Submission on Galway County Development Plan 2022 - 2028 Amendments

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1 Introduction

Wind Energy Ireland (WEI) welcomes the opportunity to make this submission on the draft Galway County Development Plan 2022 – 2028 (the Draft Plan).

This submission primarily relates to the draft Galway County Council Local Authority Renewable Energy Strategy, which forms Appendix 1 of the Draft Plan, and Appendix 4 of the Draft Plan, the new Landscape Character Assessment for County Galway

1.1 County Galway Local Authority Renewable Energy Strategy

Galway County Council is to be commended for preparing the Local Authority Renewable Energy Strategy (LARES) that forms part of the Draft Plan.

WEI welcomes the overview and context provided at the outset of the LARES in which it is stated that "to achieve County Galway's renewable energy potential in the coming years, it will be important to develop clear unambiguous policies objectives. These will help ensure that such developments are suitably located, economical and sustainable in the long term."

WEI also welcomes the statement in the LARES which states… "the key overarching rational for this LARES is the pressing national and international need to address climate change; In particular, the need to transition to the low carbon economy. In this respect, the National Climate Action Plan sets out several targets relating to renewable energy, and it is through this LARES that County Galway's contribution to these targets will be outlined."

Changes to various Government renewable energy policies in recent years has now put planning permission as the critical first stage of any renewable energy projects. Only when planning permission is secured can a project now apply for a grid connection to export the energy to the national electricity grid and identify a route to market to sell the energy that will be generated. Therefore, clear and supportive planning policies for wind and all renewable energy developments will be required to ensure we meet the challenges of addressing climate change and decarbonising the Irish economy over the next decade.

With County Galway's significant area, its significant wind energy resource and good electricity transmission infrastructure, Galway needs a progressive and ambitious Renewable Energy Strategy as part of its new County Development Plan with clear and supportive policies and ambitious targets to support further wind energy development.

1.2 WEI and Wind Energy in Ireland

WEI is the representative body for the Irish wind industry, working to promote wind energy as an essential, economical and environmentally friendly part of the country's low-carbon energy future.

We are Ireland's largest renewable energy organisation with more than 170 member companies who have come together to plan, build, operate and support the development of the country's chief renewable energy resource.

Ireland has just over 300 operational wind farms[1], which represents an investment of over €7 billion, regularly powering 65% of Ireland's electricity needs. The wind energy industry also supports 5,000 jobs and annually pays more than €45 million in commercial rates to local authorities[2]. We are a country with enormous renewable energy resources and are world leaders at incorporating onshore wind into the national grid.

Renewable energy provided 43 per cent of Ireland's electricity in 2020, with over 38 per cent of this coming from wind energy[3]. This is the highest share of electricity being provided by onshore wind in Europe, and this is expected to rise as we decarbonise our electricity system. In 2018 wind energy avoided 3.1 million tonnes of CO_2 and cut €432 million off our fuel import bill[4] demonstrating the huge contribution that onshore wind is making to climate action.

Wind energy decarbonises our electricity supply, cuts our energy import bill and drives down wholesale electricity prices. To achieve this, Ireland has built just over 300 onshore wind farms, mostly since 2003, with a combined capacity of approximately 4,300 megawatts (MW) (see Fig. 1 for historical growth of wind) and over 2,500 wind turbines. Even though these wind farms are supplying Ireland with the highest share of onshore wind in any EU electricity system, the resource in Ireland is so large that Ireland's turbine density is relatively low by other EU standards. Due to a delay between the end of the REFIT scheme and start of the RESS scheme, only c.135MW was installed during 2020.

Five other EU countries have a higher number of turbines per square kilometre than Ireland, as shown in Figure 2, suggesting there is still potential for further growth.

