and paying dividends to existing shareholders from money raised from new shareholders. Fair value adjustments was made legal immediately before the Celtic tiger building/banking collapse of 2008. This trend is spread across the entire fleet of wind farms where profits are rare and losses common. They can never repay their capital costs.

4) The material here has been condensed as much as possible and all of it may not be understood by some readers. Readers should not let this put them off as the message will become clear towards the end. We recommend it be given to the wind industry, to Greencoat Renewables, the ESB, SSE, the Director of Corporate Enforcement, The Dail Committee on Public Accounts, to civil servants with accounting training and their response demanded. Irish renewable energy ventures are a copy of the Celtic Tiger builder/banker boom into which the Patrick Nyberg inquiry investigated and made recommendations which are now being ignored. He noted the herd instinct of all the yes men with responsibility to act which is now being repeated by all but one of the 158 T.D. sitting in the Dail. (Deputy M Fitzmaurice TD). (This dossier was later given to T.D.s for Fine Gael, Fianna Fail and Sinn Fein in 2019 and to the Dail committee of public Accounts and the Dail Business Committee)

5) The Director of Corporate Enforcement was contacted with a specific instance of non compliance, but says he will only become involved if a crime is committed. We show here that in some cases wind farm companies are not complying with the law.

6) We say those holding political office in Ireland have a duty to get to understand what is happening and seek a proper investigation. We will cooperate. We compiled this dossier in the hope that at least one of our **158** members of Dail Eireann will take an interest and act on it.

7) This has implications not only for wind farms, but for their lenders and investors some of whom are likely to be pension funds. These pension funds cannot deliver pensions from the wind farm portfolios when claimants expect a pension. This makes it an ideal case for the Dail Committee on Public Accounts to study. Allied Irish Banks stands out are the most exposed.

8) The companies Act is being broken, risky accounting practices are taking place. The checks and balances of the Aarhus Convention and Article 3(2) of the SEA Directive on the environment is by passed as part of a pathological drive to promote this industry which can only end in grief at some point in the future.

Should the reader find part 1 to 5 laborious turn to part 6 for the account details.

Foreword in easy to read

Having repeatedly extended the REFIT subsidy schemes time limits, the Minister announced in early 2019 that it will end for new entrants in March 2020. It is not known what brought about such a decision or if there will be another extension of time. We anticipate government will install all the wind farms it possibly can and we therefore draw attention to the economic implications of that policy.

There is (among all our objections) one single feature of Ireland's renewable energy policy which no one can ignore. It is one which can only be escaped by bringing the whole industry under public control at a huge financial cost to taxpayers and consumers. We accept that generally governments want to do good and sometimes they succeed, but sometimes they fail. We witnessed the beef tribunal, the investigations into clerical child abuse, the Donegal Garda Inquiry, the Maurice McCabe Judicial inquiry and the most important of them all, the inquiry into the building and banking collapse of 2008. We know from these inquiries that mistakes were made and we try here to fend off one on energy. This is also an experiment to see what happens when a warning is raised like this.

There were 11 forms of renewable energy in the 2009 Renewable Energy Directive, but government decided wind should be to the forefront. It raised the proportion of renewable energy for electricity generation from 16% to 40%. The 40% figure has been reached long ago, we now have wind capacity equal to average electricity demand or 100%.
P.S. June 2021. In a remote meeting hosted by Irish Rural Link between Eirgrid and the public on the 5th May 2021, Eirgrid representatives said they i tended to raise the renewable capacity to 70% of demand.

Wind speeds vary year on year. It takes an output of about 18.2% to pay for the annual operating costs of an average wind farm. A good wind speed year will give a 24% output, which leaves 5.8% to provide interest and capital repayments. There is usually enough to pay interest and a little towards the principal on the capital loan, but not enough to pay all the capital cost within the

lifetime of the wind farm. The accounts show that where a 24% output is achieved, 76% of revenue is required to pay all the operating costs. Irish an British wind speeds are very closely related, best speeds are in the north west declining in the south east and midlands.
P.S. 2019, 2020 and the first half of 2021 have seen very low wind speeds.

About the authors.

Val Martin is a native of Kingscourt, Co Cavan. He is now as a suckler cow farmer on his traditional family holding at Kingscourt which has been in his family for over 200 years.

He obtained an honours Bachelor of Business Studies degree at the Institute of Public Administration Dublin taking the financial accounting stream in 2003. The course included a financial management module and company law.

His hobby is model mechanical engineering and scientific experimentation. He built a model electrical grid and made electronic components which worked. He is Irish Spokesperson for the European Platform Against Wind farms which has over 1,200 member groups throughout Europe and is affiliated with its counterpart in North America. He took two Judicial Reviews on planning applications as a lay litigant for energy projects. He won one with costs and lost the other bearing his own costs only. He has a number of videos on the internet You Tube channel entitled valmartinireland You Tube and three of these demonstrate practical working models. He also presents the Real True Educational - Not Fake News channel on You tube.

John Joe Dooley is a retired engineer living in Dublin. He worked in the USA and Ireland specialising in installation of production machinery. His education/experience includes assessing the economic contribution of additional machines to an existing system and he is proficient in financial accounting methods. He looks at wind turbines as he would any other machine. Computers are also machines. The cost of a machine must be repaid as profit over its useful life and the depreciation charge to the accounts must reflect this. The depreciation charge for wind farms is too low. The higher the depreciation charge the lower the profits will be.

Owen Martin has a degree in economics and accountancy and researches energy and economic topics in his spare time.

None of the authors ever received, are receiving or are likely to receive any remuneration for their efforts, they do it out of a sense of public duty and to prevent environmental damage. Val

Martin has spent a lot of his own money campaigning and helping communities deal with planning applications. We all have given of our time attending events and making submissions to public consultations.

Part 2. slightly more difficult to comprehend.

Climate change.

Climate change, is the main driver for Ireland's renewable energy policy with the objective of reducing dependence on fossil fuel and cutting carbon emissions. Whatever the situation with climate change, we accept that if renewable energy displaced fossil fuel, that would be sufficient reason to support it. We have long being pointing out that no more than **65%** of wind (**non synchronous)** power can be allowed into the electricity grid at any one time and no one has worked out how the remaining **35%** will be powered without fossil fuel. This limit is accepted by Eirgrid in their publications and observable on their on-line Dashboard. In addition to this limit, the output of Ireland's wind farms averages between 20% and 26% and declines with age. (Occasionally you may see a higher penetration of wind, but you need to check what is being exported to the UK, we find that the amount of wind net of exporting is capped at 65%) (We confine our figures to the Republic of Ireland for conciseness, click **Ireland** on Smart Dashboard). http://smartgriddashboard.eirgrid.com/#roi/interconnection

This report in the Telegraph refers to a study showing that wind farms do not reduce greenhouse gasses. We cannot see how the co2 released in their construction can ever be recouped.
https://www.telegraph.co.uk/news/earth/energy/windpower/9889882/Wind-farms-will-create-more-carbon-dioxide-say-scientists.html?fbclid=IwAR3GZePBX4gJPDPp72J9pbV5oQ4J9o4QOrjGQMYc5kbLCXvTcxv8gdkKDgU
Note: When opening links, place cursor over it and follow instructions. It may be necessary to press control and left click.

The EU Court of Auditors report 2019, demands countries such as the Netherlands and Ireland increase their capacity of wind and solar generation to help meet Emissions targets. We say that in the absence of the legally required SEA it does not appear to have occurred to any member government to tell these Auditors the limitations of such wind energy source.
https://www.eca.europa.eu/Lists/ECADocuments/SR19_08/SR_PHOTOVOLTAIC_EN.pdf

The economic model in rural Ireland.

It is government policy to help farmers augment their income by other non farming enterprises, renewable wind energy becomes an obvious option. In theory, all the farmer has to do is sign the leases, collect the rent and continue

to farm. If only life were this simple, we would not oppose it, but instead would concentrate of the optimum size of wind turbines and their locations.

In its formative years, we could only attempt to forecast wind's performance in the absence of evidence, but now as it becomes a mature industry we can provide evidence to back up our claims that a huge mistake is being made in regard to wind energy. This is being ignored by government, A problem with the current model to augment farm income with electricity income can be seen as follows:

Grid inertia and frequency stability requires conventional fossil fuel generators be run along side wind. There have been efforts to increase the 65% limit without success. The wind does not blow all the time. Fossil fuel and the generating stations to burn it must be kept hot and running continuously. The traditional large condensing steam plant needs 9 hours to start from cold and is about 55% efficient. When combined with a second cycle (combined cycle gas turbines up to 70% efficiency is achieved and when it is augmented by fast acting gas turbines on their own efficiency drips to about 35%. We now have almost twice the amount of fuel capacity we need. Irrespective of the fuel saving from wind, the land area where electricity is generated increases radically and the number of companies generating electricity is radically increased.

Traditional capacity. Republic of Ireland.

Maximum power required (winter peak demand) = 5,000 MW.
Average demand = 3,400MW
Summer night-time demand = 2,200MW

Traditional generating capacity form large continuous plant = 6,000 MW
River Hydro generation = 300 MW

Total = **6,300MW**

This provided for a 20% reserve during winter peak demand.

Present capacity (Ireland)

6,000 MW of efficient fossil fuel plant (same as before)
300 MW of river Hydro plant (same as before)
3,400 MW of wind generation
2,200 MW of fast acting gas plant.

Total : **11,900** MW

In Eirgrid's 2010 -2016 adequacy report plans were for 15,000 MW by 2016. If we add 25% to the existing 11,900 MW capacity we can see that it will be equivalent to 15,000 MW when we only need 6,300 MW which increases costs by 2.37 times. Effectively the domestic price of

traditional electricity should be in the region of 14.5 cent pet unit (kWh). It is now 24.5 cents. It is not known where it will end, but the cost in Denmark is 32 cent per unit. Denmark is more advanced than Ireland with wind energy installation. The wind industry used to say wind would bring down the price of electricity. This is untrue, it increases the price and the wind industry generally has stopped making these claims. We believe we played a roll in forcing this change. There have been recent utterances in the media that wind does reduce the price of electricity so it appears to be that they say whatever they can get away with. (SSE Electricity is currently running a TV advertisement claiming they can provide 100% renewable electricity to consumers who switch to them. This is impossible, a complaint is submitted but the regulator claims it cannot cope with the level of complaints)

Landowner rent is only a minor cost of wind energy. Rent amounts to about 15,000 Euros on average per turbine or 7,000 per MW. (there is about 40% tax deducted). Irish land owners are receiving about 240 million Euros wind rent annually before taxation. This is very close to the actual losses being sustained by wind companies. It can be seen that if wind energy worked as commonly believed, it takes about 20 acres to host one 2 MW turbine. As an extreme example if the current rate or roll out continues it will increase the annual electricity bill as follows. Wholesale price is 7.5, retail bill is 26 cents.

One hundredth of the country = 1,615 Euros wholesale and **5491** actual bill.
One fiftieth of the country = 3,230 Euros wholesale and **10,980** actual bill.

1/64 of the country = 5,047 Euros wholesale and **17,159** actual bill.
1/32 of the country = 10,094 Euros wholesale and **34,300** actual bill.
1/8th of the country = 20,880 Euros wholesale and **71,000** actual bill,

Government set a target of 4,000 MW of wind, but it is an open question as to whether government will promote more than that.

