



12th March 2021

Email: ciara.conboy@rwe.com

Ref: Submission on Draft Kilkenny County Development Plan 2021 - 2027

To whom this may concern

RWE are pleased to have the opportunity to have our consultation response submission considered in respect of the Draft Kilkenny County Development Plan 2021 – 2027.

RWE Renewables Ireland is operating and developing a number of renewable projects in Ireland, across a range of renewable energy technologies including onshore wind, offshore wind and battery storage. RWE is now one of the world’s leading producers of renewable energy and stands as the world’s second largest offshore wind developer and third largest provider of renewable electricity across Europe, with a wealth of experience.

RWE have contributed to the feedback, comments and recommendations outlined in the Wind Energy Ireland (WEI) submission to this consultation process and fully support the submission made. RWE have reviewed the various sections of the Draft Kilkenny County Development Plan 2021 - 2027 and associated documents and make this submission in accordance with section 11(2) of the Planning and Development Act 2000 (as amended) and focuses on Ch 11 Renewable Energy, particularly the Renewable Energy Strategy and Appendix K.

If you have any questions regarding our response, please do not hesitate to contact me.

We look forward to engaging in the next stages of this consultation process.

Yours faithfully,

Ciara Conboy-Fischer
Project Development Manager

*online submission bears no signature

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National Policy

The National Climate Action Plan (CAP) 2019 has set an ambitious 70% target for renewable energy production by 2030. To meet this target, the amount of electricity generated from renewables will have to double on current figures. Based on the CAP assumptions, onshore wind will provide the majority of the required electricity yield out to 2030. Taking account of this, Kilkenny County Council and all Local Authorities should be cautious when considering the designation of areas for renewable energy development going forward, so as not to constrain any areas which may have renewable energy potential, particularly for wind generation.

To generate 70% of the country's electricity from renewable energy by 2030, the Government's Climate Action Plan requires the installation of 4,000MW of new wind energy developments over the next decade. It took Ireland 20 years to install the first 4,000 MW of wind energy in Ireland.

Wind Energy in Ireland

Ireland's 2020 energy target of 40% renewable electricity was a key driver in the development of wind power over the last decade. Having missed this target, the 2020s represent a critical decade for the development of onshore wind farms if we are to meet our national target of 70% of electricity generation from renewables by 2030.

Ireland has over 250 operational wind farms, which represents an investment of over €7 billion, regularly powering 65% of Ireland's electricity needs. The wind energy industry also supports 4,400 jobs and annually pays more than €30 million in commercial rates to local authorities. We are a country with enormous renewable energy resources and are world leaders at incorporating onshore wind into the national grid.

In 2018 wind energy avoided 3.1 million tonnes of CO₂ and cut €432 million off our fuel import bill¹ demonstrating the huge contribution that onshore wind is making to climate action. Wind energy decarbonises our electricity supply, cuts our import bill and drives down

1 <https://www.seai.ie/publications/Energy-in-Ireland-2019-.pdf>

wholesale electricity prices. To achieve this, Ireland has built over 250 onshore wind farms, mostly since 2003, with a combined capacity of approximately 4,200 megawatts (MW) and over 2,500 wind turbines.

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 Kilkenny County Development Plan and Renewable Energy Strategy provides every opportunity for the development of wind energy.

Kilkenny Renewable Energy Strategy

RWE commend Kilkenny County Council on their strategic aim:

“To generate 70% of electricity demand for the County through renewables by 2030 by promoting and facilitating all forms of renewable energies and energy efficiency improvements in a sustainable manner as a response to climate change.”

RWE support Kilkenny County Council taking ownership of this target and setting specific goals for the county in the absence of regional guidance. This demonstrates a level of ambition required by local authorities if we are to meet our national target of 70% electricity generation from renewable energy sources by 2030. If this commitment was met by all counties, we would meet our overall national target of 70% electricity generation from renewable energy.