[1] Based on EirGrid generation reference numbers
[2] Economic impact of onshore wind in Ireland - KPMG - https://windenergyireland.com/images/files/economic-impact-of-onshore-wind-in-ireland.pdf
[3] http://www.eirgridgroup.com/newsroom/electricity-consumption-f/index.xml
[4] https://www.seai.ie/publications/Energy-in-Ireland-2019-.pdf

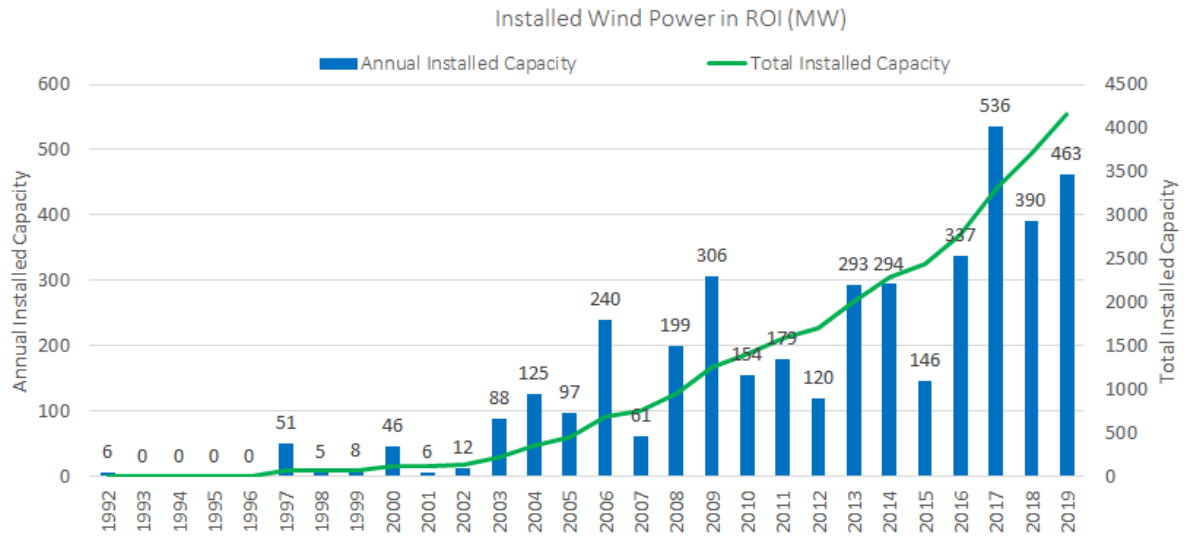


Figure 1: Installed capacity of onshore wind in Ireland since 1992.

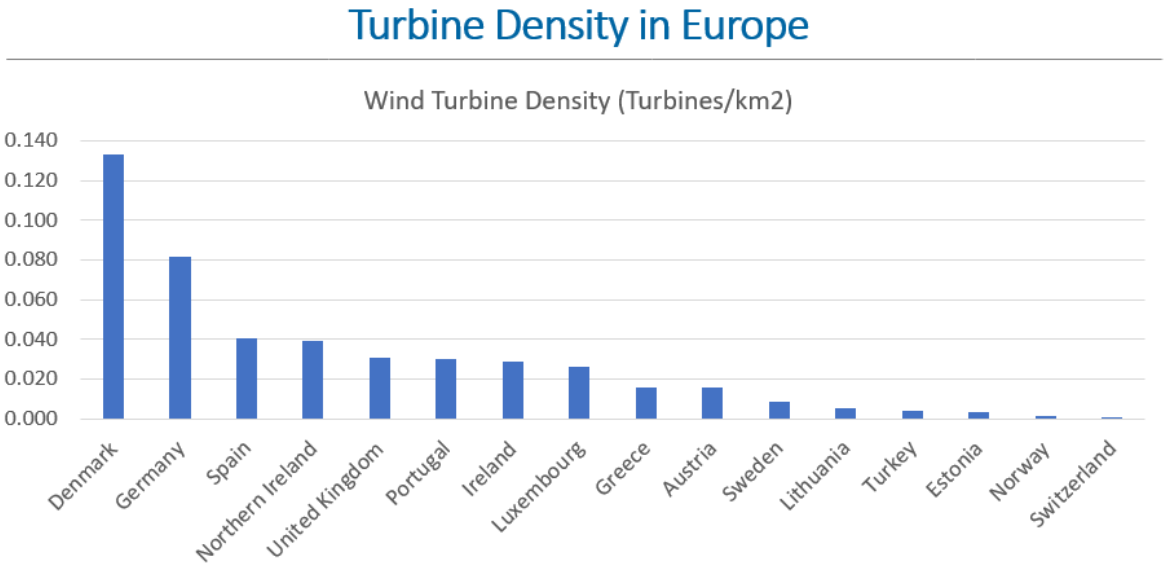


Figure 2: Turbine density in various European countries.

