Energy for generations

ESB Group Property

Kerry County Development Plan 2022-2028

Submission on behalf of ESB to the Kerry County Development Plan 2022 – 2028
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Contents

1. INTRODUCTION 3
   1.1 Overview of ESB Strategy 3
   1.2 Generation, Transmission & Distribution 3
   1.3 ESB Roll-out of EV Infrastructure 4
   1.4 ESB Telecoms & Telecommunications Infrastructure 4
2. PLANNING POLICY & PROPOSED DRAFT CDP 5
   2.1 Electricity Generation, Transmission & Distribution 5
      2.1.1 ESB Networks Dingle Project 6
   2.2 Generation & Renewables 7
      2.2.1 Onshore Wind 7
      2.2.2 Marine Renewable Energy & Offshore Wind 9
      2.2.3 Solar 11
      2.2.4 Energy Storage 12
      2.2.5 Hybrid Renewables 12
      2.2.6 Renewables-Enabling Plant 13
   2.3 Telecommunications 13
   2.4 Sustainable Transport & Electric Vehicles 14
      2.4.1 Other Sustainable Transport 15
3. CONCLUSION 15

1. INTRODUCTION

Electricity Supply Board (ESB) welcomes this opportunity to make a submission to the Draft Kerry County Development Plan 2022 – 2028. ESB is a landowner and employer in Kerry with property and infrastructural assets throughout the County. As a strong, diversified, vertically integrated utility, ESB operates right across the electricity market; from generation, through transmission and distribution to supply of customers. In addition, ESB uses its networks to carry fibre for telecommunications and to provide charging infrastructure for electric vehicles. ESB is Ireland's leading electricity utility with approximately 3.2 million customers throughout the island of Ireland.

ESB broadly supports the vison included in Draft County Development Plan (CDP). However, outlined below are observations regarding strategic issues that should be taken into consideration in the preparation of the final CDP 2022 - 2028.

1.1 Overview of ESB Strategy

ESB is Ireland's foremost energy company and the largest supplier of renewable electricity in Ireland. Through innovation, expertise and investment, ESB is leading the way in developing a modern, efficient electricity system that is capable of delivering sustainable and competitive energy supplies to customers. ESB operates a renewable energy portfolio that has the capacity to supply over 1,003 MW of green energy to the homes, farms, hospitals, schools and businesses of Ireland and the United Kingdom.

ESB is embracing new technologies that are revolutionising the energy industry, including smarter electricity networks. We are investing in sustainable energy solutions that harnesses the power of solar, wind, wave and storage to provide a cleaner future. Our objective is to develop and connect renewables to decarbonise the electricity system by 2040. ESB's progress towards achieving carbon net-zero operations is consistent with the objectives of the National Planning Framework (NPF) and Regional Spatial & Economic Strategy (RSES) for the Southern Region.

1.2 Generation, Transmission & Distribution

Mirroring Government objectives, by 2030 ESB will develop an additional 4 GW of new onshore and offshore wind and solar PV renewable assets to add to our 1 GW of renewables operating today. By 2030, 63% of our electricity will come from renewable sources and will be a net zero producer of electricity by 2040. ESB remains committed to completely transforming our generation portfolio, replacing old, inefficient plant with a mixture of renewables and high-efficiency gas capacity.

To support the transition of the National Grid to a low-carbon future ESB is developing assets such as battery storage and flexible gas fired units that respond quickly to system demand. These will be key to facilitating large scale renewables in the future.

ESB is the asset owner of the Transmission System and Distribution System and ESB Networks provides the essential service of building, managing and maintaining the electricity networks in Kerry and throughout Ireland. ESB Networks is unique in that it is in direct contact with all electricity users. The electricity network extends to over 180,000km across the Republic of Ireland and in 2020 over 28,500 new residential and business connections were completed. The focus of recent investment in the network was on continuing the reinforcement of the system to facilitate the connection of new renewable electricity generation. In Dingle, as part of the largest innovation project undertaken by ESB, we are working with the local community to establish ways customers can better understand energy efficiency measures on the journey towards a low carbon future.

1.3 ESB Roll-out of EV Infrastructure

ESB, has developed a network of almost 1,350 electric vehicle charge points across the island of Ireland. The Irish Government has set stretching targets for EV adoption in Ireland to address energy demand and emissions from transport. To help meet the increase in electric vehicles, ESB, with the support of the Government's Climate Action Fund, is rolling out high power charging hubs across the country. These hubs will be capable of quickly charging between two and eight vehicles simultaneously and will facilitate vehicles travelling longer distances across Ireland's National and Motorway routes.

ESB's plans also include investment in green hydrogen production, storage and generation facilities by the end of this decade. A clean, zero-carbon fuel, green hydrogen will be produced from renewable energy. This is fully aligned with the EU strategy launched in 2020 on energy sector integration which prioritises a more 'circular' energy system with energy efficiency at its core. Greater electrification using a renewable fuel like hydrogen for end-use applications where direct electrification is not feasible (e.g., heavy goods transport, high temperature industrial heat and zero carbon dispatchable electricity generation) will play a significant role in becoming carbon-neutral by 2050.