RWE commend Kilkenny County Council on the ambitious target, “this Renewable Energy Strategy aims to enable Kilkenny to generate a minimum of 100% of its electricity needs from renewable sources by 2030.” RWE would like clarification around the proposed target set out as there seems to be two targets of 70% and 100% of electricity demand to be met by renewable generation by 2030. RWE wonders if the target of 100% is out to 2050.

RWE commend Kilkenny County Council on the inclusion of an updated and comprehensive Renewable Energy Strategy (RES) and support the policy objectives 11A - 11C.

The CAP has specifically targeted a significant increase in onshore wind, doubling our current capacity to 8.2GW of total onshore wind by 2030. Onshore wind currently represents the

cheapest form of electricity generation in Ireland and drives down the cost of electricity for consumers. As we enter a significant decade for onshore wind development in Ireland it is important that the Renewable Energy Strategy (RES) for Kilkenny is ambitious and achievable in its targets.

RWE commend Kilkenny County Council on assessing their future renewable energy needs. The figures presented by the 3EA state that Kilkenny could contribute an additional 253MW or renewable energy to meet the target of 100% renewable electricity generation to meet the needs of the county by 2030.

RWE note that the RES expects “that the renewable energy target will be met by a mix of renewable energies, in which solar will play a significant role, thus removing dependence on wind and reducing the number of wind turbines required significantly.”

RWE appreciate the pursuance of a mix of renewable energy source and indeed recognise the importance of an energy mix to provide a secure supply of renewable energy. Taking account of the targets laid out in the CAP, a national target of 0.4 GW of solar and 4.2 GW of onshore wind is needed. Onshore wind is currently the primary source of renewable energy in Co. Kilkenny and the rest of the country and RWE would ask Kilkenny County Council to designate a sufficient area of the county for potential wind energy development as is appropriate to meet these targets.

Kilkenny Wind Energy Development Strategy

Kilkenny County Council is to be commended for its preparation of a Wind Energy Development Strategy as laid out in Appendix K. This provides a plan-led, supportive policy framework for the wind energy industry to bring forward planning applications for developments of appropriate scales in appropriate locations and forms an integral part of the Draft CDP.

In preparing a new Wind Energy Strategy (WES) for County Kilkenny as part of the preparation of the Kilkenny County Development Plan 2021-2027, Kilkenny County Council is again to be commended for taking the opportunity to review its renewable energy policies at the start of a new decade, in light of quite different Government, climate change, environmental and energy policies and bearing in mind the 76 MW currently operational in Co. Kilkenny. The final

Kilkenny CDP will inform the policies and ambitions of the county for a crucial decade in our decarbonisation journey and will be integral in the successful development of renewable energy capacity.

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 power. Therefore, clear and supportive planning policies for wind and all renewable energy developments are required to ensure we meet the challenges of addressing climate change and decarbonising the Irish economy over the next decade.

With County Kilkenny's significant area and good wind energy resource, County Kilkenny needs a progressive and ambitious Wind Energy Strategy (WES) with clear and supportive policies in favour of further wind energy development.

RWE welcomes the approach in relation to the proposed new Wind Energy Development Guidelines (due to be finalised later this year) and that the final CDP and WES for County Kilkenny refers to these Guidelines and require future proposed wind energy developments in County Kilkenny to comply with the guidelines of the day. The Department has clearly stated on numerous occasions the 2006 guidelines remain in effect until they are replaced. RWE would ask Kilkenny County Council to remove any extracts from the draft Wind Energy Development Guidelines (2019) from the final plan in anticipation of the final published guidelines this year.

Large Wind Energy Developments in 'Open to Consideration' Areas

RWE commend Kilkenny County Council on the complete designation of Co. Kilkenny under the three proposed Wind Energy Strategy Areas in table 11.3 of the WES as outlined in Appendix K. This provides a very clear methodology applied to reach the three strategy areas for the county as 'Acceptable in Principle', 'Open to Consideration' and 'Not Normally Permissible'. RWE note that Large Scale Wind Energy Developments of greater than 5MW will only be considered in areas designated as 'Acceptable in Principle'.

