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THE AGEING PORTFOLIO OF WIND FARMS IN IRELAND

KEY ISSUES

29 May 2024



PRESENTATION OUTLINE

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- FT Who we are
- Why wind farms in Ireland
- Analysis of existing stock
- Repowering / Extension of Life Issues



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WHO ARE FT

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Energy Sectors

**Onshore &
Offshore
Wind Energy**



Solar PV



**Electrical
Infrastructure**



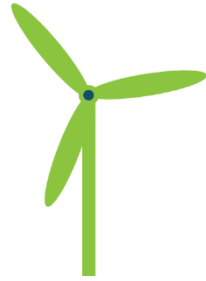
**Ancillary Grid
Infrastructure**



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FT – Renewable Energy Experience



- Over 125 Wind Farms to date
- Planning, Design and Environmental Reports
- Owners Engineer, Civil Design, Resident Engineering



- Planning for over 40 Solar PV Farm projects to date
- Planning, Preliminary Design and Environmental Reports



- Battery Storage
- Peaking Plant
- Grid Connections
- Substations
- Grid Stability Projects



WHY WIND FARMS IN IRELAND

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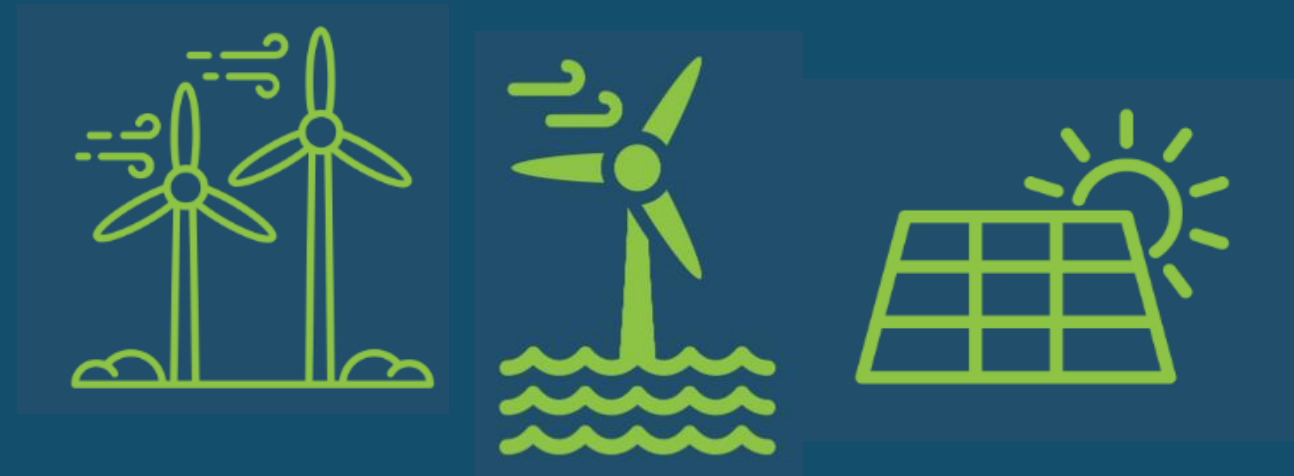
The Policy

Driven by European and National Policy to achieve a Net Zero Carbon Future by 2050

- EU Directive to achieve 45% of energy from renewable resources by 2030
- National Legally Binding Targets of 50% renewable energy by 2025 and 80% by 2030.

Climate Action Plan '23

- 9 GW of Onshore Wind by 2030
- 5 GW of Offshore Wind by 2030
- 8 GW of Solar Energy by 2030



Investment Required

- Estimated that €119 billion investment will be required to fund the implementation of the CAP '23
- €36 billion in Electricity



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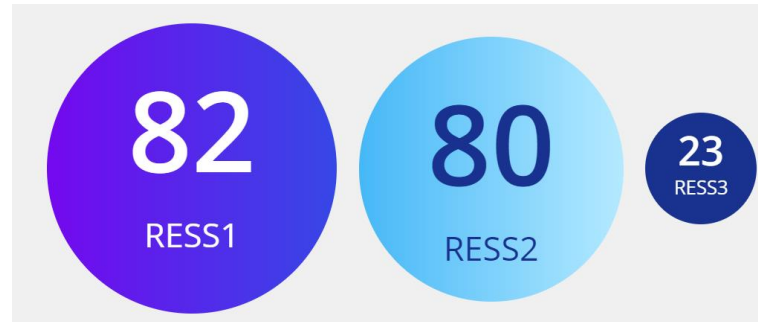
Scale of Opportunities