1.4 ESB Telecoms & Telecommunications Infrastructure

ESB Telecoms has grown from its original function of providing a communications system for ESB to become one of Ireland's leading independent telecommunications infrastructure providers with over 400 locations nationwide. ESB Telecoms now provides network solutions for a wide variety of mobile network operators, wireless broadband providers and public sector business activities. All sites developed by ESB Telecoms are made available to third party mobile phone and wireless broadband operators as points for co-location. Our open policy of sharing infrastructure limits the overall number of telecoms structures appearing in urban and rural landscapes.

Our telecoms fibre network wrapped on our 110kV electricity network provides an extensive network throughout Ireland with international connectivity to the UK. In addition, SIRO (a joint venture between ESB and Vodafone) is bringing 100% fibre-to-the-building to 50 towns and cities across Ireland, including Castleisland, Killarney and Tralee, and enabling speeds of 1 Gigabit per second. SIRO will continue to accelerate this roll-out in 2022.

2. PLANNING POLICY & PROPOSED DRAFT CDP

ESB acknowledges that the process of preparing a new County Development Plan, as set out in section 1.1 *Purpose, Vision and Goals* of the Draft Plan, shall be informed by the hierarchy of international, national, and regional planning policy. This is reinforced through Objective KCDP 2-1 that states:

> **KCDP 2-1**
> *"Support and implement the UN Sustainable Development Goals (SDG's), and the NPF Strategy and National Policy Objectives (NPO's) on sustainability and the RSES Strategic Statements, as appropriate."*

Chapter 2 of the Draft CDP outlines that the Plan forms an important part of the County's Climate Action Response and the plan is mindful of the carbon emission reduction requirements set out in the Climate and Action Low Carbon Development (Amendment) Act 2021. ESB is also working towards the delivery of Ireland's target (part of the pledged EU target) of at least 55% reduction in domestic GHG emissions by 2030.

The Minister of Communications, Climate Action and Environment recently launched Climate Action Plan 2021. This plan commits Ireland to a legally binding target of net-zero greenhouse gas emissions no later than 2050 and a reduction of 51% between 2018 and 2030. These targets are a key pillar of the Programme for Government. Among the most critical measures in the Government's Climate Action Plan is that up to 80% of electricity will be generated by a mix of at least 5 GW offshore wind, up to 8 GW onshore wind and 1.5 - 2.5 GW from solar PV.

It represents a significant change for the electricity industry and ESB is committed to doing its part in supporting and delivering on the Government's energy policy. The ambition aligns with the strategic approach to Energy Policy and Planning in section 2.6.2.2 of the Draft Plan. It recognises that the transition to a low carbon economy is an integral part of Ireland's climate change strategy and that renewable energies form a core component of reducing our reliance on fossil fuels. This is underpinned by Objective KCDP 2-2; however, it is noted that this Objective could be amended to reflect the most recent version of the Climate Action Plan 2021:

> **KCDP 2-2**
> *"Facilitate and support national climate change objectives contained in the Climate Action Plan 2019 and the actions contained in the KCC Climate Change Adaptation Strategy 2019-2024 and successor strategies."*

In addition, there is an opportunity to amend the section 12.5.1 of the Draft Plan – *National Targets and Responding to Climate Change,* as currently the targets outlined in this section are from the Climate Action Plan 2019 and could be updated to reflect the new targets from the Climate Action Plan 2021.

In reviewing the Draft Plan, ESB has a number of observations in relation to the key issues identified that may set the framework for delivery of energy infrastructure to meet energy needs and the future development of the County.

2.1 Electricity Generation, Transmission & Distribution

Both the NPF and the RSES contain promoting policies in relation to Energy Infrastructure. ESB fully supports the reinforcement of those policies at a local level that will accommodate the ongoing generation, transmission and distribution of electricity. As outlined in Chapter 12, *Energy,* the Council recognises that the availability of energy is of critical importance to the continued development and expansion of employment in County Kerry. In addition, the Council support the sustainable development of indigenous energy resources, with an emphasis on renewable energy supplies, in the interests of economic progress and the proper planning and sustainable development of the

county. The development of secure and reliable electricity transmission infrastructure is also recognised as a key factor for supporting economic development and attracting investment to the County.

The ongoing need for curtilage management and the restriction of lands uses, which might affect the ability to consolidate and/or expand operations, is essential. Therefore, we welcome supporting statements in the Draft Plan, in relation to route corridor protection, such as, under section 12.1, where it states:

> *"…support the safeguarding of strategic energy corridors from encroachment by other developments that could compromise the delivery of energy networks."*

ESB welcome support for energy utility providers to reinforce and strengthen existing utility infrastructure and transmission/distribution networks. In this regard, ESB support the continuance of Objectives KCDP 12-6 and KCDP 12-7 of the Draft CDP, where it states:

> **KCDP 12-6**
> *"Facilitate sustainable energy infrastructure provision, so as to provide for the further physical and economic development of the County."*
>
> **KCDP 12-7**
> *"Support and facilitate the sustainable development of enhanced electricity and gas supplies, additional electricity generation capacity, and associated networks, to serve existing and future needs of the County."*

It is acknowledged that over 40% of the county is designated under the Natura 2000 network and that the Council shall work in partnership with existing service providers to facilitate required enhancement and upgrading of existing infrastructure and networks (subject to appropriate environmental assessment and the planning process). In this regard, we welcome the update to KCDP 12-8 in the 2022 Plan and highlight that concerns about visual, amenity, health and safety need to be mitigated through the consultation process. The NPF, RSES and Local Development Plans and the Strategic Infrastructure Act provides the necessary framework for ensuring that all necessary standards are met and that extensive statutory and non-statutory consultation is an intrinsic part of the planning process. This ensures that there is ongoing consultation with local communities and local authorities regarding the construction of new networks.