Obviously there has to be an optimum wind capacity, we claim it is zero, but accept government believes it should be more. Government has not assessed what the optimum capacity is. In the absence of a government decision, the wind industry is making the decision and that decision is to install as much as they possibly can. This policy is clearly unsustainable because there has to be a **saturation limit** for any commodity.

P.S. ------- Eirgrid in an Irish Rural Link remote meeting in May 2021 said they intend to increase renewable capacity in every way possible). They announced plans for more on-shore wind and off - shore wind with no limit. They hope to attract private investment and when asked by Val Martin who and how it would be paid for they said they had costed it. Efforts are now in train to find out where this costing actually is if it exists at all. When asked what they would do with excess capacity in high wind speed conditions they said they would export it to Britain and France. This means all this effort is for the benefit od British and French consumers. -------- end of P.S.

Part 3. Technical in parts but please read on.

Ways to measure the contribution of wind energy.

The engineers traditional way to measure the contribution of any source of electricity generation was **capacity credit,** viz: the amount of existing generation plant it allows to be shut down without endangering supply. Several studies have shown this to be 4% in Ireland for wind. A study by Dutch scientists Dr. Fred Udo and Keys LaPair found this to be the case, we say it follows the laws of diminishing returns if it does any good at all.

We attach the report of the ESB of 2004 which confirms this. it states at page 24 paragraph 2 that ***as the amount of wind increases, the contribution tends towards zero.*** It follows that as more is added the contribution becomes less tending towards zero. Common sense will tell the reader that if they keep adding more wind capacity which does not displace existing fuel generation and if those wind companies are to survive, the price of electricity must increase. We now have the 3rd highest prices in the world. (If VAT is excluded, Ireland has the 2nd highest electricity prices in the world after Denmark)

At paragraph 3 it goes on to say with regard to figure 16.

"*The red line represents the capacity for an all thermal system. With increasing amounts of wind capacity the total plant rises significantly but the amount of non-wind plant only falls off by a relatively small amount. In fact the amount of non-wind plant reaches a saturation level. The result is a rising level of 'excess plant'. Stated another way the capacity credit for Wind Power Generation* ***rises more slowly*** *with increasing amounts of wind power and tends to saturate."*
Here is the link to this report. See page 24, paragraph 2.

https://docs.wind-watch.org/EirGrid-WindImpact-Main.pdf

Its heading is "Impact of wind power generation in Ireland on the operation of conventional plant and the economic implications" published by the ESB in 2004. (it may be necessary to press control to open the link).
We take the liberty of underlining and highlighting the ESB's own words. They are the experts, the equivalent of the Central Bank on inflation, the Attorney General on law, the Chief Medical Officer on health and the Garda

Commissioner on road safety advice. Yet the ESB is ignored by decision makers in government.

If wind were assessed using the traditional method of capacity credit, it would immediately become apparent that it is not viable and it would be hard to justify its continuance. However, this was circumvented by measuring the contribution by **Capacity Factor** (also called load factor). Capacity factor is the amount of electricity produced over one year expressed as a percentage of the rated capacity of the plant being measured. There are **8766** hours in a year and wind companies are paid wholesale about 70 cents per Megawatt hour (MWh) and paid three extra amounts we will not specify here. The total amount paid is close to **76** Euros per (MWh). There are curtailment and capacity payments included which are fixed and not related to wind speed.

Wind turbines start to generate at about 12 MPH (5.5 meters per second MPS) wind speed and must be turned off for safety at 32 MPH (14.5 MPS) wind speeds. Between these values, the output increases by the cube of the wind speed so that as the wind speed is doubled, output increases by 8 times.

It can be seen that if the Capacity Factor were 100%, (if the wind blew at 32 MPH every minute of the year) and provided wind generation is kept below 65% of demand. wind could be relied on and would reduce the amount of fossil fuel plant used by allowing it to be shut down. However, at best, the capacity factor is 24% in a good year and this is intermittent. A guaranteed wholesale price of 76 Euros is very bad value with the average for traditional reliable power being 57 Euros in August 2019.

In its adequacy report 2010 - 2016 Eirgrid promised average capacity factors of 32.4%. Professor Gordon Hughes of Edinburgh University and Val Martin assessed the likely load factors for the UK and Ireland and found average likely factors of 24% and 24.1%. If wind farm incomes were projected at 32.4% factors, a drop to 24% would be a drop from 100% expectations to 74%. (32.4 - 24 = 8.4) 8.4/32.4 X 100 = 26%. Eirgrid's then CEO was written to and he was not prepared to stand by the 32.4% figure. An expected 100 Euros income would drop to 74 Euros. An examination of wind farm company accounts show capacity factors of between 20 and 27%, with 24% being very common and the higher values being rare. Some are much lower. An enquiry with Eirgrid staff in March 2019 revealed that their figure of 27% for 2018 was only a forecast, the actual figure was 20%. Please note this figure **20%.**

Professor Hughes also found that the output of wind turbines degrade with their age so that a turbine producing a factor of 28% in year 1 will degrade to 21% in year 19. This constraint is acknowledged in some financial accounts, but not in others. The result is an overstatement of the asset value of these companies. This would reduce a 24% output factor to 21.8% and a 20% factor to 17.4% after 19 years. 17.4% is below break even point for operating profit. https://www.ref.org.uk/attachments/article/280/ref.hughes.19.12.12.pdf

The guaranteed price of 75 Euros is only part of the subsidy scheme which includes fixed capacity payments to all generating plant, the most valuable is **priority dispatch**, wind electricity must be bought in priority to all other forms of electricity which is about the best subsidy available to any industry. Waste to heat which is 50% renewable, totally predictable and allows turning off fossil plant is not afforded priority dispatch and some of its output is being dumped to make way for wind. Asian countries may soon refuse to take this waste so restricting its disposal by conversion to electricity makes no sense. .

When wind generation exceeds 65% of demand, it is constrained down by turning off a portion of turbines. There was a small payment for this. There was talk of it being phased out, but it still applies. As the amount of wind on the grid increases, curtailment increases which suppresses wind company income as they compete with each other for a market. The business term is **cannibalism.** The size of the cake stays the same. but as the cumulative capacity of the generators increases, the slices of the cake get smaller.

Storage. Simple to read.

The standard response of wind proponents to these problems is to cite storage as the answer. Mark O'Malley and engineer with UCD and an advisor to the government stated at the launch of the energy green paper in 2012 that storage was not a viable option. See valmartinireland you tube video No 9 which shows storage is impossible because of the volume required. It has not worked anywhere in the world to date. In an RTE radio interview in 2018, a representative of the Commission for Regulation of Utilities justified increasing wind capacity on the basis that it can be stored. Both cannot be correct and Mr O'Malley is a qualified engineer. To store wind power, the wind companies must be paid to generate it and the storage facility must be paid to deliver it. That is double payment for the same product. Battery storage facilities are a fire hazard and have a limited life span.

Electricity demand. Somewhat difficult to comprehend.

Electricity is measured in Watts (W), kilo (1,000) Watts (kW) Mega (million) Watts (MW) and so on. This is the power being used at any instant. In order to measure a working quantity, the word hour (h) is inserted. A standard retail domestic unit is a kWh, but to measure wholesale generation capacity a MWh is used (1,000 KWh or 1 million Watts). A one kW electric cooker ring would use one kWh in one hour. A standard family home uses about 5,000 KWh in one year.

Demand varies from about 2,200 MW on a summer's night to about 5,000 MW of a cold January Friday evening. The maximum demand is called winter peak

demand. Average demand is about 3,300 MW. This has not increased since the economic collapse in 2008.

Fossil fuel plant is of two types, slow starting condensing steam turbine plant taking 9 hours to go from cold to hot and fast acting gas turbine plant using jet engines which can be started in 15 minutes. The slow starting plant burns, coal, oil and gas and is much more efficient than the gas turbine plant which burns only gas and refined oil. The faster starting the plant is, the less efficient it is. Combined cycle gas turbines have two generators, the first is powered by a gas turbine (jet engine) and the flue gases are diverted into a steam boiler to generate electricity from the high pressure steam. This makes better use of the fuel than any other design and is the most efficient. The boiler component still takes 9 hours to start from cold. The electricity generating capacity in the Republic of Ireland is now:

Slow traditional condensing steam plant from gas, coal and oil 4,000 MW
Fast acting traditional gas plant 2,000 MW

Hydro 300 MW.

Traditional total capacity	**6,300MW**

Present extra capacity since wind became a component.

Slow starting condensing steam plant	Nil
Fast acting gas plant	2,200 MW
Wind farms	3,400MW
Total additional capacity	**5,600MW**
Present total	**11,900 MW.**

It can be seen that we have 11,900 MW of plant when all we need is 6,300 MW. Government must ensure that all of this survives with the result that consumers must bear the added cost. It can also be seen that we have over 2,200 MW of extra fast acting fossil fuel plant required to balance wind which would not be needed if we had no wind. With traditional plant, extra plant can be installed on the same site using existing staff and supporting facilities, whereas wind farms are spread out into small entities owned by separate companies all of which must survive financially. This means that on an average week day at 3pm, 8,600 MW will go **idle** and unused = **73%.** Even on the coldest January evening when demand reaches 5,000 MW, **57%** will not actually be delivering electricity to the grid system.

Negative pricing: Paying to dump surplus product.

Since October 2018, Ireland has experienced a high level of negative pricing. Prices dropped as low as minus €139.44 in February 2019. Negative pricing occurs during periods of very high wind, mostly at night, when it becomes too expensive for power stations to switch off and then back on again should wind subside.

In such circumstances, it becomes cheaper for the power station to pay electricity consumers to take their power. It would be a bit like driving into a filling station and seeing a negative price on petrol: i.e. if they paid customers to fill up. Negative pricing is usually offered to large companies with high electricity consumption.

Negative pricing is a new development in the Irish electricity market, but it is symptomatic of a problem that has been happening for many years in Denmark. If power stations are unable to switch off during periods of high wind then that means the co2 savings attributable to wind are much less than is often claimed.

In effect, it means Ireland is running a duplicate system, with renewables running in parallel. It is in effect another subsidy paid for by consumers, a type of double billing.

Part 4

The Market. Simple to read.

The market comprises 1) The generators 2) suppliers 3) consumers. The wholesale price of fossil fuel power bought by suppliers like ESB Electric Ireland, Energia or Bord Gais varies according to time of day between 35 Euros and 120 Euros per MWh. The average is about 57 Euros. (5.7 cent per unit)

The guaranteed wholesale price of wind is 76 Euros. This proves that claims that wind would reduce the price of electricity were false. The domestic retail price converted to MWh (1000 units) is 260 Euros, a mark up of 66%. The difference is made up of the administration and infrastructure costs. This means that if a way is found to use all the planned wind electricity, wind generators will get 76 Euros, but consumers will pay 3.4 times that in other charges. In fact 260 - 75 = 185 Euros that goes elsewhere. What is planned is a giant monolithic monster in a very small country struggling to repay a 200 billion Euros debt it owes to the rest of the world.

