



## **Draft Clare CDP 2023-2029 - Public Consultation Portal**

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### **Volume 1**

Climate Action and Renewable Energy, Transport, Service Infrastructure and Energy, Shannon Estuary, Marine and Coastal Zone Management

### **Volume 3(a) Ennis Municipal District Written Statements and Settlement Maps**

### **Volume 3(b) Shannon Municipal District Written Statements and Settlement Maps**

## **Volume 3(c) Killaloe Municipal District Written Statements and Settlement Maps**

## **Volume 3(d) West Clare Municipal District Written Statements and Settlement Maps**

### **Associated Documents**

Volume 5 Clare Renewable Energy Strategy, Volume 6 Clare Wind Energy Strategy, Volume 9 Strategic Integrated Framework Plan (SIFP) for the Shannon Estuary

### **Environmental Reports**

None of the above

### **Your Submission**

Please see attached document.

### **Location Map**



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# Clare County Development Plan 2023-2029

Submission on behalf of ESB to the Clare County Development Plan 2023–2029  
28/03/2022



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## 1. INTRODUCTION

Electricity Supply Board (ESB) welcomes this opportunity to make a submission to the Draft Clare County Development Plan 2023 – 2029. ESB is a landowner and employer in Clare 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 vision 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 2023 - 2029.

### 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.

Located near Kilrush, ESB Moneypoint is one of Ireland's largest electricity generating stations with a total capacity of 915 MW – yearly, this can add up to around 5 million MW hours. However, work is already underway to transform this strategic site into a green energy hub, where a range of renewable technologies will be deployed over the next decade under the '*Green Atlantic @Moneypoint*' project. Already located on lands adjacent to the power station is Moneypoint Wind Farm. This 17MW renewable energy project consists of 5 wind turbines and has the ability to deliver enough clean, green, indigenous electricity equivalent to the needs of approximately 10,000 homes.

In addition, ESB owns and operates the hydro-electric power station at Ardnacrusha. The hydro system (also known as the Shannon Scheme) is the largest hydroelectric power scheme in the



country, with a current capacity of 86MW. About two percent of Ireland's electricity generating capacity is in the form of hydropower.

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 Clare 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.

### 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 Ennis and Shannon, 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 1.3 *Format and Content of the Clare County Development Plan 2023 - 2029*, shall be informed by the hierarchy of national, and regional planning policy. This is reinforced through Key Goal XIX, under section 1.6, that states:

### Goal XIX

*“A county that manages and monitors the county level implementation of the National Planning Framework, Regional Spatial Economic Strategy, national plans and guidelines to ensure that quality of life, sustainability, climate action, resilience and inclusivity are the fundamental principles of the future sustainable development of the county.”*

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 support for the implementation of Plan Objective CDP2.1 and acknowledge that climate action provisions are integrated as a cross cutting theme throughout the plan. 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. As recognised in section 2.7.6 *Energy Generation and Use*, through the Renewable Energy Strategy (RES), the Wind Energy Strategy (WES), and the related objectives of the Draft CDP, Clare County Council will support and facilitate renewable energy use and sustainable generation at appropriate locations within both the County and its offshore waters to meet national objectives towards achieving a low carbon economy by 2050. The RES outlines the strategy for renewable energy developments including solar energy, bio-energy, marine renewables, hydroelectric power and renewable heat. The RES also outlines the strategy with regard to issues such as micro generation, micro hydroelectric power, renewable transport, energy storage and community energy.

In reviewing the Draft Plan, including the RES and WES, 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. Across the Draft CDP, but most particularly in Chapter 11, *Physical Infrastructure, Environment & Energy*, and Chapter 16 of the RES, *Supporting Infrastructure*, the Council recognises that the availability of energy is of critical importance to the continued development and expansion of employment in County Clare. 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, that seek to reinforce the existing grid including grid connections, transboundary networks into the County and the expansion into areas not adequately serviced. The support for ongoing transmission projects is noted including the new 400kV submarine cable to connect Moneypoint to North Kerry. 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 Plan Objective CDP11.45, that includes supportive statements such as:

**CDP11.45 (a)**

*“To Facilitate improvements in energy infrastructure and encourage the expansion of the infrastructure within the County.”*

**CDP11.45 (b)**

*“To facilitate future alternative renewable energy developments and associated utility infrastructure throughout the County.”*

It is also acknowledged that significant parts of the county are 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 note CDP11.45 (f) and the further reference to CDP3.1 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, processing and transmission.