ESB supports the promotion of energy infrastructure objectives and submit that they must continue to protect the County's future capacity for the development of energy generation, a processing and transmission.

2.1.1 ESB Networks Dingle Project

ESB is very proud to be associated with the Dingle Innovation Hub in developing workable solutions to facilitate the transition to a low carbon society. ESB Networks is working with the local community in discovering what opportunities the future of energy can unlock. The largest innovation programme undertaken by ESB Networks aims to help future-proof the electricity network for the benefit of homes, farms and businesses.

In Dingle, five local ambassadors were selected and each received a range of low carbon technologies including an Electric Vehicle Charge Point, Air Source Heat Pump, Rooftop Solar PV, Controllable Immersion, Smart Circuit Breaker, Smart Meter, Battery Storage System and a Smart Living Gateway. Each ambassador is exploring these new technologies and sharing their

experiences with the wider Dingle community and in doing so help inform us as to how customers use and engage with new low carbon and Smart grid technologies and the impacts on the distribution system.

We welcome the ambition of Kerry County Council to work with Dingle Creativity and Innovation Hub to pilot Dingle as decarbonising zone for the county. This is underpinned by Objective KCDP 2-3, which states:

> **KCDP 2-3**
> *"Facilitate the development of a Regional Development Plan to provide a framework for action on decarbonisation across all sectors and support Dingle Decarbonisation Zone as a pilot initiative to identify and develop additional Decarbonising Zones within the County."*

The Dingle Project will shape and inform what the smart integrated electricity network of the future might look like. The learning that ESB develop in Dingle will help inform how we plan our network over the coming years and deliver on the challenge of increasing renewable generation connections and distributed energy sources as well as the electrification of heat and transport.

2.2 Generation & Renewables

In line with the Government's response to the Climate Change Crisis, ESB is increasing renewables in our power system from 30% up to 80% by 2030 with a broader range of technologies likely to be deployed e.g., offshore wind, wave, solar etc. ESB welcomes the vision and ambition set out in Chapter 12 of the Draft CDP – *Energy* as outlined in Objective KCDP 12-12:

> **KCDP 12-12**
> *"Maximise the development of all renewable energies at appropriate locations in a manner consistent with the proper planning and sustainable development of the County."*

In reviewing Chapters 9 & 12 along with Appendix 6 - *Wind Zoning Methodology* and the Development Management Standards in Volume 6 of the Draft CDP, ESB acknowledge the overall consistency and alignment with the objectives of the NPF, RSES and national guidelines. ESB wish to make some observations in relation to the renewable technologies and ancillary developments as set out below.

2.2.1 Onshore Wind

According to the SEAI *Energy in Ireland, 2021 Report*, 42% of all electricity generated in 2020 came from renewable sources, 86% of which came from wind, with the remaining 14% split evenly across hydroelectricity and bioenergy. This is an encouraging trend, but further acceleration of deployment is necessary to achieve the Government's target for electricity of up to 80% from renewables by 2030.

The Draft Plan identifies that County Kerry is already making a significant contribution to wind energy delivery amounting to approximately 18% of the total national wind generation. Among the existing wind farms in County Kerry, ESB owns and operates Mount Eagle Wind Farm (6.8MW) outside Castleisland with 14 turbines and Grousemount Wind Farm (114MW), near Kilgarvan with 38 turbines.