Onshore wind needs to continue growing in Ireland to meet future renewable energy targets with Ireland's Climate Action Plan proposing an increase from ~4200 MW at the end of 2020 to ~8200MW by 2030. That is why it is critical that the new Galway County Development Plan and Renewable Energy Strategy provides every opportunity to get as many of the projects currently in development through the planning and approvals system to enable them to contribute to hitting our 2030 targets.

1.3 Wind Energy Is Popular

The most recent opinion poll carried out for WEI by Interactions found that 79 per cent of Irish people were strongly in favour of, or tended to favour, wind energy (Figure). It is important to reiterate that these figures

have been replicated over the years and with different polling companies. An Ipsos MRBI poll from February 2016 found support for wind energy at 70 per cent and polls from the same company in 2014 and 2013 found that opposition to wind energy only once, in 2014, reached double figures at 12 per cent. A 2016 opinion poll carried out by Research Now for the ESRI put support for wind energy at 78 per cent positive versus 10 per cent negative making it more popular than gas, coal and biomass[5] (Figure). The Irish people support clean, renewable, indigenous energy.

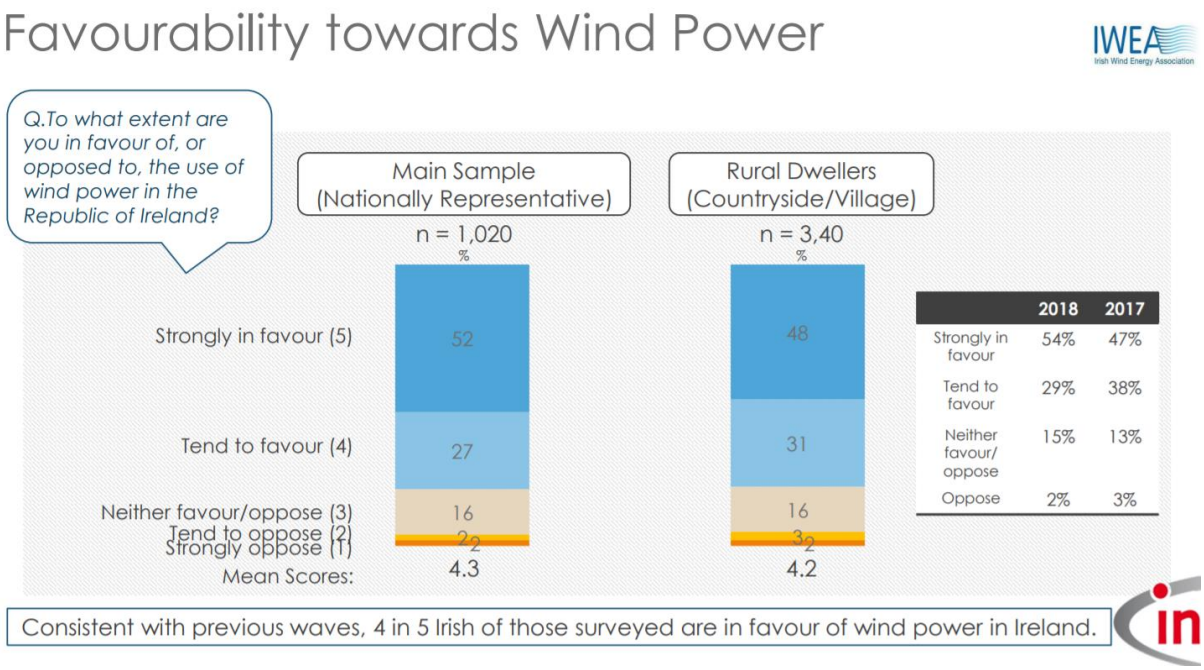
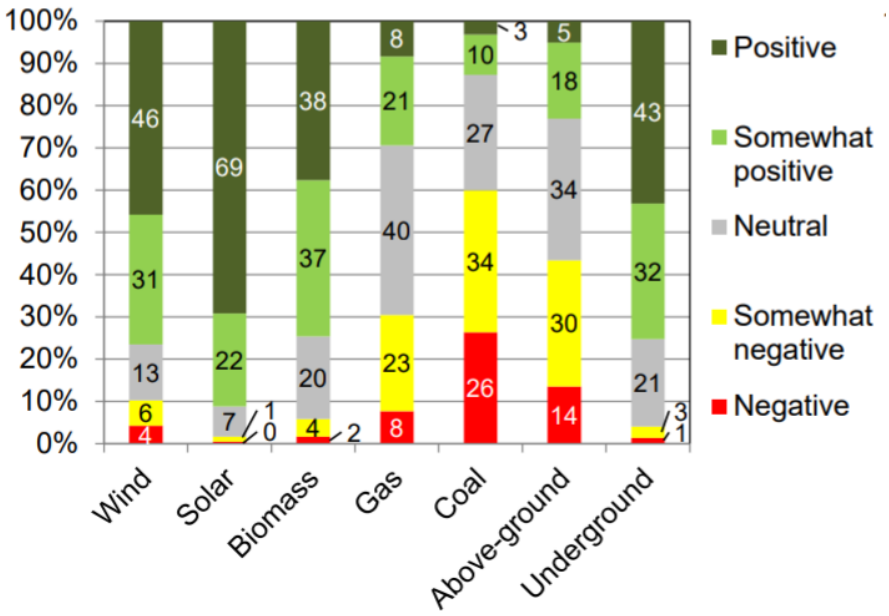