The Machinery Directive. Simple to read

Engineer John Dooley has made the point that no Irish wind turbine complies with the Machinery Directive and that there is a major health and safety issue involved. Swedish authorities have reported on the collapse of a Vestas V112 three MW turbine which found it did not comply and another found these turbines don't comply with Article 4 of the directive. Planning authorities have ignored submissions made to them on breaches. Wind farms are currently valued very high, the lack of compliance with this directive is not considered in

such valuations. Should someone be killed as a result, enforcement could follow, this could mean closing down certain turbines reducing their value.

Cash for Ash.

An example was the Northern Ireland Cash for ash debacle. Government gave a subsidy of £1 per therm for wood chip costing 60 pence. Participants were heating empty buildings to make the 40 pence profit. When it was realized that the funding came out of the block grant from the British government and had to be paid for by cutting funding in hospitals schools etc, there was a crisis which brought down the Northern Assembly. We hoped this would provoke a re-think of wind energy on the Island, but it was ignored.

The business model of Ireland's wind farms.

In the Nyberg inquiry into the Celtic Tiger collapse, a number of buccaneer activities were observed which should have been acted on by government to prevent the collapse that resulted in a debt of 64 billion Euros to be carried by taxpayers. It is our assertion that history is repeating itself with renewable energy policy. Very recent reports is that 200 billion Euros is owed by the population of only 4.5 million people leaving the economy exposed to shocks in the final markets.

The business model for wind farms is to overcome local and planning resistance, obtain planning permission, obtain bank finance and build the wind farm. Next is to sell on the facility to anyone prepared to buy it. There are several examples too numerous to mention, but the Tierworker wind farm in Co. Meath was bought by National Toll Roads within 4 months of commissioning. In most cases, the buyer is an electricity supplier such as ESB Electric Ireland, SSE electricity and other such semi state companies. A common feature is that they all are mostly semi state companies or companies requiring a license to operate in the market they occupy. They were set up as semi state companies, but are entitled to behave as private companies. We cannot find examples of genuine private companies investing except for John Laing PLC dealt with below. Very recently, supplier Energia announced it is to spend 3 billion Euros on green energy investment. If this was all wind energy and they expect consumers to repay the capital sum alone, it will cost the average bill payer (3 billion Euros divided by 2 million) = 1,500 Euros each and Energia is just one supplier out of many.

In an article in the Irish Times on May 14th 2019 by Laura Slatery, the semi state forestry company Coilte gave a glowing account of the reversal of their past poor (debt ridden) performance by building wind farms on their extensive

lands and immediately selling them to Greencoat Renewables. Greencoat is another state backed company which is busy buying winds farm of the type we speak here.
https://www.irishtimes.com/business/energy-and-resources/coillte-profits-more-than-treble-on-wind-farm-gains-1.3877296#.XNlOz-Y9sP4.twitter

This should cause alarm bells to ring. Another company Gaelectric , cannot sell half its assets. It differs from others in that it has no parent to bail it out. Eventually loss making wind farms will fail to sell, how will they keep going?
https://www.irishtimes.com/business/energy-and-resources/green-energy-firm-gaelectric-for-sale-as-chinese-investors-withdraw-1.3251532

In the Celtic tiger boom/burst, the buyer of overvalued assets were backed by the licensed banks and when the enormity of their reckless lending became known, the taxpayers was forced to step in and bail them out. Now we see that while the banks are exposed for loss making wind farms, the state backed company Greencoat Renewables is directly involving the taxpayer and those paying into a pension in bailing out distressed wind farms. One Canadian company Brookfield sold out when Greencoat bought them at a hansom profit which begs the question of how Greencoat can buy up wind farms with a lifespan of under 20 years when it will take at 35 to 55 years (and more) to get their money back?

We have learned that while Greencoat makes no real profit, it has resorted to paying dividends to its long established shareholders out of funds received from new shareholders. The practice of allowing loss making companies pay dividends from new shareholder funds was unlawful in Ireland until the law was changed recently to allow it.

While Coilte are busy building new wind farms, Bord Na Mona are doing the same. They will soon have to end their peat harvesting operations and wind farms are an obvious way to use their land resource. It begs the question of whether they intend to be electricity suppliers to the National Grid or whether they intend to sell their wind farms on, will state backed Greencoat take an interest and if they do, where will Greencoat get the money? Why would these semi state companies not run the wind farms themselves? In September 2019 the Irish Independent reported the CEO as stating the financial situation was dire and in the 2019 budget a 31 million Euro Bailout was given to it. It appear no provision for a pension fund was ever made.
https://www.youtube.com/watch?v=g9HoSLypofo&feature=share&fbclid=IwAR256J1fPer4q-LLNk0o6Hty2VsGRi7TLoqCISut0AsfMfT_D2YetWwPKEQ

All of these ventures have to join an already struggling gang of electricity generators of conventional and non conventional types. The non conventional types are confined to about a 65% penetration segment and are already cannibalizing themselves for market share.

Between the 25th May 2018 and the 25th September 2018 there was virtually no wind generation at all. It was too calm for 4 months. April and May sometimes brings consistent east winds but these failed since 2007 and have not materialized in recent years. they increase output significantly.

Basic common sense should indicate at this stage that something is very wrong. All the consumer in Ireland wants is a socket on the wall from which electricity will flow at a price he can afford. It's the same as water, gas and bin collection. Larger companies have diesel and gas generators as an alternative to the mains supply. Households can switch to gas for cooking and indeed diesel generation and it is obvious the monopoly of electric power supply is not secure. Yet the consumer/tax payer is expected to bail out wind companies, Coilte, Bord Na Mona and a host of planned battery storage and solar generation in addition to conventional plant.

On the 28th February, 2018 blackouts occurred in two zones. High wind speeds were forecast and duty controllers overestimated demand. Demand remained too low while wind surged into the system forcing frequency chaos. One area blacked out was Templebar in Dublin. This incident proves the 65% limit. While he is not a contributor to this dossier and we don't have authority to quote him, UCD economist Colm McCarthy has been consistently warning of this unsustainable situation due to overcapacity, the involvement of semi state companies in energy production and the National Wealth fund. https://www.independent.ie/opinion/comment/colm-mccarthy-varadkar-bans-drilling-for-oil-never-found-in-irelands-waters-38543836.html

Interconnection.

During the period of office of Pat Rabbitt as Minister for Energy, the wind industry persuaded him to build 3,000 MW of wind farms in the Irish midlands for export to the UK. The British realized something was not adding up following communications from Val Martin and others and they stopped the plans. Such export would mean that Irish consumers would have to pay the cost of that 3,000 MW of wind at the priority dispatch price of 76 Euros equal to 240 Euros extra annually per house, while British consumers would be supplied with regular grid electricity mostly produced from fossil fuel. Irish consumers would be subsidizing their British counterparts. It was recently noticed that the amount Irish wind farms can produce is being facilitated by exporting to the maximum of 530 MW to the UK, The price is not known but it is well below the price for wind @ 76 Euros. This means Ireland is subsidizing British consumers and paying premium prices to Irish wind companies to produce electricity sold to the UK at a huge discount.

Part 5.

Political environment. Technical and difficult to comprehend.

The Paris Climate Accord did not aim to reduce carbon emissions, rather it allowed continued expansion of fossil fuel powered industries in China and India and similar countries while limiting emissions in developed countries. The overall amount of emissions is planned to remain unaffected. The Accord agreed to ration (or cap) emissions of co2 based on the financial ability to bear the curtailment of the use of fuel. Two countries stand out, China and India. These have large populations and a developing industrial base. The Gross National Product (GDP) is divided by the total population which gives a **low** per capita income. China is allowed to continue with business as usual for twelve years while India is to be permitted to continue unabated for an unspecified period.

In western countries the GDP is divided by the total population to give a **high** income ratio compared with that of China and India. The result is that industrial production is being driven out of developed countries to China and India. Many of the parts of vehicles and machinery such as gearboxes, crank shafts and other parts made using smelting of raw metal are now sourced in China and India. It has been observed that the quality of some of these parts is inferior. The United States has withdrawn from the Paris Accord in 2017.(In March 2020 the Corona virus exposed the reliance China for components of European manufactured products, as of the 12th March 2020 many companies are on short time because of a shortage of parts some car parts cannot be obtained)

The viability of wind farms is not dependent on the existence of climate change as they cannot reduce or abate co2 in any event. The minister announced Ireland will not reach its targets notwithstanding all this wind generation. This presents the political world with a dilemma. It was the promise of renewables such as wind and solar generated electricity that it provided an easy way to decarbonize economies. To do that it would have to actually displace the use of fossil fuel. If renewables had been assessed by the capacity credit method (the amount of fossil fuel saved) the savings could have been accurately counted in advance and the result would have matched the real result after the facilities were operational. Instead the contribution of renewables was popularly measured by how much was installed. The industry talked about the total wind capacity as if the wind blew continuously. In the public mind neither the 4% contribution not the 32.4% output measure were flagged. A unit of wind was the same as a unit of coal generated power to them, <u>this is a serious misconception.</u>

They failed to measure the amount of fuel saved and as a result we now see a situation where governments must choose between a reduction in manufacturing, food production, transport and other business ventures and creating jobs in the economy. The harsh reality is now facing the US Democratic Party, Irish established parties, Established parties in the UK and established parties in Europe and Australia. The problem is typified in France where the

Yellow Vest movement was the direct result of the imposition of a carbon tax on citizens. The Irish government favours building data centres which will increase electricity demand by 25% while attempting to reduce agricultural emissions. The EU recently announced it will allow more South American food to be imported in direct competition to the EU produced product. This may result in the destruction of pristine rain forests to make land to produce the food Europe consumes. Ecuador's government was recently forced to restore a subsidy on fossil fuel following protests.

The Irish EU and local elections held on the 24th May 2019 did not result in a green wave as predicted by the media. In the British General Election on 12th December, 2019 only one Green party MP was elected. In the Irish General Election on the 8th February, 2020, the Green party increased its seats from 2 to 12 but the established parties of Fine Gael and Fianna Fail lost heavily to Sinn Fein. An economic downturn would focus attention on this problem, but for now most people are in support of wind energy. No amount of popular support can cause unprofitable companies to become profitable. Instances of fuel poverty are on the rise. In Northern Ireland one in 5 households are in arrears, figures are not available for the Republic.

Commercial rates:

It is common for wind developers to give money to local good causes. Element Power Wind Company tried to give 375,000 Euros to a Meath GAA club in 2013, but this was thwarted by campaigners against the Kells wind farm. Meanwhile the wind industry claims it can't afford to pay commercial rates as reported in the online farming newspaper Agriland:
https://www.agriland.ie/farming-news/wind-energy-sector-rates-could-reach-e60-million-by-2030-iwfa/
In the article Gratten Heally claims the commercial rates are too high and could be more than the subsidies received. Rates and community benefit schemes are eventually paid for by consumers through their electricity bills and these costs would not be there at all in a traditional system. Mr Heally's complaint corroborates our claims here that the wind industry is in a dire financial situation.

In November 2019, Eddie O'Connor CEO of Mainstream Renewable Power said the wind industry was at its knees.
https://www.rechargenews.com/wind/wind-on-its-knees-as-profits-vanish-says-industry-pioneer/2-1-704554

In mid 2021, Mr O'Connor resigned as CEO after mading claims that Africa was tribal. He said it reminded him of corruption. Perhaps they were just more astute than their Irish counterparts and showed Eddie the door. Mainstream is still there but its charismatic leader is gone. Interesting it was reported in some articles that he repeated his previous claims that wind farm companies have a profit problem. This concurs with our findings.