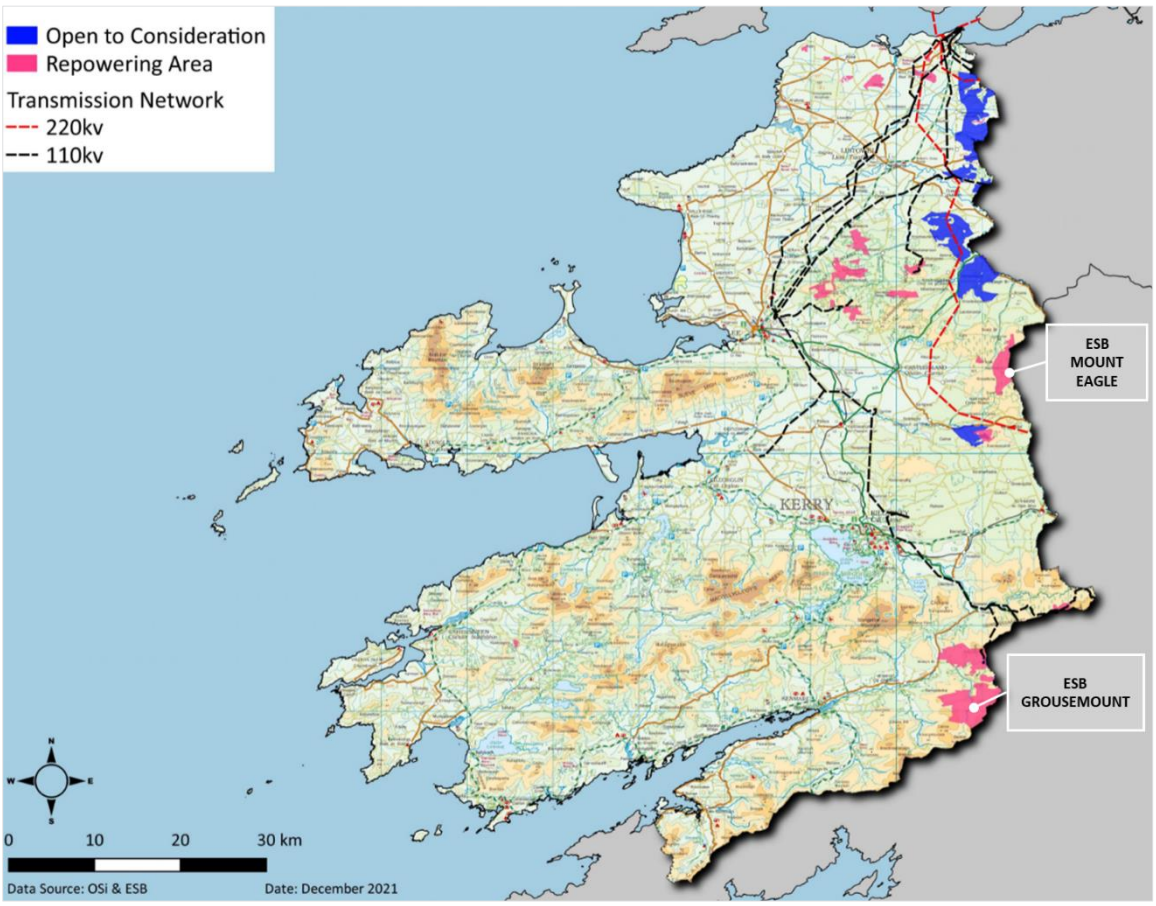

Fig. 1 – Extract of Map 12.4 Wind Energy Areas

We acknowledge that the *Draft Revised Wind Energy Development Guidelines 2019 (DHPLG)* and the SEAI Methodology for Local Authority Renewable Energy Strategies (LARES) have been used to inform wind energy policy in the Draft Plan. In this regard we welcome the inclusion of Objective KCDP 12-13, which states:

> **KCDP 12-13**
> *"Ensure that projects shall be designed and developed in line with the Draft Revised Wind Energy Development Guidelines (DHPLG, 2019) and any update of these guidelines in terms of siting, layout and environmental studies."*

ESB support a Plan led approach through the identification of areas for wind energy development. The Wind Zoning Methodology set out in Volume 1; Appendix 6 of the Draft Plan identifies the most suitable locations for wind energy development. The identified areas have been derived following a comprehensive sieve mapping analysis. Map 12.4 (extract above) displays the outcome of the process and highlights areas *'Open for Consideration'* and *'Repower Areas'*. Applications for windfarms in these areas will be assessed on a case-by-case basis, subject to viable wind speeds, environmental resources and constraints and cumulative impacts in compliance with Article 6 of the Habitats and EIA Directives.

Section 12.5.4.1.4 in Chapter 12 and section 1.15.1 in the Development Management Standards set out how proposals in areas *'Open for Consideration'* will be assessed. This is further reinforced by objective KCDP 12-14.

Our initial analysis of the areas identified as *'Open for Consideration'* highlights that it may not be possible to secure planning permission for viable windfarms at these locations due to the turbine heights required coupled with the proximity of residential property. To compete in future RESS auctions, developers will probably need to seek planning permission for turbines of 4MW - 6MW in size. As the minimum viable tip height for these turbines is 180m and the Draft Wind Energy Development Guidelines require 4 times the tip height separation from residential property (i.e. 720m), our analysis concludes it may not be possible to secure planning in the areas identified as '*Open for Consideration'.*

In order to obtain planning permission for new commercial windfarms outside the *"Repowering Areas"*, Kerry County Council may need to re-examine the *'Landscape Character Assessments'* for areas 1-25 referenced in Appendix 6, *Wind Zoning Methodology,* of the Draft CDP and seek to increase areas available for new development. In particular, the visual impact assessment should consider the benefits of having a smaller number of larger turbines in the landscape. While these larger turbines will be visible, their size can complement the grandeur of the Kerry landscape at some locations.

As an owner and operator of two wind farms in the County, ESB welcome the provision of supporting objectives for repowering of existing wind farms. Repowering can grant a new lease of life to existing renewable energy projects by extending the planning lifetime of existing windfarm with no, or minimal, new development. Well-maintained renewable energy projects and associated plant can operate safely after a planning expiry date of 20-30 years. Existing developments have the benefit of acceptance by local communities and contribute economically to the County through the payment of rates and community benefit funds. It is noted that repowering of existing wind energy developments may be considered within or adjacent to European sites and dealt with on a case-by-case basis. In conjunction with Map 12.4, Objective KCDP 12-16 sets out support for the sustainable replacement of turbines or repowering of energy projects and outlines the requirements for proposals that are in close proximity to SPAs designated for Breeding Hen Harrier.