Figure 3: Results from opinion poll carried out by 'interactions' on the attitude of Irish people towards wind energy[6].



[5] ESRI Working Paper 545. October 2016.

[6] https://iwea.com/latest-news/2948-new-poll-confirms-overwhelming-majority-back-wind-energy

Figure 4: Irish Residents Views of Energy-Related Technologies (Bertsch et al., ESRI, Journal of Energy Policy 2017[7])

WEI believes it is important to consider the views of those living near wind farms, but also of wider Irish society when identifying the priorities for a new County Development Plan and Renewable Energy Strategy for County Galway.

[7] http://dx.doi.org/10.1016/j.enpol.2017.04.008

2 Lack of Renewable Energy Targets in Policy Objectives

In a submission on the pre-Draft LARES, WEI encouraged Galway County Council to take an ambitious approach to deciding the actual installed capacities of wind energy the new Renewable Energy Strategy for County Galway was going to aim to facilitate.

The draft LARES, demonstrates how by 2030 "Galway will have the capacity to realistically and sustainably deliver over 1.5GW of Renewable Energy (mostly wind), which, if achieved, would make a significant contribution to the Climate Action Plan aims of having 8.2GW of operational onshore wind capacity and 1.5GW of solar PV capacity, nationwide, by 2030."

For all the policy objectives included in the LARES and Draft Plan, there is no clear policy objective for a target of installed or permitted renewable energy, either within the lifetime of the new plan or by the 2030 time horizon of the Government's Climate Action Plan by when it is required that 70% of the state's electricity would be generate from renewable resources.

The total 2030 wind and solar energy yield of 1,566MW, including 1,350MW of wind energy, as calculated in Table 11 of the LARES, are outlined as "potential yields". Instead of setting the 1.5GW figure as a policy objective, LARES Policy Objective 3 on renewable energy generation only proposes:

"To facilitate and support appropriate levels of renewable energy generation in County Galway, in light of the need to transition to a low carbon economy and to reduce dependency on fossil fuels."

What is considered by different stakeholders to be "appropriate levels" of renewable energy is very different from what could be a very clear policy objective to see 1.5GW of renewables installed or permitted (pending connection to the electricity grid) by 2030.

Similarly, LARES Policy Objective 13 on wind energy generation propose:

"To increase renewable energy generation levels from wind energy developments in County Galway, given the recognised wind energy potential of the County."

This objective just "to increase" is very different to the renewable energy potential of the county demonstrated Table 11 of the LARES.

A specific objective should be included in the final LARES and County Plan to translate the renewable energy potential demonstrated in Table 11 of the LARES, into a specific MW generating target. A suggested wording for a specific policy objective is provided below:

> ***"To deliver over 1.5GW of renewable energy in County Galway by 2030 and over 1.25GW within the lifetime of the 2022 – 2028 Galway County Development Plan"***

3 Recognition of Economic Opportunity

In addition to the low carbon, climate resilient, environmentally sustainable, green and competitive advantages that wind energy development offers County Galway, wind energy also represents a significant economic opportunity for County Galway. Ireland has one of the best wind energy resources in the world, and counties like Galway can take greater advantage of the wind energy resource by supporting and facilitating wind energy development. The economic development opportunity that wind energy represents is not even mentioned in Chapter 5 (Economic Development, Enterprise and Retail Development) of the draft Plan. This must surely be an oversight?