Electric cars.

It can be seen that as the generating capacity increases demand remains static which squeezes all generators. Another way to increase demand is electric cars. These transfer the co2 emissions from the car exhaust to the power station chimney. In low wind conditions electric cars will be charged with fossil fuel generated electricity. Even in high wind speeds, 35% of the power to charge them must come from fossil fuel. There was no study to find out exactly how they compare with traditional vehicles on environmental or performance issues. There is a huge environmental cost to the production of batteries world wide. It can be seen also that there is nothing stopping a motorist charging his electric car from a diesel generator at home using marked gas oil and thereby avoiding paying the taxes and VAT on road fuel. Only one Irish TD (member of parliament) Shane Ross drives an electric car. The electricity grid relies on gas and if electric cars were to take centre stage, both the power grid and transport would rely on gas for over 70% of the time. This means that a squeeze in imported gas supply would cripple both electricity supply and transport. In any event there is not enough time to solve the problem identified here by electric cars. This insolvency crisis is imminent.

In the Sunday Times (Irish edition) of the 11th August, 2019, Stephen O'Brien reports that Graham Doyle, the Secretary of the Department of Transport believes that to achieve the government's target of 900,000 to 1 million electric vehicles by 2030, a total ban on sales of Petrol and Diesel cars will have to be introduced. Alternatively 10 billion Euros will have to be spent to encourage motorists to switch over. Mr Doyle is silent on where the electricity will come from. It will actually come from fossil fuel.

P.S. June 2021. Val Martin passes the charging point in Bailieboro four times a week. It is very rarely used. It used to be free when it was free it was used a occasionally. Now motorists have to have a special account, they cannot just top up at will. The one in Cavan is used by one single motorist regularly and his car is seen charging for many hours a week. Roll out is slow. A problem emerged with long distance travel. Some charge points don't work and some other motorists might be using it. Some motorists have to wait many hours and stay with their car to prevent queue jumping. A problem arose with leakages from batteries when cars are left parked for long periods and where end of life E-cars are stored there appears to be no way to dispose of them.

The German Experience.

Germany has spent 930 billion Euros on renewable energy infrastructure since 2000 and yet it's government has been forced to admit it will not meet its 2020 co2 emissions targets. Visitors to the country report that it is literally plastered

over with wind farms. There are ample reports on-line, this one in the Telegraph newspaper refers:

https://www.dailytelegraph.com.au/news/nsw/germany-will-not-meet-its-carbon-emissions-targets-in-2020-despite-spending-billions-of-euros/news-story/6ecb5e173327c74dd8630b68b5ef872e

A direct search can be made on Google. It will be noted that the contribution of all Germany's wind and solar fleet is given at 16%. We would suggest it is lower, but this proves Ireland can never reduce co2 emissions using wind energy because it does not work as commonly believed.

https://notrickszone.com/2019/10/22/high-electricity-costs-hostile-environmentalist-activism-uncertainty-now-crippling-german-economy-outlook-bleak/

And

https://notrickszone.com/2019/04/09/germans-unable-to-pay-power-bills-electricity-prices-have-more-than-doubled-344000-households-cut-off/

And

https://www.marketwatch.com/story/german-cartel-head-reportedly-says-high-energy-prices-have-hit-economy

The Danish experience.

Denmark has been to the forefront of wind farm building for 25 years. It has the highest electricity prices in the world charging households 32 Euro cent equivalent per unit (1kWh). It is often paying neighbours to take its electricity. In 2011, 99% of its primary energy came from fossil fuel. Val Martin's video https://www.youtube.com/watch?v=_WeIXkKRRVM&t=118s relates or search valmartinireland youtube. After a massive investment in renewable energy, Denmark is more reliant on fossil fuels than the United States is.

Before any wind farms were built fossil fuel for primary energy = 18.2 million barrels of oil equivalent per day. After they were built the figure was = 18.1 million barrels of oil equivalent per day.

Wind made no difference at all.

The Raragh Wind Farm, Kingscourt. Read only if you have time or skip for now. We selected it because the site adjoins Val Martin's farm and was closely observed during construction and operation in 2919.

The cost of Raragh wind farm is in the region of 30 million Euros. (2.6 million per MW). This would buy over 3,000 acres of land or 54 four bedroomed semi detached homes in a good Dublin Suburb.

The roads alone for access to this wind farm measure approximately 1.7 km long by 8 meters wide. It is excavated and filled with a half meter of high quality stone from quarry suppliers in the area. Rough calculations show there is 1200 X 7 X .5 cubic meters of stone installed = **4,200** cubic meters. This is well over 1,000 lorry loads and it was observed that hauliers have been constantly drawing to it for 3 months in 2919.

The volume of concrete per turbine is calculated at 1,971 cubic meters of concrete or 4,730 metric tonnes. The web site "Stop These Things" gives the co2 emissions for a small turbine of 481 m3 of concrete and 45 tonnes of steel to be **241** tonnes of carbon emitted. By that measure this wind farm will have emitted **4,820** tonnes of co2 when installed.

The wind industry claims the contribution of wind is equal to the capacity factor, whereas we claim it is equal to its capacity credit. Mainstream media sometimes claims the contribution is simply the amount installed viz: the more the better.

Wind farms require substantial amounts of grid electricity to run, defrost and light which is not separately stated in annual accounts, but has been estimated in other reports at between 10 and 20% of capacity. At 15% Raragh will consume 8766 X 1.5 Mwh = **13,149** MWh of power in a year. Power suppliers charge for this, which is recorded as a cost of sales in wind farm accounts. Add to this all the transport emissions and the carbon footprint of Raragh wind farm can never be recouped. Financially Raragh will achieve a load factor of about 24% (at best) which will yield revenue of 1.73 million of which 1.31 million will be operating costs leaving 416,560 to repay the capital cost. It will take **72 years** to repay the capital cost not including any interest or dividend. Despite all the efforts, Ireland will fail to meet its co2 targets. Government's response to this appears to be to install even more wind. We can find no genuine case of a dividend having been paid by a wind company out of profits earned. This wind farm is now offered for sale by the owner Mainstream Renewable Power and a US company is flagged as negotiating to buy it. If they do it will be the only known example of a foreign company investing in an Irish wind farm in recent years.

Tax Incentives.

We admit not being experts on tax. However, if US based company has a taxable profit of say 100,000 and will pay 40% corporation tax on it **= 40,000**.

If it invests 100,000 in an Irish wind farm it will save 40,000 tax. If it never gets any return of that investment it loses 100,000 – 40,000 = **60,000**. Up until now it recouped its 100,000 by selling the wind farm on. If it cannot get a buyer, it loses 60,000 in total. A tax break is no use if the investment is not recouped,

Wind farm investments are being recouped through rapid transfer of ownership, but we argue that this can't continue.

Canton Fitzgerald is seeking investment and uses the words **exit** for short term investors availing of the 40% tax breaks. Professor Gordon Hughes of Edinburgh University reported recently that retail electricity prices will have to double to pay for wind farms because the operating expenses are higher than anticipated. https://www.thegwpf.org/british-public-faces-huge-electricity-price-rises-to-bail-out-wind-farms/

Unattainable hopes of the wind industry.

According to Gratten Heally of the wind energy association, government policy is for 75% of our electricity generation to come from wind by 2030. We say that is only by an accounting trick, by counting the contribution by the amount of capacity installed.

Between the 25th May and 25th September 2018 there was virtually no wind energy produced. We know of no other area of the public finances where such unorthodox ways of counting a commodity or service are permitted.

Another misconception is that wind farms power several hundred thousand homes. No home was ever powered by a wind farms. Pure wind generated electricity can only be used to power direct resistance appliances like heaters. It cannot be used for a washing machine, cooker, lighting, television sets, escalators, electric blankets, computers,

The impact on People.

The Irish Wind Energy Association has recently apologised to communities for the suffering their installations has caused. A large compensation payment was paid to seven members of a family in Banteer, Co Cork for the impact of noise on them. There is a legal requirement that potential claims such as these be made a provision in the accounts (as an extraordinary item) and that there be a note in the accounts for extraordinary expenses. This is not done. The financial Regulator should have a role to play, but won't. Neither local planners nor An Bord Pleanala will entertain concerns on this basis. In February 2020 three Cork Children were awarded 225,000 Euro compensation for health effects from a wind farm. https://www.irishexaminer.com/breakingnews/ireland/cork-brothers-and-sister-who-lived-close-to-windfarm-settle-actions-for-225k-983997.html

Changes in industry and government approach. Up until mid 2019, wind farms gave a voluntary community benefit to local sports clubs and schools.

Element Power Ltd applied for planning permission for 87 large wind turbines in County Meath and offered 375 million Euros to the Meath GAA club in Trim over 5 years. Planning permission was refused and the GAA did not accept the money. A provision is made in proposed new planning guidelines to compel wind farms to give 1,000 Euros annually to residents living within 1 kilometer of a wind farm. Recently we heard Minister Richard Bruton on RTE radio advocating that local communities buy shares in local wind farms. This effectively means that instead of offering free money to communities, local communities are being asked to fund local wind farms. It's a complete reversal of policy trying to make cash flow from communities to wind farms instead of from wind farms to communities. This could be a signal of the cash flow difficulties reflected in wind company accounts.

Part 6 Financial Accounts. Here is the evidence in black and white.

The double entry financial reporting system is at the heart of Ireland's financial accounting system which in turn is linked to the British system and that of the wider world. Guidelines are issued from time to time by the accounting bodies on how certain matters are to be dealt with. Not all wind farms publish accounts, some are included as part of group accounts by parent companies such as the ESB or SSE and the accounts for these do not separate out the wind farm component. However, some do publish accounts and these are available from the Company's Records Office at a cost of two Euros and 50 cents.

Only very basic details are published. Irish law allows companies with over 100 Euros million in assets (and losses of tens of millions of Euros) to publish abridged accounts in which there is no breakdown of cost of sales etc.

A set of accounts comprises a profit and loss (P & L) account showing gross income from sales less the cost of sales to give an **operating profit**. The cost of sales is usually the cost of purchases which are then sold. Next is taken the expenses required to run the business and this includes wages, rates, rent, transport and other costs both fixed and variable. This gives a profit or loss for the financial year. The assets of the company are not included in the P & L account, but the annual depreciation of assets amount is. Depreciation lowers profits Euro for Euro it is a charge to the P & L.

The accounts also include a balance sheet which is a snapshot of the companies financial health at year end. It includes the tangible fixed assets, current assets and intangible assets owned by the company. It includes money owed by and owed to the company and provision for bad debt. There are usually notes to the account for added clarification. The value of assets at year end is the value at the start of the year less depreciation. Eventually this value arrives at zero. Tangible assets are real land, buildings, machines, (wind turbines), vehicles etc and readers will easily understand them. Intangible assets include goodwill and in the case of wind farms it is mainly grid connection offers by Eirgrid.. These have a value because the wind farm cannot operate without them, but they cannot be separated from the wind farm itself and if the wind farm is loss making a grid connection to it will not fetch much at auction.