Whilst noting that extensions to existing windfarms will not be permitted within Natura 2000 sites (KCDP 12-19), we welcome the inclusion of Objective KCDP 12-18 that states:

> **KCDP 12-18**
> *"Consider extensions to an existing windfarm where it can be demonstrated to the satisfaction of the planning authority that there will be no significant adverse impact on residential amenity, the built environment, or on the visual character of the landscape."*

Although the Draft Plan contains comprehensive development guidance for windfarms, we wish to highlight that assessing the County Development Plans and Wind Energy Strategies of adjoining counties would strengthen the Plan. It is noted that there is good consistency across County Development Plan's and the Wind Energy Strategies of some counties. However, there is scope to improve on this consistency further in order to facilitate the development of windfarms across county boundaries. Implementation of Regional Policy Objective (RPO 98 and RPO 99) of the RSES would help ensure consistency across the region. Unless this is achieved, a windfarm development on one side of border may not have scale to compete in future Renewable Electricity Support Scheme auctions and therefore may never get built – thereby reducing opportunity for both counties to benefit from jobs, rates and community benefit schemes associated with the windfarm development.

2.2.2 Marine Renewable Energy & Offshore Wind

As highlighted in the Draft Plan, the emergence of opportunities to exploit offshore energy potential have developed significantly in recent years and will continue to do so as technology advances in

this sector. The Draft National Marine Planning Framework will deliver a new spatial system for the designation of marine zones for offshore energy. We welcome that Kerry Co. Co., as highlighted in Objective KCDP 9-83, will co-operate with state and semi-state agencies in relation to the implementation of projects in the marine sector.

> **KCDP 9-83**
> *"Support the National Marine Planning Framework, the Offshore Renewable Energy Development Plan (OREDP) 2014 and its successors in the progressive sustainable development of Ireland's offshore renewable energy potential and cooperate with state and semi-state agencies in relation to the implementation of these and supporting projects in the Shannon Estuary in a sustainable manner."*

Floating offshore wind (FOW), it is a fast-maturing generation technology and is moving progressively and steadily towards a real commercial opportunity which could unlock the significant potential in Irelands deeper offshore areas. Most wind turbines today are fixed to the seabed, so-called bottom-fixed, in waters less than 60 metres deep. The next generation of offshore wind turbines are designed to float further out to sea, where winds are stronger, but the water depths make bottom-fixed designs uneconomic.

The energy resource available to floating offshore wind off the coast of Ireland is immense, with the SEAI, OREDP and the Programme for Government 2020 referencing up to 30GW. The Programme for Government 2020 acknowledges the role floating offshore energy will play in Irelands future, stating:

> *"We will also produce a longer-term Plan setting out how, as a country, we will take advantage of the massive potential of offshore energy on the Atlantic Coast. This Plan will set out how Ireland can become a major contributor to a pan-European renewable energy generation and transmission system, taking advantage of a potential of at least 30GW of offshore floating wind power in our deeper waters in the Atlantic."*

ESB's Brighter Future Strategy sets out a major aspiration to develop in excess of 2GW of offshore wind in Ireland and the UK by 2030. ESB entered into a development partnership with Equinor a global leader in the development of floating offshore wind having successfully constructed Hywind Scotland, the world's first commercial floating wind farm located off the coast of Scotland. The partnership has identified a number of potential offshore wind development sites, along the Irish coast. Already, we are working on developments in the Irish Sea, off the coast of Dublin. Sea Stacks offshore wind farm (www.seastacksoffshorewind.ie) is one of ESB's proposed projects and is located c.12km from the Dublin/Wicklow coast. The expected capacity of the project will be approximately 800MW.

The creation of a new industry presents a major opportunity for economic growth on the Irish coastline and Kerry, along with the South West Region, has the potential to be at the centre of that development. As outlined in section 9.6.1.1 *Shannon Estuary (SIFP);,* combined with the presence of grid connections, there are significant opportunities to grow offshore wave and wind renewable energy in the Shannon Estuary. Strategically located port facilities and land based supporting infrastructure will be required to support the ambition of harnessing the energy of the marine area. The commitment under Objective KCDP 9-83 above, to support and facilitate the Strategic Integrated Framework Plan (SIFP) for the Shannon Estuary offers an opportunity to ensure the development of this key supporting ancillary onshore infrastructure required to support this emerging industry in the Region. This is further underpinned by Objectives KCDP 9-84 and KCDP 12-29:

KCDP 9-84
"Support the sustainable development of land-based, coastal infrastructure that is critical to and supports development of Offshore Renewable Energy, including sustainable development of port infrastructure to service such developments."

KCDP 12-29
"Support the sustainable development of onshore infrastructure, including grid connections, to facilitate the development of offshore energy projects at appropriate locations and further to environmental assessments."

Offshore renewable energy in Ireland will act as a driver to significantly reduce greenhouse gas emissions and accelerate the move to cleaner energy in line with national and EU policy.