"The rationale behind this policy is to minimise the visual impacts of such large-scale developments, in addition to effects on the environment of County Kilkenny as a

whole, as well as to facilitate appropriate grid connections. These will be assessed in accordance with the Wind Energy Development Guidelines.”

RWE would ask Kilkenny County Council to consider Large Scale Wind Energy Developments in areas designated as ‘Open to Consideration’ as well. This areas is, “characterised by no significant conflict with environmental designations or sensitivities.” The rationale put forward by Kilkenny County Council for restricting Large Scale Wind Energy Developments to areas designated as ‘Acceptable in Principle’ relate to the potential effects on the environment, access to the national grid system and potential visual impacts.

Areas designated as ‘Open to Consideration’ are defined as having, “no significant conflict with environmental designations or sensitivities” as outlined in Appendix K. Existing or planned electricity grid capacity should not be considered a constraint for the purposes of determining whether areas of County Kilkenny are suitable or unsuitable for wind energy development. Grid capacity is a technical and electrical engineering constraint and is not an appropriate constraint when identifying potential areas for wind energy development. Finally, as laid out in the RES, all large scale wind energy developments would be subject to a detailed Environmental Impact Assessment, including a visual impact assessment. RWE would argue that, for the reasons mentioned above, large scale wind energy developments should be given consideration in areas designated as ‘Open to Consideration’ where otherwise appropriate.

Designating Sufficient Lands to meet 2030 Targets and Beyond

RWE note that 50,000 ha of land is contained in the strategy area ‘Acceptable in Principle’ which is the equivalent of 24% of the entire county containing potential lands for wind energy developments. RWE do not necessarily agree with Kilkenny County Council’s statement, “that a typical wind turbine requires a land take of 0.4 hectares, (and) it is clear that notwithstanding the 500m setback criteria from residences, this Strategy provides for sufficient land area.”

RWE have looked at this 50,000 ha from a wind farm development perspective. Considering the WEDGs, a 500m buffer from all houses was applied using a geodirectory database. A 3.5 rotor diameter exclusion from 110kV overhead lines was applied as per Eirgrid specifications. A rotor diameter of 130m was used, which RWE feel is a conservative representation of turbine specifications going forward. Any Natura 2000 sites were then

excluded, including Special Protected Areas and Special Areas of Conservation. This reduced the amount of potentially available land to approximately 6,100 ha. All operational wind farms were located on the SEAI Wind Atlas and excluded, leaving 5,750 ha. A commercially viable wind farm would need to be 20 MW at a minimum. A four turbine wind farm of 5MW turbines was considered. A typical wind turbine requires a land take of 0.4 ha for the constructed hardstand, however there is a considerable area needed between turbines to optimise the wind take. A conservative measure of 4 rotor diameters was used in this example. This means that an area of 21 ha is needed around a turbine, with 85 ha for a 20 MW wind farm.

Considering an area of 85 ha is needed for a wind farm of 20 MW, the 5,750 ha available allows for 67 wind farms of 20MW, or 1.3 GW. However, there is a very high attrition rate applied to wind farm development. There are numerous constraints which could result in a potential wind farm development being unsuccessful. Industry best practice would suggest an 80% attrition rate, equating to 270 MW available in the areas designated as 'Acceptable in Principle' overall.

It is worth noting that tip heights are increasing as turbine technology improves, resulting in fewer numbers of larger turbines in wind farms. In recent years, wind farm planning application consents are frequently granting maximum tip heights of 150 - 185m tip heights to avail of more efficient turbine models. If this same example uses a tip height of 150m, 110MW of land is available. This considers a 600m setback from houses as per the draft Wind Energy Development Guidelines (2019), which is expected to be published imminently. These figures serve to highlight the importance of designating a sufficient quantum of land for potential wind energy development.