Onshore Wind & Solar - Scale of Opportunity

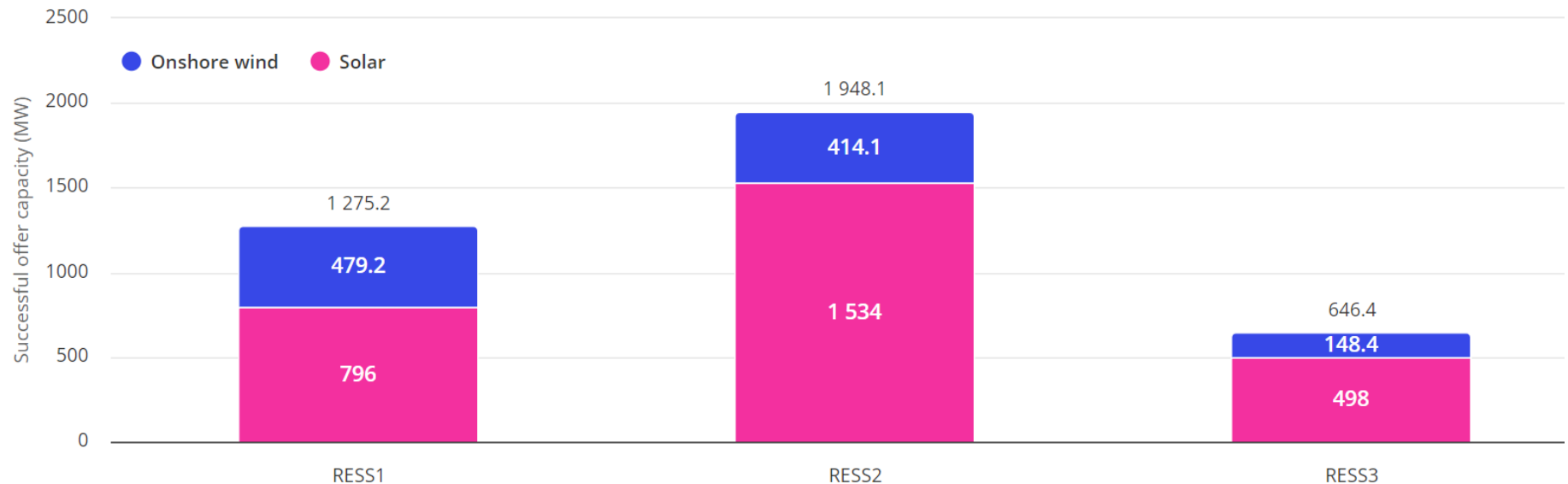
- Average deployment of onshore wind 2008 – 2020 = 280 MW pa.
- Targets will require 8 times increase to 2.3GW annually from 2024 – 2030
- Estimated we need 3126 MW* of wind to be lodged for planning between 2024 – 2006 to meet 2030 wind targets.

*Allowing Attrition rate of 36% and 80% planning success rate.

BUT No. of Projects successful in RESS has reduced significantly



Successful offer capacity (MW)



What About the Existing **Fleet**

4,347 MW (existing)

+

4653 MW (additional required)

= 9,000 MW (Government Target).





ANALYSIS OF EXISTING STOCK

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Existing Fleet

Onshore Wind & Solar - Scale of Opportunity

- 279 no. onshore wind farms = 4,347 MW



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Years	No. of WF to be decommissioned	MEC to be decommissioned	Cumulative MEC to be decommissioned
2024	19	139	139
2025	15	247	386
2026	6	68	455
2027	0	0	454
2028	6	54	509
2029	16	212	721
2030	14	133	854
2031-2035	69	899	1753
2036-2040	56	735	2,488
Post 2040	78	1859	4,347
Total	279	4,347	

Source: WEI Commissioned Research 2024



REPOWERING – KEY ISSUES

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The Challenge

County Development Plan Spatial Policy *

- 2,778 MW are in Favoured Zoned Areas
- 1,123 MW are in Non Favoured Zoned Areas
- 446 MW in unclassified areas.

Current Design, Planning and Environmental Constraints

- Set bac distance of 4 times tip height from residential receptors
- Noise: No distinguishment between greenfield sites and EOL or Repowering sites.
- Shadow Flicker 30 min per day or max of 20 hours per year v. zero shadow flicker.
- Repowering in SPA's

*Source: WEI Commissioned Research 2024

Repowering in SPA's

Current Situation

- 34 wind farms located within SPA's (732.9 MW)
- 24 wind farms within 5km of SPA's (347.73 MW)

Potential that these sites will not pass the Appropriate Assessment threshold under the Habitats Directive. – A significant barrier to repowering



Repowering in SPA's

Light at the end of the tunnel

- REPower EU launched in May 2022
- Directive EU 2023/2413 (RED III), adopted on 18th October 2023

*“By 21 February 2024, until climate neutrality is achieved, Member States shall ensure that, in the permit-granting procedure, the planning, construction and operation of renewable energy plants, the connection of such plants to the grid, the related grid itself, and storage assets are presumed as **being in the overriding public interest** and serving public health and safety when balancing legal interests in individual cases for the purposes of Article 6(4) and Article 16(1), point (c), of Directive 92/43/EEC, Article 4(7) of Directive 2000/60/EC and Article 9(1), point (a), of Directive 2009/147/EC.*

Where a renewable energy project has adopted necessary mitigation measures, any killing or disturbance of the species protected under Article 12(1) of Directive 92/43/EEC and Article 5 of Directive 2009/147/EC shall not be considered to be deliberate. Where novel mitigation measures to prevent as much as possible the killing or disturbance of species protected under Directives 92/43/EEC and 2009/147/EC, or any other environmental impact, have not been widely tested as regards their effectiveness, Member States may allow their use for one or several pilot projects for a limited time period, provided that the effectiveness of such mitigation measures is closely monitored and appropriate steps are taken immediately if they do not prove to be effective.

Repowering in SPA's

Light at the end of the tunnel

- Repowering in SPA's can be justified by the RED III Directive and RePower EU initiative.
- Repowering could be deemed an activity of Overriding Public Interest
- However any adverse effects would need to be compensated for
- Compensation measures would need Ministerial approval and agreement with NPWS
- Track record on IROPI in Ireland is poor with only one project (WWTP) successfully navigating the process to date.



Conclusion

- The Climate Action Plan assumes an upwardly trajectory for deployment of Wind Energy in Ireland
- Europe recognizes the importance of Repowering projects by applying some relaxations to existing Directives
- There needs to be more guidance or joint up thinking on how projects can be repowered and co-existing with protected habitats and species.
- Consideration should be given to having bespoke development standards for Repowering and Extension of Life projects



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