2.2.3 Solar

Photovoltaic (PV) systems which produce electricity directly from solar radiation are becoming more widespread as their advantages become apparent and as costs fall. Solar projects will play a critical role in diversifying our renewable generation portfolio for the period out to 2030. Ireland is in a great position to take advantage of the significant reduction in the cost of solar energy over the past few years as the technology has advanced with the potential to provide a clean, diversified renewable electricity source for decades to come. Solar energy is suited to Ireland's climate and we expect to follow the trend of other European countries and see increasing deployment of rooftop and grid scale solar energy. There is a strong correlation between wind and changing weather systems. In times of low wind there are often good solar conditions.

Mapping for solar irradiation illustrates that parts of North Kerry rank highly in terms of solar resource in Ireland. In this regard, we welcome the support for the development of solar energy in the County as set out in the Draft Plan under Objectives KCDP 12-21 and 12-22. In the absence of national policy guidelines, Development Management Standards, Volume 6, section 1.15.2, *Solar Energy,* presents the criteria by which applications for solar farms will be assessed.

ESB wish to highlight that solar farms have potential to be built on agricultural land, whilst also accommodating the continued use of the land for grazing or for incorporating biodiversity measures within a project. We also wish to highlight that the overall guidance on solar developments could be strengthened with the provision for extension of duration of permission. Currently, Solar PV developments can take in excess of 5 years to develop to construction phase. Securing a grid connection, relevant support tariff or corporate power purchase agreement and securing project finance has introduced significant delays for developers. Therefore, notwithstanding the provisions of Section 42 of the Planning & Development Act 2000 (as amended), it may be more appropriate for the Planning Authority to retain the option to grant permission for a longer period if requested by the developer in appropriate circumstances.

In addition, the lifetime of solar developments is extending with most technologies now suitable for a minimum of 30 years operation. Investment decisions for projects are being made on project lifetimes of up to 40 years. In this regard, ESB request that permissions are granted with a lifetime up to a maximum of 40 years. Concerns regarding the deterioration of the infrastructure can be addressed by the lodgement of a financial security in the form of a bond and the requirement to provide a Decommissioning Plan, as specified. This will ensure that the development is maintained until decommissioned and appropriately restored to agricultural use.

2.2.4 Energy Storage

ESB note that the Draft Plan has considered emerging renewable energy storage technologies such as battery storage systems and other sources of renewable energy technology that are a viable means of providing energy security. This is highlighted in Chapter 12 and support included in Objective KCDP 12-.30:

> **KCDP 12-30**
> *"Facilitate the sustainable development of Battery Storage systems in appropriate locations at or adjacent to existing energy infrastructure, subject to requirements and considerations in relation to: residential amenity, landscape, cultural heritage, Natura 2000 sites and the Habitats & Birds Directive, the objectives of the Water Framework Directive; flood Directive, electricity infrastructure and health & safety."*

Energy Storage systems such as batteries, liquid air energy storage are some of the technologies being explored that will be essential to smoothing out the natural variability that occurs in renewable energy sources and to provide electricity at times of peak demand. Utility-scale battery storage systems are being utilised to enable more efficient use of renewable energy.

At present, ESB's is installing a synchronous condenser at Moneypoint, Co. Clare which will be the first in the country and will incorporate the world's largest flywheel for grid stability. The grid stability provided by the synchronous condenser will replace and displace a fossil generator from providing these stability services, thereby lowering the carbon intensity of the electricity system. Due to the intermittency of wind energy in particular, grid stabilization technologies have an increasingly important role in a successful energy transition and this new technology is being deployed as a cost-effective and zero-carbon solution in strengthening the stability and resilience of the Irish grid. This is part of the plan to transform Moneypoint site into a green energy hub, where a range of renewable technologies will be deployed over the next decade with the capacity to power 1.6 million homes.

ESB is already installing Battery Energy Storage Systems (BESS) at existing facilities. BESS will operate by charging batteries using electricity and storing the energy until it is required. In addition, these batteries can stabilise the frequency of the electricity network further enabling the operation and stability of a highly renewable system.

ESB has partnered with dCarbonX on the assessment and development of Irish offshore green hydrogen subsurface storage. Green Hydrogen, which is produced from renewable energy sources, offers potential for large scale seasonal storage of variable renewable energy. This enables zero carbon backup to the power system when intermittent renewables such as wind and solar are not available. Large scale Green Hydrogen production and storage could leverage the continental scale of Ireland's renewable energy potential to enhance Ireland's energy security and to make Ireland a net exporter of energy.

2.2.5 Hybrid Renewables

Hybrid renewables consists of two or more renewable energy sources used together to provide increased system efficiency as well as greater balance in energy supply, whilst optimising use of existing infrastructure. By developing hybrid renewables, plant consisting of wind, solar and battery exporting from common point of connection, but at different times, the need for transmission infrastructure associated with new generation is minimised and grid stability can be improved on.

As mentioned above, repowering with hybrid renewables can grant a new lease of life to existing windfarms and other generation sites. As recognised in the Draft Plan, East Kerry is well served by the grid with an existing 220kV and 110kV transmission lines providing a high-capacity path for power through the Southern Region and on to the East Coast. Utilising existing infrastructure will enable accelerated connection of onshore and offshore wind to the system. By utilising hybrid connections, offshore wind projects can be efficiently delivered in a more cost-effective manner when compared

to building a dedicated offshore wind grid electrical connection infrastructure. For these reasons, we would suggest that an opportunity exists for the inclusion of support for the concept of Hybrid Renewables in the Draft Plan. An additional Objective, containing wording as suggested below would be welcome.