Every megawatt (MW) of wind energy capacity installed gives rise of an investment of approximately €1.25 million. If the next Galway County Development Plan were to lay the right policy foundations for a further 965MW of wind energy development in the County over the next decade, as Table 11 of the LARES demonstrates the County could yield, that wind energy development alone would represent an investment of €1.2 billion. WEI considers that such an opportunity for economic development in County Galway must be recognised in the County Development Plan.

Ongoing investment and economic development benefits during the 30+ year operational lifespan of wind farms, take the form of rents payable to landowners, financial support for local communities in the form community benefit schemes and commercial rates payable to Local Authorities. Combined, these amount of approximately €25,000 per MW per annum. If the next Galway County Development Plan were to lay the right policy foundations for a further 965MW of new wind energy development in the County over the next decade, combined with the 385MW of wind energy that is already installed and projected by Table 11 of the LAREs to remain operational by 2030, that would result in an annual investment of over €33.75 million in the Galway economy, or a further €1.01 billion over the 30-year operational lifespan of projects. This opportunity for ongoing investment in County Galway must also be recognised in the new County Development Plan.

4 Clarification/Correction of Currently Installed Capacities

The figures presented in multiple places in the LARES and the Draft County Development Plan for the approximate commissioned capacity of wind farms in County Galway is incorrect, and significantly overstates the actual capacity currently installed. Correct installed capacities can be established from the EirGrid-published list of connected renewable generators, which as of the latest published list dated 01 February 2021, lists the following installed/commissioned capacities that are different to those MW capacities presented in the LARES.

- Derrybrien Wind Farm has an installed capacity of 59.5MW, and not 163.3MW as listed in the table in Section 3.1 of the LARES.
- Galway Wind Park has an installed capacity of 172MW, consisting of 64MW installed in DG92 (Uggool) and 108MW installed in TG58 (Seecon), and not 180MW as listed in the table in Section 3.1 of the LARES.

The installed capacities of smaller-scale wind farms can be established from the ESB Networks-published list of distribution connected energised wind , which as of the latest published list dated 1st April 2021, lists the following installed/commissioned capacities that are different to those MW capacities presented in the LARES.

- Inverin Wind Farm has an installed capacity of 3.3MW, consisting of 2.64MW installed in DG923 (Knock South Wind Farm (Inverin)) and 0.69MW installed in DG923X (Knock South Wind Farm (2)), and not 15MW as listed in the table in Section 3.1 of the LARES.

The overall effect of these corrected and reduced installed capacities, is that the approximate commissioned capacity wind energy developments in County Galway should be reduced to 322.65 from 446MW, which is a 27% reduction on the installed figures originally cited.

The errors in the figures presented in the Draft LARES are not highlighted as criticisms, but more so to highlight there is an even greater challenge ahead to reach the 1,373MW of wind energy targeted in the LARES and draft County Development Plan, if starting from a current installed capacity of 322MW rather than the 446MW cited in the draft LARES and Plan.

5 Methodology for determination of Future Wind Energy Capacity

WEI understands the process followed for determining the future wind energy capacity of the county, but fundamentally disagrees with some aspects of the methodology used, and strongly encourages Galway County Council to revisit some important elements of the process.

In Part 3, Section 5 of the LARES on the mapping of renewable energy factors, landscape is referred to as the first factor considered, but is then not listed in Table 5 or Table 6 of Part 3 as a consideration for any renewable technology. It is not clear how, or if, landscape was factored into the overall classification of areas' wind energy potential, but many areas of Low Sensitivity landscape appear to have been unnecessarily excluded from even being classified as "Open to Consideration" for wind energy development in the draft LARES. It is strongly suggested that areas with the lowest landscape sensitivity, be classified at least as "Open to Consideration in the new Plan and LARES. Practically the entire area east of Lough Corrib is classified as the lowest landscape sensitivity classification in the new Draft Landscape Character Assessment, but a very large area currently classified as "Open to Consideration" for wind energy development north of Claregalway and south/southwest of Tuam, has now been reclassified as "Generally to be Discouraged" in the draft Plan and LARES.