The balance sheet includes current and accumulated profits or losses from the (P &L) account for current and previous years, land, equipment, buildings and cash in hand. It shows the position of the company if it were sold at year end. Central to this is a judgement of how much the assets would realize if sold. A factor is the involvement of the state company Greencoat Renewables which is involved in buying up wind farms using a mix of public and private cash. At the same time the company Gaelectric Renewables sold half its assets to a Chinese consortium that promised to buy the other half. It backed out of that promise. Wind farms are expensive to decommission. There are already calls in Britain for the state to bear the cost and for taxpayers to pay for the decommissioning and replacement of existing wind farms. Because of this the residual value of a wind farm on decommissioning may be negative.
https://environmentjournal.online/articles/uk-must-repower-wind-turbines-to-hit-carbon-targets/?fbclid=IwAR3_FtteN6OQhuMXlim3P_y8YhO3AvIFekPBqXjxHG1zk4KUcH3D60t0XFo

There are three ways to finance any venture; **1) Borrowing** also called leveraging or debt for which interest must be paid. A company that fails to meet its repayments will be in default and could be placed in receivership. **2) Equity** (ordinary share capital), the shareholders effectively own the company and its assets. Dividends are the equivalent of annual payments on a loan. There is no obligation to pay a dividend or to pay back the principle. **3) Premium share** capital, in this case a contract exists giving priority to premium shareholders and if the lender agrees premium shares can take priority over borrowings. It depends on the contract. Wind farms are normally financed by debt at the construction stage and a combination of equity and debt during operational stage. Efforts to swap debt for equity are ongoing. We found one example of premium share holdings. Wind farms rarely own the land under the facility, this distinguishes it from agriculture (farming) where the land is usually owned.

As wind farms are not profitable, existing turbines become obsolete and manufacturers are forced to offer something bigger and better. It is our view that these don't work either, but it keeps the show on the road for another while. No new developer would consider installing the type of turbines used 10 years ago. Proof of this is that Gaelectric cannot find a genuine buyer for the remaining half

of its fleet. Therefore the depreciation charge to the P & L account of all wind farms is too low. If they were accurately valued the losses reported would be much higher. The financial account overstate asset values. Some wind assets are written off over 25 years, most over 20 years and one was reduced to 16 years reflecting experience of a more rapid degradation than at first believed. We suspect wind turbines depreciate in a similar way to rigid bodied trucks. The best will last about 17 years if well minded but others will be off the road by 12 years. Normal practice is to write off equipment with moving parts over 7 years and if they last longer calculate the residual value in the accounts. An overvalued asset results in an overvalued profit, a false profit. We found that planning permission is usually granted for 25 years, accounts usually give the lifespan of a wind farm at 20 years writing off at the rate of 5% annually. It will be more difficult to obtain planning permission after 25 years because there will be evidence of noise and flicker impacts.

Responsibility for the accuracy of financial accounts rests with the directors. Auditors certify that the accounts give a true and fair view. Situations have occurred in businesses where auditors certified that accounts gave a true and fair view and the company was sold. The new owner discovered the accounts did not give a true and fair view. The courts have stopped short of holding auditors legally accountable. This is one of the most controversial areas of law. We believe the turnover and operating costs in the following accounts are accurate, but we question the valuations of assets. Even if valued correctly, the accounts show unsustainable losses. A receiver cannot turn these companies around to make them profitable.

The legal dictionary defines solvency as: **Solvency**. The ability of an individual to pay his or her debts as they mature in the normal and ordinary course of business, or the financial condition of owning property of sufficient value to discharge all of one's debts.

Economic principles.

A super normal profit can only be made if there are barriers to entry creating a monopoly. Over time these tend to dissipate. Many conventional companies make a small profit moving from loss to profit many times over the years, but healthy companies will make a normal profit to enable it pay shareholders a dividend. Usually such companies will have assets which can be sold if liquidated. There is usually no defined life span on **fixed** assets (land) and a 50 year lifespan for buildings) so that temporary difficulties can be overcome by trading their way out. This is not available for wind farm assets due to their short life span. Land owners may not renew land leases and planning permission is required to upgrade. Residents who have experienced the effects will be determined to object. They will have evidence to back it up. Therefore many wind farms will have to be dismantled.

Examples of ordinary non wind farm companies for comparison.

Here is an **example** of a limited company without the complication of group involvement. It produces animal feedstuffs and has nothing to do with wind energy. It is well run and famous for the quality of its products and loyalty of its customers. It provides a benchmark against which wind farms can be measured.

Corby Rock Mills. Monaghan. No 51890. Accounts 2018 and 2017

Profit on ordinary activities **after** taxation. 2,7 million -------2.7 million

Fixed assets 5.8 million ---- 4.4 million

Accrued profits in the balance sheet 25 million ------22 million.

Debtors outweigh creditors by 3 million. This is an example of a healthy company.

Examples of groups.

The Kingspan Group is a well known multinational building supplier whose accounts are published online https://az750602.vo.msecnd.net/kingspan-live/kingspanglobal/media/results-centre/full-year-results-2018.pdf Net profit for 2018 was **335** million and the balance sheet shows long term liabilities at **1,221** million, four years profit will easily repay the capital sum. Its tangible fixed assets are close to **900** million and are not time limited. Dividends of 42% are being paid.

The Glanbia Food Group. Made a profit of **234 million,** had tangible fixed assets of **453** including property and long term liabilities of ***990*** which is not time limited Dividend is 26%.It is obvious the three sets of accounts immediately preceding comply with the fair value principle. We question if this is also true in the case of the wind industry where dividends are not being paid for generating electricity.

The Director of Corporate Enforcement, a repeat of Patrick Neary?

This part shows how the Director of Corporate enforcement was contacted about the failure of Mountain lodge wind farm to submit a set of accounts. His reply was that he will only intervene if a crime is committed. We show here that a crime is committed in accordance with the law,

Anyone who thinks this agency will intervene is making a serious mistake. Here we have a 6 billion Euro wind industry where serious issues are raised and nothing is done. The company's Act 2014 states that financial reports must give a **true and fair** view and comply with financial reporting standards. Section 291

says a P & L and balance sheet must be submitted. Section 352 and 353 of the Companies Act 2014 allows smaller companies to submit abridged financial statements. There must be a balance sheet and readers should note the balance sheet **must** include figures from the P & L showing profit or losses accruing. Certain notes must be included in the return.

Example: The Director's attitude to Mountain Lodge wind farm No 343257, Cootehill.

Years are **2016** and **2015**.

Actual called up share capital is 100 Euros. We repeat **100** Euros. So this large wind farm with dozens of turbines shows equity is only 100 Euros. The cost must be borrowed.

Next is the balance sheet. It is a complete blank. The only entry is the 100 Euros called up shares. There is no P & L account figure, there is no assets figure, there is no creditors figure, no debtors figure and no figure for long term debts. Val Martin wrote to the Director pointing out this with the intention of bringing about greater scrutiny of wind farm accounting practices generally and with the intention that he insists on compliance by all companies. The Director replied in writing that unless Mr Martin could point to the commission of a **crime**, he would not become involved. The upshot of this is that the Director of Corporate Enforcement is neglecting to carry out its functions when serious failures are drawn to its attention.

Irish Law. (relating to the mountain Lodge failure)

Under Irish criminal law there are two degrees of criminal law breaches:

1) A summary offence triable by the District Court without the option of a jury.

2) A felony triable in the higher courts with a jury, but in less serious cases triable without a jury in the District Court with the consent of the accused.

3) Some criminal offences are hybrid, so that the Director of Public Prosecutions can choose to try them summarily in the District Court or on indictment in the Circuit Court.

The common meaning of a crime is an offence triable on indictment. The Director's reply indicates that only **crimes** are investigated and not offences. This interpretation is legally a **nonsense**. Mountain Lodge failed to comply with Section 290, 352 and 352 of the Act.

Section 291 (9) clearly states that any company which fails to comply or any officer which fails to comply or defaults is guilty of a category 2 offence. This is

a hybrid offence carrying maximum penalties of a fine up to 50,000 Euros or 5 years imprisonment of both. The directors of Mountain Lodge have submitted a blank sheet, which can be a felony, (a crime). There are issues of Mens Rea (guilty mind) if a prosecution were taken and the appropriate measure might be a warning.
https://www.pearse-trust.ie/blog/categories-of-offences-under-the-companies-act-2014

It follows from this that complaints from members of the public to the Director of Corporate Enforcement will be ignored. Wind farm Companies could and have provided blank balance sheets and get away with it. We say the regulatory environment is hopelessly inadequate.

Section 12 of the Director of Corporate Enforcement Act 2001 sets out the functions as:

a) To enforce the Companies Act. b) To encourage compliance with the Act. c) To investigate suspected offences under the Act.

We **are not saying** every little deviation from strict conformity should end up in Court, we want the standard of compliance with the Act which shareholders, lenders, creditors and concerned citizens are entitled to be enforced. This is central to the entire concept of limited companies liability about which over 1,000 lengthy sections are enacted in the Companies Act. They might as well be a pop song.

The implications for Irish financial accounting probity are too obvious to itemize. It simply beggars belief and proves that the Director is failing in his duty to ensure financial statements give a true and fair view. This is precisely what Patrick Nyberg warned against and it's happening again.

We point out that long term debts owed by a company and reported in the balance sheet **do not include repaying share capital.** A healthy company must pay its borrowings (interest and principle) and **should** have enough over to pay shareholder's dividends to pay off all investment before the end of life of the project. Shareholders effectively own the company and if the company is worthless and they get nothing, it's their loss. They are entitled to know the accounts are true. It is vital to understand that lenders must be paid interest and the principle. Shareholders do not have to be paid anything, but if the company is wound up or sold they must be paid from the sale or disposal after creditors and taxation.

A lot of what we report here could be prevented if the Director did what he is paid to do, they have failed before, The Director should be asked to comment.

We now examine a number of operating wind farm company accounts obtained from the Company Records Office. The information provided is from the companies themselves and audited. A wind farm gets paid for the amount of electricity exported from the wind farm into the national grid, the meter runs in both directions and measures electricity flowing into and out from the wind farm. In a normal business operating costs of 70% to 80% would be acceptable and in these examples 76% is common. The difference with wind farms is that the capital costs are several times higher than normal businesses while production is pegged at 20% to 24% of the time. Manufacturing companies using expensive plant often operate a shift roster system to increase the output from this plant over a year. A wind farm cannot do this because it relies on wind speed.

John Laing PLC.

This is the famous British company (Later Laing O'Rourke) mentioned in Dominic Behan's famous song McAlpines Fusiliers. They invested in renewables in Australia, Germany and Glencarbry 29 MW wind farm in Co. Tipperary, Ireland. They differ from all other wind companies operating in Ireland in that there is no parent company to bail them out. They encountered difficulties with a grid failure in Australia, but in 2019 they reported that their German and Irish wind operations were making huge losses due to inadequate wind speeds. A report was carried in the Times of London and the Irish Examiner and for the first time in wind energy history, the word **"yield"** was used and it turned out to be too low due to low wind speeds, this proves our prediction of an overstated capacity factors was accurate.

https://www.irishexaminer.com/breakingnews/business/yield-hit-for-john-laing-wind-farm-in-ireland-as-wind-strength-weakens-945684.html

This video relates also. The profit on every 100 Euros invested was 26 cents. A disaster. The accounts show they received a 1.4 million Euro payment from the PSO levy, this is not the standard practice because the payments should be made to suppliers and not generators. It could amount to illegal state aid to industry. Company accounts number is 470914. It's profit for the year ending 31/3/2018 was 659,000 on an investment in assets valued at 70 million. It will take 106 years to pay off the capital cost and the turbines will be dismantled in 20 to 25 years. Laing is cutting its losses, but no one else is.

tps://www.youtube.com/watch?v=J0Au0ZxAlyU&t=19s

The value of this company fell in one year from **£175** million to **£35** million pounds sterling due to renewables failing to perform. While Laing is divesting from Irish wind and selling on its wind farm, more wind farms are being built.