> *"Support and facilitate proposals for hybrid energy systems and/or co-location of renewable energy where applicable where such development has satisfactorily demonstrated that it will not have adverse impacts on the surrounding environment."*

2.2.6 Renewables-Enabling Plant

Energy security and sustainability are the main concerns in combatting climate change. Notwithstanding the Government's aim to increase the percentage of electricity generation from renewables to 80% by 2030, the contribution from non-renewable sources will still consist of 20%. Furthermore, on dull still days or nights, almost all electricity may sometimes need to come from non-renewables generation.

We note that the requirement for renewables-enabling Plant is not acknowledged in the Draft Plan. Given that North Kerry has access to Gas Network, the inclusion of the text below as a promotional Objective for the development of Renewable Enabling Plant will further assist in the transition to a low carbon economy.

> *"It must also be recognised that natural gas, particularly renewable and indigenous gas, will continue to have a role to play in the transition to a low carbon economy. As such, renewable energy developments may require support from such sources in times of high energy demand."*

ESB support this provision as it will be a necessary to connect additional non-renewable Plant to the grid. This efficient Plant can be applied rapidly to provide operational flexibility and the required grid support services, when needed. Typical Plant consists of fast-responding gas turbines (i.e. FlexGen Plant) to provide backup power and synchronous condensers to provide inertia & grid stability. FlexGen gas turbines need to be located close to existing 110kV or 220kV stations and the gas grid.

2.3 Telecommunications

The provision of high-quality telecommunications infrastructure is recognised by Kerry County Council as critical to the development of a knowledge economy and will help attract inward investment in hi-tech, knowledge-based industries.

ESB supports the approach and the view of Kerry County Council that to facilitate the provision of telecommunications services at appropriate locations within the County, the applicant must demonstrate compliance with national guidance. The Draft Plan recognises that applications for telecommunications development shall be consistent with the updated guidelines (PL 07/2012) that facilitate the improved development of telecommunications infrastructure and promotion of a policy of co-location.

The updated Guidelines facilitate the improved development of telecommunications infrastructure and promotion of a policy of co-location. ESB's telecoms infrastructure in the County continues to assist in delivering enhanced communications networks through the provision of backhaul fibre and shared telecommunications towers. In addition, ESB Telecoms are working with ESB Networks to upgrade internal ESB Communications Networks to facilitate the roll-out of ESB's 'Smart Metering' project. The successful delivery of 'smart metering' is a central component of Ireland's plan to combat climate change through the reduction of unnecessary energy usage. Due to the extent and reach of the electricity network, additional masts may be required in some locations to ensure the

delivery of 'smart metering' to all areas. ESB Telecoms will work within the development management standards to deliver this infrastructure.

All ESB Telecoms Mast sites are open for co-location and duplication of infrastructure is reduced as a result. ESB supports the Telecommunications policy that promotes co-location. ESB encourages policies consistent with the Department Circular to allow for the improved development of telecommunications infrastructure, particularly broadband capability in the area.

2.4 Sustainable Transport & Electric Vehicles

With Ireland's natural advantages in terms of wind and other renewables a large proportion of the power used by electric cars will be carbon free in the future. The Irish Government's Climate Action Plan 2021 has set stretching targets for EV adoption in Ireland to address energy demand and reduce emissions from Transport including achieving:

- 840,000 passenger vehicles by 2030.
- 95,000 electric vans and trucks by 2030.
- Procuring 1,200 low-emissions buses for public transport in cities.
- Building the EV charging network to support the growth of EVs at the rate required and develop our fast-charging infrastructure to stay ahead of demand.
- New scheme for 200 on-street public charge points per year for electric vehicles

The above targets demonstrate that EV's (incl. plug-in hybrid electric vehicles PHEV's) are central to Government targets for zero carbon emissions transportation systems. The establishment of EV infrastructure by ESB and the associated EV usage aligns with the key principles and benefits of sustainability and the National Climate Change Strategy on reduction of emissions.

There are currently over 45,000 EVs registered on Irish roads, so while the number has improved, the pace of uptake must increase over the coming years to achieve our fleet electrification targets. The overall support for Electric Vehicles throughout the Draft Plan is acknowledged. Objectives KCDP 2-12, KCDP 14-36, KCDP 14-37 all seek to support the expansion of the EV charging network by increasing the provision of designated charging facilities. These promoting objectives are under pinned by the parking standards set in section 1.20.2 of the Development Management Standards.

ESB welcome the above initiatives, however, it is very important to note that the EU Energy Performance of Buildings Directive calls for an **increase to 20%** for the number of parking spaces which should have provision for electric vehicle charging infrastructure. In preparing the final CDP, an opportunity exists to ensure availability is expanded, in line with the new directive so that the County is consistent with National and Regional Policy in relation to the provision of electric vehicle infrastructure over the lifetime of the new plan.

Therefore, to ensure that the Kerry County Development Plan increases the usage of electric vehicles to the levels required, we request that the standards as set out in Statutory Instrument No. 393/2021 – European Union (Energy Performance of Buildings) Regulations 2021. The standards in the table below are consistent with the above Regulation and should be considered for inclusion in section 1.20.7 Car Parking Standards, in Volume 6, Development Management Standards.