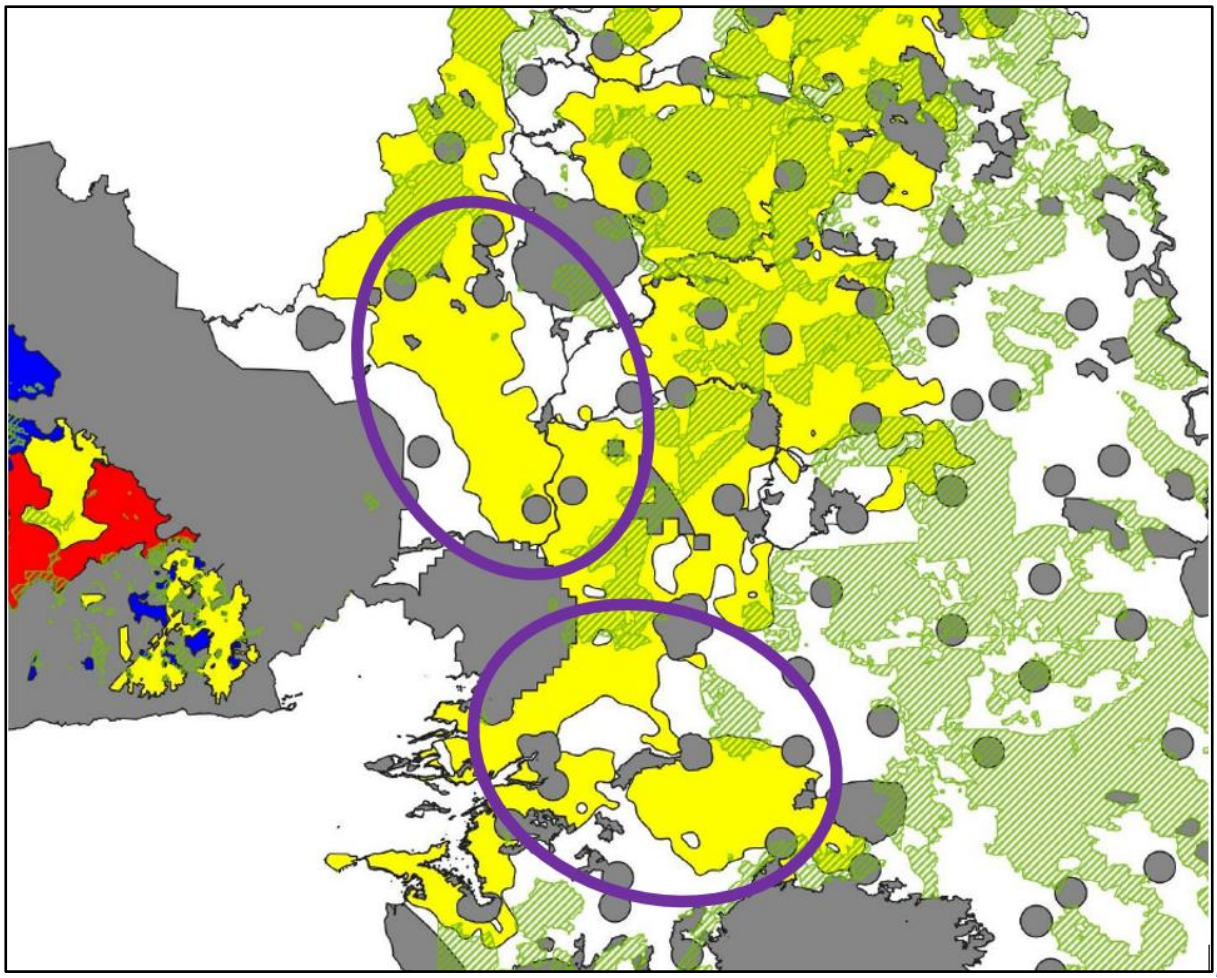


Figure 5. Large areas (outlined in purple) of "Low Landscape Sensitivity" previously classified as Open To Consideration, now without any policy support for wind energy development

In Part 3, Section 5 of the LARES on the mapping of renewable energy factors, population and setback distances are also referred to as follows:

> *"Population/Setback Distances: Population density was used to help the need to consider setback distances for turbines. It is not feasible to map the setback distances from all dwellings, occupied and unoccupied as well as permitted, but unbuilt. Any such mapping would quickly lose it's validity due to the dynamic nature of housing. Instead, population density is used to indicate areas that have greater or less potential to meet set-back requirements. Population density is slow to change, and so will allow the finished mapping to remain valid and accurate for longer."*

Nationwide, rural housing is the single greatest impediment to wind farm development, and Galway County is no different in this regard. If the LARES has been developed without individual dwellings and other properties being mapped and buffered with a setback distance constraint, it is difficult to have confidence on the energy yield figures presented in Table 11 of the LEARS. Other analysis undertaken by Galway-based planning and environmental consultants MKO, that has been shared with WEI, suggests that rural housing and

properties will have a dramatic and concerning impact on the areas identified in the draft LARES as Acceptable in Principle and Open to Consideration. While the map of the proposed deployment zones included in the LARES appear to classify large areas of the county as Acceptable in Principle (3.24% of the county) or Open to Consideration (20.11% of the county), WEI does not believe that the MW energy yields set out in Table 11 of the LARES are achievable or realistic if rural housing has not been considered.

The MW target figures presented in Table 11 of the LARES assumes that only 15% of the Acceptable in Principle areas and 7.5% of the Open to Consideration Areas will be developable. WEI considers that these are overly optimistic percentages, even before project attrition is taken into account. The analysis undertaken by MKO and shared with WEI, as summarised in the below table, suggests that 95% of the area classified proposed as Acceptable in Principle, and 95% of the area proposed as Open to Consideration, cannot be considered as viable locations for wind farm development due to planning, environmental or other technical design considerations and constraints.

Table 1. Percentage reduction in area wind deployment areas, with planning, environmental and technical wind energy constraints (including Eircode properties with a 700m setback)

	Area (ha)	Area remaining after Planning and Environmental Constraints applied (ha)	% Reduction in Area	Area remaining after 700m constraint applied to all Eircode properties (ha)	% Reduction in Area
Strategic Areas	5,042	3,779	25%	3,022	40%
Acceptable in Principle	19,748	13,557	31%	938	95%
Open to Consideration	122,701	91,438	25%	5,676	95%

The remaining 5% of areas proposed as Acceptable in Principle and Open to Consideration, would then be subject to project attrition. As illustrated by the below Figure X graphic, project attrition is a normal part of the wind energy project development process, and but attrition rate only applies when a sufficient quantum of theoretically viable lands are identified in policy.