Gort/Derrybrien wind farm company number 9843001

Built in 2003, capacity 60MW. Owned by the ESB this is the wind farm that resulted in EU Fines of 1.7 million Euros in Ireland for failing to assess the potential of peat sliding from the site into the local village.

P & L account.	**2017**	---------- **2016**
Turnover	5,506,000 ----------	5,013,000
Cost of sales	5,863,000 ----------	6,344,000
Impairment charge	**(10,172,000)**	
Gross loss	(10,172,000) ----------	(1,331,000)
Administrative expenses	(883,000) ----------	(889,000)
Operating loss	(11,412,000) ---------	(2,200,000)
Interest payable	(112,000) ----------	(155,000)
Loss on ordinary activities before tax	(11,524,000) ------	(2,375,000)
Tax rebate on loss	1,388,000 ----------	284,000
Loss for financial year	**(10,136,000) ---------**	**(2,091,000)**

Balance Sheet.	2017 and	2016
Tangible fixed assets	19,641.000 and	29,308,000

The cost value of assets on 31st December 2017 was 64,422,000 with an addition of 3,732,000 total cost was **68,154,000** which was reduced through depreciation to 19,631,000. It is depreciating in value by about 10 million per year for 2017.

The impairment charge of **10,172,000** is a recognition that the company cannot overcome this shortfall and declares it in its accounts. For this to accrue, there had to have been losses dating back many years. The wind farm is in a good high westerly location.

Notes to the account describe the debt forgiveness by the ESB as being at an ***"Arm's Length Basis"*** in our opinion this effectively means the ESB has written

off this debt to the tune of **10.1 million** Euros and absorbed it themselves. It is a hidden charge to consumers and an attempt to hide the fact that this company is insolvent. This adversely impacts on the ESB's own financial position and means there is no hope of any saving elsewhere from lower fuel costs, efficiencies or improvements being passed on to consumers.

These turbines are approaching obsolescence and will have to be removed within 7 years at the latest. The carrying amount is 67 million.

Comment: Gort wind farm is insolvent, it is being carried by the ESB as a charity with a pending loss of 67 million Euros all to be loaded on the hapless taxpayer and consumer. It's crazy.

Woodhouse wind farm County Waterford. No 3399998 20 MW began to generate in June 2015. It is owned by the ESB and priced at 33 million euros new.

Accounts are available for	**2017**	and	**2016**
Profit	642,000	--------	222,000
Book value of assets	28,955.000	----------	30,273.000
It's financed by a loan from the ESB	16,593.000	-------- ----	18,106.---
Called up shares	9,525,000	----------	9,525,000

No dividend was paid.
Average profit over each of the two years was **432,000.** per year

The loan is being paid off first which will take 16,955,000/432,000 = **38 years**. By this time it will have been decommissioned for 20 years. Shareholders can never be paid.

If we take the better profit year of 2017: 16,955 / 642 = **26.4 years.** It will be gone by then also. Woodhouse wind farm is insolvent. The ESB owns 300MW of wind farms as subsidiaries. Accounts are not available for all, but if this one is typical, all are insolvent and as their life span expires the ESB will have to write off the capital cost. Woodhouse is a charity and not a going concern.

Geartnanane wind farm Bailieboro Co, Cavan No 338335. is a 15 MW facility built in 2004 by Airtricity. It was bought by SSE. Two turbines were fitted with new gearboxes in January 2019. These would cost several hundred thousand Euros. The notes give the facility a useful life of 20 years (ending in 2024).

Accounts are for **2018** and **2017**

Its revenue averaged 2.3 million and after paying expenses and tax it made a profit as follows each year 783,000 and 393,000

Average profit when all was paid = **588,000** each year over the 2 years. It's one of the better ones.

Total owed to lenders etc at the end of 2018 was **2,692,000** Euros. This does not include the two new gearboxes in 2019. We estimate the cost at at least 345,000 increasing total owed **3 million.** To be paid from an average annual profit of 588,000 will take 5 years and 2 months.

The book value of the assets is given at 9 million, but if this valuation is overstated, it brings into question its solvency. We checked back to 2009 when it made a profit of 744,000 and 2010 when it made a profit of 232,000. It paid interest in 2010 of 783,000. This facility is on an excellent site.
Parent company SSE issued a profit warning in September 2018, its share price fell 8%.
https://www.sharesmagazine.co.uk/news/shares/how-safe-is-sse-dividend-after-weather-blows-hole-in-profits

We have checked the accounts for profits for 2008. 2009, 2015, 2016, 2017 and 2018 = 3,561,000 or an average of 593,000 Euros each year. The life span is 20 years, so 593,000 X 20 = **11,860,000** It cost **17,400,000** million. So how can it ever repay its cost? A note to the accounts states "*The company has net current liabilities and is dependent on on-going financial support* from a fellow group company. The financial statements have *been prepared on a going concern basis which assumes adequate finance will be available for the foreseeable future. A fellow group company has given an undertaking not to demand repayments of monies advanced to the company for the foreseeable future"*

Meentycat Wind Farm Donegal No 338333. 72 Mw capacity built in 2004

Cost of its assets is given at 93 Million. Net book value in 2017 is given at 44 million. Its average profit over the years 2017 and 2016 was 1.3 million per year. 44/1.3 = 33 years to repay its capital cost. Life span is given at 20 years which expires in 2024. It will be the year **2050** when it's all repaid. In one year it owes about 1 million more than it is owed. Notes say it was given an undertaking by a fellow group company not to demand repayment of monies owed to it for the foreseeable future. It's in a good location. **It's insolvent**. Run as a charity.

Company number 339206 Teevurcher Wind farm, Kells North County Meath. This facility is located in the village of Tierworker, Kells Co.Meath on the Cavan Meath border. It was granted planning permission by Meath Co. Council and was not appealed to An Bord Pleanala. The turbines are located within the 500 meters

set back guidelines, some as close as 370 meters to turbines. There are complaints of the effects of shadow flicker and noise.

It was purchased by National Toll Roads soon after commissioning which proves the business model of build and sell on.

Profit and loss account to year ended 31st March 2018.

Total comprehensive loss for the year (**38,328)**

Balance sheet. The fixed assets are 17 million which is indicative of the cost of this comparatively small 5 turbine wind farm.

Debtors and cash amounts to nearly 2 million.

They owe 7.7 million in one year and 11.6 million after one year giving total debts of 19.3 million Euros. This debt is justified by the fact they own the turbines valued at 17 million and 2 million of other assets. It raised about 400,000 share capital which is low so it has a high borrowings to equity ratio. Assuming the facility lasts a generous 22 years it will need to repay 19.3 million Euros 19.3 / 22 = 877,000 per year. Yearly profit/losses figures are not available. The company already admits the noise is above planning limits and nothing can be done to abate it. There is no provision for potential claims by residents as required by law. The law says provision must be made for such extraordinary items as legal claims.

Garvagh Glebe wind farm, County Leitrim. No 459034 2017 and 2016

Loss on activities after tax refund. 2017 = **(3.1 Million)** 2016 = **(935.000)**
Balance sheet .
Creditors falling due under one year = 7.2million Creditors falling due after 1 year = 45.2 Million

It can be seen the income can never repay the amount due and the only way is to sell the company on at a profit to an unsuspecting buyer. So why are there buyers prepared to buy such a guaranteed loss maker?

Lisheen Wind Farm Co. Tipperary. Commissioned 2009. Abridged accounts to 31st December 2017.

The assets are valued at **33.6** million at year end.

They have cash and debtors (money owed to them) of 7.4 Million which is normally received later.

In the current year they owe **3.6 million.** They will owe **37 million** after one year and the company made a loss of (**275,000)** in 2017 and (**559,000)** the previous year. The exact nature of the money owed to this company is not known, but it can be seen that with losses totalling over two years of **830,000**

only a massive increase in wind speeds or a massive increase in the price of electricity exported can allow it to pay back its principal capital.
As future profits are unlikely, this company is insolvent, yet there is nothing in the accounts to reflect this. This is what the Companies Act and Financial reporting standards under it are designed to expose, but it's all ignored.

Mainstream Renewable Power.

This large company was founded and still is chaired by former Bord Na Mona chairman Eddie O'Connor. It is in the business of developing wind farms in Ireland, Chilli and South Africa. It submits group accounts as head of its own and subsidiary companies. It was called on by Raragh developments to help build the 10 MW Raragh wind farm.

Accounts are for **2017** and **2016**

Operating losses **(12million**) and **(13million)**

It has large financial interests in play which alter the above as follows. Group loss for the year (5 million) and (22million)

The largest item in its assets is inventories at **139** m and **109** m
It is presumed these are wind farms components, tools used to repair them and perhaps expertise in installing them etc.
Restricted cash (held for a particular purpose) **44 m** and **18m**

Total liabilities (159 m) in 2017 and (138m) in 2016. It is obvious that their annual losses have been accruing at the rate of about 13 million a year. 159/13 = 12 years. The year 2017 less 12 = 2005. It seems it has lost 159 million euros since it was set up amid great fanfare in 2008.

The company itself holds assets which are mainly investments in subsidiaries of **170** million which in turn raises the question of what the real value of these are. It owes **222** million.

It's part funding Raragh wind farm costing **30** million euros, it is writing cheques and they are being honoured. Where the money is coming from is a mystery. The health of this company is dependent on the real value of its assets. Kingspan and Glanbia have assets In property and equipment, this company's assets are less well defined. The losses bring into question the going concern situation. The accounts claim this company is a going concern without any source of revenue to cover its losses and liabilities. This differs from Gartnaneanne and other companies where accounts explain that the directors file the accounts on a going concern basis because guarantees were given from parent companies not to demand payment of the purchase price. The wind developer Element Power could not continue when there was no prospect of making money due to refusal/delays of planning permission. The exposure for Mainstream is much larger than Gartnaneanne.

Greencoat Renewables. Their subsidiary companies performance.

Company number 9954446 Greencoat owned Monaincha wind farm.

Accounts are available for **2016** and **2015** Here are the basics.

P & L account
Loss/profit for financial years **(1,981,720)** loss for 2016 and **555,665** profit for 2016. Over the two years its a net loss was **(1,426,000.)**

The balance sheet shows non current liabilities of **63, 289,985.**

Monaincha Wind Farm is **insolvent.** We surely don't have to go any further.

Greencoat owned Knockacummer, a good example.

Knockacummer wind farm Co. Cork. Built by Bord Gais in 2013, 87 MW believed to be increased to 100 MW per Eirgrid's publication. It was bought by Canadian Company Brookfield and it was in turn bought by Greencoat Renewables at a handsome profit. It was originally owned by Bord Gais and was sold on on directions of the EU as part of the bank bail out.