The standards below or similar have been implemented in the latest review of Development Plans by Planning Authorities in Ireland. Promoting policies and objectives are facilitating growth in charge point infrastructure, to become a comprehensive network of public and domestic charge points, with open systems and platforms accessible to all supply companies and all types of electric cars.

Development Category	EV Charging Points
Residential multi-unit developments both new buildings and buildings undergoing major renovations (with private car spaces including visitor car parking spaces).	A minimum of 1 EV charge point space per five car parking spaces (ducting for every parking space shall also be provided)
New dwellings with in-curtilage car parking.	Installation of appropriate infrastructure to enable installation of recharging point for EV's.
Non-residential developments (with private car parking spaces including visitor car parking spaces with more than 10 spaces e.g., office developments)	Provide at least 1 recharging point, and a minimum of 1 space per five car parking spaces should be equipped with one fully functional EV Charging Point.
Developments with publicly accessible spaces (e.g., supermarket car park, cinema etc.)	Provide at least 1 recharging point, and a minimum of 1 space per five car parking spaces should be equipped with one fully functional EV Charging Point.

Table 1. Proposed EV Charging Point Standards

2.4.1 Other Sustainable Transport

ESB also wish to highlight that, green renewable hydrogen enables the further electrification of transport, allowing the full decarbonisation of the transport sector, as well as improved air quality as the technology replaces diesel buses and diesel HGV across Ireland.

In partnership with CIE and Bus Éireann, ESB was part of a new, in-service, trial of fuel cell electric buses powered by hydrogen produced from renewable electricity from ESB's Ardnacrusha hydro-electric power station. ESB has been actively engaging with Hydrogen Mobility Ireland (a partnership of businesses, public sector and academic stakeholders) to deliver a coordinated approach to this cutting-edge technology. This will ensure that Ireland can benefit from being an early starter in this solution to further decarbonise transport using renewable energy.

3. CONCLUSION

Investment in infrastructure is crucial to the economic and social well-being of our country. Such investment creates jobs, stimulates economic activity and provides modern, efficient facilities to provide the services that people need including healthcare, education and community services amongst others. There is a significant multiplier effect from investment in infrastructure which means that it stimulates growth in the local economy. This investment in infrastructure is also necessary to support EU and national policy on Climate Change adaptation and mitigation.

ESB, Ireland's leading electricity utility, is building a truly sustainable company by investing in smart networks, renewable energy and modernising the generation portfolio. Sustainability, both within the company and in the services we provide, is integral to our corporate strategy. We are committed to reducing carbon emissions and addressing long-term concerns over future fuel supplies. ESB is implementing energy strategies that support the transition of Ireland to a low-carbon and ultimately post-carbon economy to become a competitive, resilient and sustainable region. We request that due consideration is given to the issues raised in this submission, most particularly, that the final County Development Plan includes clear policies in relation to:

- Ensuring that the long-term operational requirements of existing utilities are protected. The importance of existing infrastructure and the associated Electricity Generation, Storage, Transmission and Distribution operations are strategic and national in nature.

- The final Plan should maintain the planning policies which protect the County's future capacity for the development of energy infrastructure whilst encouraging the sustainable development of renewable energy resources, including energy storage systems and landside developments for offshore wind. This will enable ESB to develop and maintain a safe, secure, reliable, economical and efficient electricity Generation, Transmission and Distribution System with a view to ensuring that all reasonable demands for electricity are met having due regard for the environment.

- As the viable tip height for new turbines is now typically 180m and the Draft Wind Energy Development Guidelines require 4 times the tip height separation from residential property (i.e. 720m), Kerry County Council should consider a re-examination of the *'Landscape Character Assessments'* for areas 1-25 referenced in Appendix 6, *Wind Zoning Methodology*, of the Draft CDP and seek to increase areas available for new development.

- Ensuring energy security during the transition to an all-green and renewables electricity sector by providing for adequate supporting energy structure which will include using the cleanest natural gas technologies aiding the integration of renewables in the shift to a sustainable energy system.

- Kerry's coastal location coupled with a good solar irradiation and significant grid network present opportunities to maximise energy generation by solar means. It is appropriate that permissions for Solar PV are granted with a lifetime up to a maximum of 40 years which reflects the operational life and financial modelling for current solar technologies.

- Support for hybrid connections (co-location of two or more renewable energy sources) as ESB has determined that enabling hybrid connections can expedite the connection of offshore wind.

- Commitment to support and facilitate the Strategic Integrated Framework Plan for the Shannon Estuary which recognises the importance that future development of industry in the Estuary derives from the benefits of key existing assets including major energy infrastructure and the significant potential to harness marine based renewable energy.

- Promoting, encouraging and facilitating the use of sustainable modes and patterns of transport, including electric vehicles, to ensure the implementation of the latest standards consistent with S.I. No. 393/2021. This will support the extension of charge point infrastructure to ensure it becomes a comprehensive network of public and domestic charge points with open systems and platforms accessible to all supply companies and all types of electric cars.

If we can be of any further assistance, or if you wish to clarify any of the points raised, please do not hesitate in contacting the undersigned.

Yours sincerely,

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