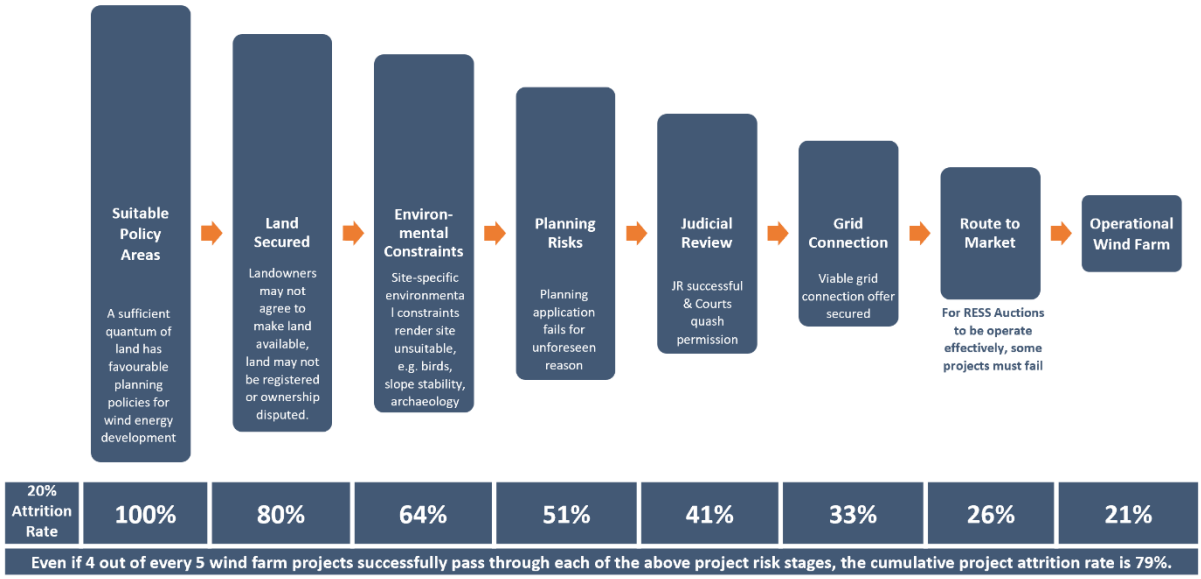


Figure 6. Project attrition

The project attrition rate assumes that four out of every five potential wind farms projects (80%), successfully clear the hurdles presented at each development stage. A 20% project attrition rate at each stage of the project development process, results in a cumulative project attrition rate of 79%. Therefore, assuming that one can start with a sufficient quantum of suitable policy areas, only projects that:

1) are in suitable policy areas,
2) can secure necessary lands
3) have no-site specific environmental constraints
4) secure planning permission
5) withstand judicial review
6) secure a viable grid connection offer, and
7) secure a route to market for their electricity

are likely to be constructed and contribute to Irelands 2030 Climate Action Plan targets, and Galway County Council's LARES and County Development Plan's 2030 MW targets. The MW totals for wind energy yield from the wind energy deployment zones, outlined in Table 11 of the LARES, do not take project attrition into account. Therefore, to achieve anything like the 851MW of new wind energy capacity envisaged in Table 11 of the LARES, will require a significantly larger quantum of land to be identified as Acceptable in Principle or Open to Consideration. WEI has a genuine concern that the LARES as presented, appears to present a large quantum of land as Acceptable in Principle and Open to Consideration, and that those areas can yield a badly-needed 851MW of new wind energy developments, but the reality of the policy as presented is very different.

WEI is concerned that the wind energy deployment zones identified in the LARES will not be able to deliver anything like the MW yields, due to the incorrect planning, environmental and technical constraints being applied at the sieve analysis stage, insufficient areas being classified as AIP or OTC in the "Low" sensitivity landscapes of the county, and finally, that no consideration has been given to project attrition which will be a major factor in the MW yields that can actually be achieved in the deployment zones.

6 Landscape Character Assessment

Galway County Council's update to its Landscape Character Assessment is also largely welcomed and timely. However, there are some aspects of the Landscape Character Assessment as repeated in Section 5.2 of the LARES relating to the categories of landscape sensitivity, which WEI must take issue with. Four categories of sensitivity are used:

1. Iconic
2. Special
3. High
4. Low

The choice of terminology in going from "Low" immediately to "High" on a four point scale is somewhat unusual. It is respectfully suggested that it would be more in keeping with conventional rating or classification systems for the second lowest rating on a four-point scale to be "Medium" rather than "High", and the second highest rating on a four-point scale to be "High" rather than "Special". If the current description on the "High" category is an "elevated sensitivity to change", it is surely only elevated over the "Low" category described as "unlikely to be adversely affected by change", and therefore to jump immediately from "Low" to "High" affords an unwarranted degree of sensitivity to the second-lowest category on sensitivity on the four point scale.

7 Landscape Capacity

The updates to the Landscape Character Assessment and LARES are both welcome but neither document deals with landscape capacity in relation to wind energy developments in the way the current County Galway Wind Energy Strategy (Appendix IV of the Galway County Development Plan 2015-2021) does. Landscape sensitivity is used as a proxy for landscape capacity, as described in Section 4 of the Landscape Character Assessment. However, modern wind turbines are almost unique in their height and visibility over long distances (in some landscape settings), and require a different assessment approach for judging the capacity of a particular landscape to accommodate wind turbines. To use an approach to landscape sensitivity assessment that is intended to control one-off rural housing as well as wind energy development, could unnecessarily restrict wind farm developments in parts of county Galway that otherwise could accommodate them.

Table WE7 of the current County Galway Wind Energy Strategy (Appendix IV of the Galway County Development Plan 2015-2021) provided strategic guidance on landscape capacity for wind energy developments in landscape character areas. Such a wind-specific landscape capacity assessment and guidance is now lacking from the updated Landscape Character Assessment and LARES. Although the boundaries of the landscape character types and units have been redrawn in the new Landscape Character Assessment, no attempt has been made to assess each landscape character unit in terms of its capacity to accommodate wind energy, as opposed to any other types of development, despite the fact that a very different ruleset should be applied.

ENDS