P & L account

This company made a loss of **3.6** million in **2017**, but it received a debt forgiveness of **6.9** million from an intercompany loan which allowed it to declare a profit of **3.3** million.
It made a loss of **4.4** million in **2016** which when added to its real loss in 2017 gives its average losses = **3.45** million per year. 2018 was a bad wind year so it can be assumed Greencoat is facing a bill for 2018 of 3.45 million euros to accrue forever.

The balance sheet shows debtors owe the company about **10** million Euros.

Liabilities within one year and more than one year are 5.8 + 135.7 = **141.2** million in total. Less creditors of 10 million = **131** million rounded off. It has used 6 of its 20 year lifespan leaving 14 more years at best.

The company is funded by shareholder funds of only 10 million indicating high leverage (borrowing). Actual borrowings are not given, but 6.1 million was paid on interest on borrowings indicating heavy borrowing to equity (share) ratio.

It can be seen that the **131** million Euros can never be repaid from recurring losses and this company **is insolvent.**

The company was bought over by Greencoat Renewables recently.

It appears that the debt forgiveness of 6,9 million, was just window dressing for the sale and it was recouped in the generous purchase price.

Greencoat owned Ballybane wind farm No 306647. Is 20 MW facility located at Ballylickey, Co. Cork and connected in 2008.

Accounts for **2017** and **2016**

P & L account : There is no P & L account, but the situation is stated on the balance sheet.

Profit of **144,410** for 2017 and **66,076** for 2016

Therefore the total profit is an average of **105,203** annually.

It owed 9 million in 2018 and 38 million after one year = 47 million Euros.

47,000,000 / 105,203 = 446 years. It will take **446** years to repay the capital cost and this wind farm has a life span of no more than 20 years with 10 already expired.

It can be seen that this is a hopeless case of insolvency. It did make a profit, but the capital cost is so enormous that it will be the year 2465 when it is paid off. This is the worst case so far.

Greencoat owned Killhills Windfarm. 36 MW in Co. Tipperary.

Account for **2016** and **2015**

Loss (285,000) and (456,000)

Total loss over two years = **(741 ,000)** Euros.

The company is owed 1.6 million at year end.

In less than one year and in more than one year it owes 44.6 million Euros less debtors = 40.75 million Euros.

This company is not a going concern and can never repay its capital sum. **It is insolvent.** How is Greencoat going to pay company debtors to the tune of **370,500** for each year of operations? Lenders to the company will have to be paid their money and can sue to wind it up. So Greencoat has acquired another permanent loss maker and will soon have to get its cheque book out.

Cloosh Valley wind farm No 845334 is Part of Galway wind park is flagged as the best performing wind farm on the Island of Ireland. Its capacity is 108 MW. It is 75% owned by Greencoat Renewables. It cost 280 million Euros. It was commissioned in September 2017 and accounts are to March 2018 for 7 months. Full yearly accounts are not yet to hand.

Its current assets are 20.8 million which is money owed to it and cash in hand.

Its current liabilities are about the same at = 20.3 Million Euros. They effectively cancel each other out. It is paying 13.3 million on loans indicating high borrowings. There is 91,000 share capital which is low.

Its long term liability is 173.5 million Euros. In 2017 it made a loss of 502,000 Euros but the situation improved in 2018 with a profit of 5.8 million after tax.

173,500,000 / the profit for 2018 = 5.8 million = 30 years to repay. This wind farm will be gone in 20 years leaving 10 more to pay with no income. Full year accounts will likely have more income. but also more expenses. It is not a good example because the accounts are only for part of a year.

Greencoat owned Glanaruddery Wind Farm is 36 MW capacity which became operational in the last quarter of 2017. It's too early to analyse the accounts.

There is no reason to expect it will return better profit than other mature wind farms.

Greencoat owned Garrabereagh Wind Farm Co Cork is 9.2 MW capacity.

This wind farm was due to commence generation in July 2018. It is too soon to judge its performance. A search of the Companies Record Office did not yield a set of accounts.

Greencoat owned Raheenleagh. 35.2 MW in Wicklow. It became operational in Sept 2016.

The first years accounts should show a healthy outlook as the plant is new. The Directors declared the load factor to be 42% in 2017 and 38.8% in 2018. The revenue accurately reflects this claim. To achieve this, the wind at the Wicklow site would have to blow at least 30 miles per hour in 2017 for 21 weeks in the year and in 2018 for 20 weeks. This factor beats anything ever achieved in Ireland or Scotland where the average factor is 24% and such wind would be a newsworthy item.

In 2018, there was virtually no wind and very little wind energy generated between 25th May and the 25th September. Eirgrid's own dashboard showed this and we can vouch that we watched it very closely. There could not possibly be a load factor at Raheelagh wind farm of 38.8%. If this were the case, all the forgoing accounts for the year and for previous years would be wrong and it must be borne in mind that Eirgrid confirms that the factor for 2018 was only 20%. How can this be?

John Dooley investigated. It transpires that Raheenlagh wind farm is of 35 MW capacity, but it is only permitted to dispatch half of this (17MW) into the grid. The reason for this constraint is not known, but we assume it is inadequate cabling or a flaw in the connection contract. In periods of good wind speeds, sales are limited to half capacity (about 17MW). As wind speed drops overall output per turbine drops, but more turbines are allowed export at lower output so that at a certain point 17 MW is maintained.

Notwithstanding this, the amount due to be paid in the long term is 54 million and the profit was 1.7 million. It can be seen that it will take 31 years to pay it back and the wind farm will no longer be operational after 20 years. The output will degrade with age and expenses will increase. This wind farm effectively has 35 MW capacity but has only half the normal market. Its capital costs are double its market. In low wind speeds it can sell more than a standard wind farm, but its costs are twice as high. It can never re-pay its capital cost.

Greencoat owned Tullynamoyle wind farm was commissioned in February 2018

11.2 MW located in County Leitrim.

Accounts are not yet available.

Greencoat owned Lisdowney. No. 490019 Co Kilkenny 9.2 MW capacity built in 2010, bought in 2018 by Greencoat. Accounts before sale:

In 2017 it owed 13.7 million in more than one year. It had accrued losses of 274,279 in that same year. It was hopelessly insolvent and is now owned by Greencoat having paid 22.5 million Euros for it. If a private individual was left this facility in a will he would have to refuse to take it, otherwise it would bankrupt him for life. Yet 22.5 million was paid for it. It's crazy.

Summary of Greencoat's wind farms performance to date.

All these are selected at random based on availability.

Knockacummer: Insolvent, it had 6.9 million of its debt written off by its parent in 2017.

Ballybane: Hopelessly insolvent.

Killhills: Is losing 370,000 Euros a year and can never repay its 40 million capital cost.

Cloosh Valley: Accounts are only available for part of a year for this new facility. They indicate the capital sum cannot be repaid.

Raheelagh: It is showing a load factor of almost twice the average elsewhere in one of the calmest years ever known and yet it will take 31 years to repay its capital cost by which time it will be gone.

Lisdowney: Hopelessly insolvent

Overview of Greencoat Renewables.

Without this company the Irish wind industry would have already collapsed.

It is in the business of buying wind farms and is actively seeking investment by way of shares from any source. They seek investment from pension funds. Their wind farms can never hope to repay their capital cost. It's our view that investors will lose money on Greencoat. **The Irish Strategic Investment Fund is one of its main shareholders with a 76 million Euro stake, Newton Investment Management 16.7 million**, **Irish Life 15M, Allied Irish Bank 15. Investec 13.2 m, Close Asset Management 9.8 m, Farington 9.8M** and **M & G Investment Management 9 M.** Total 164.5 million. If our fears are correct there

will be a serious deficit in pension funds when they fall due to be paid. It will take 250 years to repay the capital cost of the wind farms we identified which is 10 times the maximum lifespan of any asset.

Wind farm companies with high borrowings are selling to Greencoat in what is effectively a debt for equity swap. Existing lenders are paid using equity from new investors. Its balance sheet is published on its web site
http://www.greencoat-renewables.com/~/media/Files/G/Greencoat-Renewables/documents/reports-publications/2019/Greencoat%20Renewables%20Plc%20Report%20%20Accounts%202018.pdf

The value of its assets is worded as follows.

"*Non current assets Investments at fair value through profit or loss **757,399.000** for 2018 and **316,796.000** for 2017."* How can this be repaid? We are dealing in billions here! Their accounts show they have **400,000** Euros in borrowing proving they are avoiding debt in favour of equity which they don't have to repay. Whereas the wind farm they are buying are the opposite.

In turn Greencoat Renewables in their own accounts managed to show income of 56 million Euros through a fair value adjustment of 46.7 million Euros. Fair value adjustments have been used in the banking industry to boost the balance sheet. Greencoat have decided that the value of these wind farms increased by 46.7 million euros which they have recorded as income. They are able to show a large profit when in fact they made a loss. In theory, fair value means assets can be valued at the market price rather than the cost price. If a turbine maker decided to double the price of its product, existing installed turbines could double the values of its turbines.

Wind companies could adjust the value of their fleet upwards based on the new cost. Yet the income from these re-valued wind farms will not change. We say accounts citing such re-valuations do not give a true and fair view as legally required notwithstanding that fair value adjustment is legal under the law.

This was made legal just as the Irish builder/banking boom was developing about 2005. but anyone can see how this loophole allows this industry to record high asset valuations which reflect in increased income when in fact no such real effect took place.

In the book Bean Counters by Richard Brooks published by Boomerang Books ISBN 978178649 0292 published in 2009, the author attributes the fair values accounting as one of the key causes of the world wide credit and banking bubble. In the Irish Times of the 22nd May 2019 Greencoat executives are reported as giving glowing reports of their company's performance. The adjustment of their asset values permits them to report values which have no basis in reality by a practice which was unlawful for most of the history of accounting. The hype and positive news it conveys is fooling investors,

governments, communities and consumers into supporting what is actually a **pyramid selling scheme** which is causing extensive damage to the environment.

One already gone under. Gaelectric Limited No 418730, accounts for 2016 -2015.

Operating loss: **(1,595,000)** for 2016 ------- **(6,896,000)** for 2015.

Finance costs **(11,099,000)** for 2016 ------- **(3,387,000)** for 2015

Loss on ordinary activities before tax (**24.8 million)** for 2016 -- (**20.3 million) for 2015**.

It valued its property, plant and equipment at **301** million.
Here is what it owed on loans and borrowings = **333** million for 2016, **193** million for 2015 and **95** million for 2014. There was 24 million in equity with some well known Irish business people named as big losers. The Auditors did not comment on whether they considered the company a going concern in the accounts which the Act required them to do. This is another failure by the regulator. The American lender Star Capital is suing the former CEO Brendan McGrath for about 10 million dollars of personal guaranteed debt. The fact that Mr McGrath left himself exposed for such debt shows he actually believed his ventures were viable. This shows neither he or any other CEO can be trusted to assess the viability of their own ventures and cannot be trusted to manage pension funds from licenced pension fund concerns.
https://www.independent.ie/business/irish/energy-companies-line-up-to-prise-off-gaelectrics-assets-36617776.html

A portion of the National Pension Reserve fund went to Gaelectric. The fund is now gone altogether and has no offices. We say that this is where every wind farm company is heading unless there is a bailout soon.
The only difference with this company is that there is no parent to step in but it is possible Greencoat will do so amid much hype and fanfare. Greencoat is the one to watch.

Glencarbry Wind farm No 470914 Co. Tipperary.

Owned by John Laing PLC, world renowned British construction company it is a new wind farm with its first full set of accounts for year to 31st March, 2018. Since then the parent company announced it is exiting all renewable energy activity and selling off all such assets. Glencarbry is therefore expected to come on the market soon.

Turnover	5,863,336
Cost of sales	(1,119,356)
Gross profit	4,743,980
Administration expenses	(2,029,521)
Operating profit	2,714,459
Loan Interest	(2,056,141)
Profit before tax and after tax	**658,318**

Current and long term liabilities **70,000,000 / 658,318 = 106 years. Maximum life is 23 years.**

Comment, **this company is insolvent.** An article published in the Times of London and the Irish Examiner shows John Laing checked performance to June 2019 and will have to write down its Irish and Germany wind assets by 55 million Euros which equates to a reduction in the value of Glencarbry by over 8 million Euros. They wrote down the value of their Australian renewable ventures by £66 million Sterling. The share price dropped, lowering the value of the London based company from £175 million to £35 million Sterling due to renewables alone.

https://reneweconomy.com.au/john-laing-takes-120m-hit-on-renewable-projects-from-marginal-loss-factors-36891/

https://www.thetimes.co.uk/article/wind-levels-are-blow-to-john-laing-g8xwqv3ns

https://www.irishexaminer.com/breakingnews/business/yield-hit-for-john-laing-wind-farm-in-ireland-as-wind-strength-weakens-945684.html

John Laing PLC is the company mentioned in Dominic Behan's song **McAlpine's fusiliers** and they have learned the hard way that investing in wind energy is futile.

The United Kingdom.

In 2016 the British government banned all subsidies on new wind farms.
https://www.bbc.com/news/uk-politics-33227489
UK Company No. 3254615 Wind Prospect Limited, has been involved as a partner in developing wind farms in the UK and Ireland, it's name appeared on many planning applications. Its profit and loss account shows a loss of £13 million, its balance sheet shows it owes £13 million.

In the Sunday Telegraph dated the 28th July, 2019 Professor Gordon Hughes says the price of electricity will have to be radically increased because wind companies totally underestimated their operating costs.
https://www.thegwpf.com/electricity-bills-could-double-to-bail-out-new-wind-farms-report-claims/

In March 2020 the British government announced it would reinstate a subsidy scheme for on-shore wind.

Bawnmore wind farm Cork. No. 471912

It made a 144,000 Euro profit, but could not repay a 3.2 million debt. It is insolvent and being propped up by other group companies.

Article in the Irish Times newspaper dated 17th February, 2020 in regard to Green Energy Company Limited shows the huge losses being suffered by wind farms are being noticed in the print media. It conforms our finding herein by another source.

https://www.irishtimes.com/business/energy-and-resources/green-energy-jv-sees-losses-top-1m-1.4174305

Gortahile wind farm Co. Laois. 20 MW. It was bought by a Dutch Company for 40 million Euros but later sold to Greencoat renewables for an undisclosed sum. Hiding the price is a defining moment because traditionally such deals were done amid a fanfare of celebration. Reality may be beginning to bite.
https://irishenergyblog.blogspot.com/2019/10/greencoat-wind-farms-part-1-gortahile.html

Boggereagh Wind Farm (article in Irish Times).

Article in Irish Times.

https://www.irishtimes.com/business/energy-and-resources/green-energy-jv-sees-losses-top-1m-1.4174305

Video on Val Martin's Youtube channel , presenter is Val Martin, the co-author of this dossier.

https://www.youtube.com/watch?v=pihhzMQY8tE&fbclid=IwAR3l0JIsW5eLnT1ZbTts51hzTBRQPDvp3RN96teSjhBXCM8UCqW6Zbxi1yc

Part 7: Conclusion:

The Irish people and its government may not realize it, but they are lucky to have had a dedicated group of activists throughout the country to retard the planning process for wind farms. The industry is insolvent these past several years and survived by clinging to parent companies surplus cash. If this continues, the parent companies will themselves suffer a collapse providing only wreckage for wind farms to cling to. The John Laing experience, the Gaelectric and Bord Na Mona experience prove there is no way out except through the taxpayer for wind energy. Home electricity generation is an alternative already catching on with businesses. Government does not want to admit is was wrong.

It can be seen that there is an underlying plan to keep insolvent wind farms out of liquidation by any means possible. Parent companies are carrying them along for charity. Relaxations in the law regarding the financial management and reporting of limited companies are being used to the full by directors. This includes fair value adjustments of asset values and loose regulation. But even where the law is breached, nothing is done by regulators. The first refuge of distressed companies is the parent company such as the ESB National Toll Roads and SSE. Strangely Eirgird does not own any wind farms notwithstanding that it promised 32.5% factors. Where failing wind companies don't have a parent to carry them on, Greencoat is there to intervene to exchange debt for equity. Greencoat itself is on shaky ground. It has (400,000) Euros borrowing of its own to repay and it will soon face the bill to forgive the accruing debts of Knockacummer, Ballybane, Killhills, Lisdowney, Cloosh Valley, Glenaruddery, Ballerbereagh and Reheelagh. Meanwhile it will be getting approaches from other distressed wind farms to buy them out. We will continue to monitor Greencoat. It has Irish investment of 164 million Euros, but claims total assets of ¾ of a billion. One can only wonder where this came from and consider the possibility that investment managers have access to colossal financial resources. Deutcshe Bank is in trouble with 49 trillion Euros exposure in derivatives.

It cannot continue to revalue its assets upwards indefinitely in order to show a book profit, Investors considering investing would be crazy to do so. Whether it is ethical to take money from private investors is questionable, but if this money is being taken from the pension funds of workers it certainly is not ethical, **it is scandalous.**

Ireland's 6.5 billion wind industry is missing one vital ingredient, adequate wind speeds to give adequate yields. Companies measured it at each site before they started, so they knew right well. Their business model didn't need any wind, just hype. We could see at least another 1,000 MW of wind installed and more fossil fuel plant to balance it. Ordinary domestic and business electricity bills are paying for it, but not enough to make them profitable. Companies are insolvent and can never repay their capital costs. Every possible intervention is and will be used to put off the evil day. How long more can parent companies hold out themselves? This will end in grief one way or the other. How will banks cope with a 6.5 billion hole in their loan book. Economist Colm McCarthy predicted NAMA for wind farms. It's just the Celtic tiger reincarnated. Our government learned nothing, determined to ignore those trying to alert it. If it can happen with energy it can happen with anything. It's now over to public representatives to investigate or not and seek responses from the various agencies involved. There are no shortage of accountants in the civil service. We have made our contribution, it over to them.

Since this was written, we learned from an RTE Primetime programme on the 5th June, 2019 that the ESB has been allowing hundreds of thousands or litres oil to leak into the ground and waterways of Dublin for decades, while we see here that they handed 10.1 million Euros to Gort wind farm which itself have environmental issues. This calls into question ESB's priorities. The financial press has in the past few days reported severe problems at the German Deutsche bank and that there are indications of an impending economic slowdown world wide. Questions are being asked about the real value of hedge funds and derivatives which are a major component of the world banking system. The accounts of Mainstream Renewable Power show they rely heavily on derivatives. If the buccaneer financial management approach we have uncovered here extends into other areas of the Irish and international business world, then there is no real value underpinning any of their assets and at the first signs of a financial downturn .the real value will be tested. We won't make predictions and hope it does not come to that extreme. We hope the powers that be will look into this and defer back to us but if an economic down turn dies come about, the waste on useless wind energy may be exposed anyway. Then it will be too late. . There is talk in the financial press of Deutsche bank failing.
The above was updated in March 2020.

Additional information inscribed on the 24th May 2021.
Glencarbry wind farm owned by John laing PLC was sold to Greencoat Renewables for 70 million Euros. The Irish Government has introduced a Community Benefit Scheme for wind farms. This is to encourage investors to buy shares. Some of these schemes do not afford voting rights others do. This is an insidious corrupt attempt to dump loss making wind farm onto unsuspecting people with money. Many could be retirees, nurses, soldiers, Gardai, factory workers who receive a gratuity amounting to 60 to 80 thousand Euros. Richard Bruton was on radio pushing it. They can never get their money back from income. It is a pyramid selling scheme, a Ponzi scheme. Under the Companies Act those promoting this are legally obliged to inform potential investors of the insolvency and under the Theft and fraudulent offences Acts it can be a criminal offence not to do so. If I get evidence I will make a complaint to the Gardai. Signed: Val Martin

Val Martin's

John Dooley

Owen Martin.

References.

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https://www.telegraph.co.uk/news/politics/2910739/Wind-farms-fail-to-deliver-value-for-money-report-claims.html

http://epaw.org/echoes.php?lang=en&article=n612

https://www.youtube.com/watch?v=_WeIXkKRRVM&t=248s

https://www.wind-watch.org/news/2014/01/13/german-wind-farm-operator-prokon-warns-of-imminent-insolvency/

Page 24 and 25 of this relates https://docs.wind-watch.org/EirGrid-WindImpact-Main.pdf

This article which is pier reviewed advises investment in the re-conditioning of wind turbines after they wear out. The fact that the previous investors did not recover their investment does not appear to have occurred to the authors.

https://budgeting.thenest.com/can-invest-windmill-energy-farms-23327.html

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News added in June 2021.

This article on threatened Blackouts in California shows that blackouts are threatened. The state has large amounts of renewable energy. It shows the prices. Ireland's electricity price is 26.7 Euro cents. The US average is 10.66 cents, they are higher in California.

Blackouts Loom in California as Electricity Prices Explode (dailysignal.com)

A new problem to emerge is data centres. These use huge amounts of electricity and it was claimed it could be generated by wind. That has not worked out. It is certain date centres will consume 25% of electricity in the short term and 35% in the long term. It is set to overtake agriculture and while farmers are being told to de-stock to reduce co2, the government is inviting data centres to replace them. Brid Smith TD has said data centres are the elephant in the room of the transition to renewable energy. The storage electronics use electricity and heat up. They are cooled by electric fans blowing air through them. Bitcoin is a very heavy user of electricity. It appears that governments plan always was to increase electricity usage to such a point that everything will eventually be needed. They don't seem to have factored in the cost to data centres for Ireland's very expensive electricity. How can companies afford it.

Data centres and emission targets (irishtimes.com)

Ireland faces data centre challenge to power demand | NOT A LOT OF PEOPLE KNOW THAT (wordpress.com)

Eirgrid during a zoom meeting on the 5th May 2021 as part of its public consultation said they will export surplus electricity from wind farms to Britain and France raising the question of whether it is all for the benefit of the British and French people.

They are also asking Irish people with money to invest in community wind farms. They said they already had it costed, We can find no figures. The plan for 70% renewables consumed without saying how. Many people are at risk of losing their savings. One scheme advertised gives no voting rights to shareholders.

That is it for now. Having checked out the history of Ponzi schemes, There are a few on line. This one is by Patrick Bolye

Top 10 Craziest Ponzi Schemes - Bing video

A common factor in all of them was the police deciding to investigate. A good Ponzi scheme needs a good cover story. How many Ponzi schemes happened but no police investigated.

29th June 2021.

Val Martin