## 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 broad support for the development of renewable energy technologies across the entire plan, including the RES and WES. This support is amplified through the vision and ambition set out in Goal I, Chapter 1 of the Draft CDP:

**Goal I**

*“A county that is resilient to climate change, plans for and adapts to climate change and flood risk, is the national leader in renewable energy generation, facilitates a low carbon future, supports energy efficiency and conservation and enables the decarbonisation of our lifestyles and economy.”*

In reviewing the Written Statement of the Draft CDP along with associated Appendices, 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 Moneypoint & Shannon Estuary

As mentioned previously, ESB owns and operates Moneypoint Generation Station located near Kilrush, Co. Clare. The overall site operational site area is 561 acres; the land area measures c.398 acres and the foreshore area is c.163 acres. Moneypoint Generating Station has an installed capacity of 915MW with the recently installed Windfarm with 17MW installed capacity. Moneypoint continues to be strategically important in terms of capacity and security of supply through providing diversity in fuel supplies and providing critical energy storage in an increasingly volatile global energy market. However, as Moneypoint nears the end of its operating life in its current configuration, ESB is planning, through its '*Green Atlantic @Moneypoint*' project to develop more suitable low carbon generation technology to capitalise on the extensive Marine, Transmission, Distribution and ancillary facilities at this strategically important location.

The '*Green Atlantic @Moneypoint*' project aims to transform Moneypoint into a green energy hub. It involves a multi-billion Euro investment that will result in hundreds of jobs and deliver vital elements of renewable infrastructure to ensure Ireland becomes a leader in green energy production, such as:

- **Renewable Enablement** - through the development of a Synchronous Compensator to enable higher volumes of renewables on the electricity grid.
- **Floating Offshore Wind Farm** – development of a 1,400MW wind farm off the coast of counties Clare and Kerry.
- **Wind Turbine Construction Hub** – Moneypoint will become a centre for the construction and assembly of floating wind turbines, utilising the deep-water port facilities and the Shannon Estuary.
- **Hydrogen Energy** - ESB's plans include investment in a green hydrogen production, storage and generation facility at Moneypoint towards the end of the decade.

The Shannon Integrated Framework Plan (SIFP) identifies Moneypoint as a Strategic Development Location (SDL). This is further recognised in Chapters 9 & 12 and throughout the Draft CDP. Section 12.2.2.2 *Moneypoint*, highlights the strategic importance of the Moneypoint site, including the network of 400, 220, and 110kV power lines radiating from the station. ESB welcome the commitment from Clare County Council to support the '*Green Atlantic @Moneypoint*' project and in so doing, safeguard future operations and proposed development at Moneypoint to ensure the efficient production of environmentally sustainable electricity and security/diversity of supply in the future while upholding the environmental integrity of the Shannon Estuary.

Development Plan Objective, CDP 11.50 demonstrates clear support for our projects at Moneypoint, stating that it is an objective of Clare County Council:

#### **CDP11.50**

- "a) To support the sustainable technology upgrading and conversion of power stations in the County including Moneypoint to the use of energy efficient and renewable energy sources; and*
- b) To support the redevelopment of the Moneypoint power generation station site as a green energy hub subject to the requirements of the Habitats and Birds Directive, Water Framework Directive, and all other relevant EU Directives."*

Plan Objective CDP12.6, along with Map 12B *Strategic Development Location B* (Fig. 1 below), further underpins the support of Clare County Council to safeguard the role and function of Moneypoint as a key strategic location for the driver of economic growth in the Country. As displayed in the amended map below the operational footprint of the Moneypoint Station extends beyond the existing jetty area to include the Foreshore Area within ESB ownership. It should be noted that as we manage the transition to more sustainable means of generation the existing plant at Moneypoint will continue to play an important role in providing a supply of stable energy output. This process may involve minor adjustments to the plant as it moves to the final stages of its life cycle. In this regard, we welcome the inclusion of Plan Objective CDP 12.6 (a) that states:

**CDP12.6 (a)**

*“To safeguard the role and function of Strategic Development Location B – Moneypoint as a key strategic driver of economic growth in the Country, facilitating its sustainable growth, operational expansion and diversification, in accordance with national and regional energy objectives.”*

Looking to the future delivery of Parts (b) & (c) of the above Plan Objective will facilitate ESB in delivering on our ambitions for the site, help Ireland meet its climate targets and maintain secure supplies of electricity in the future.

**CDP12.6 (b)**

*“To support the redevelopment of the Moneypoint power generation station site as a green energy hub and the development of the Shannon Estuary as a focal point for the offshore wind industry in Europe.”*

**CDP12.6 (c)**

*“To support and facilitate the development of marine related industry on lands adjacent to Moneypoint which is compatible with the primary use of the SDL as a Strategic Energy Location.”*

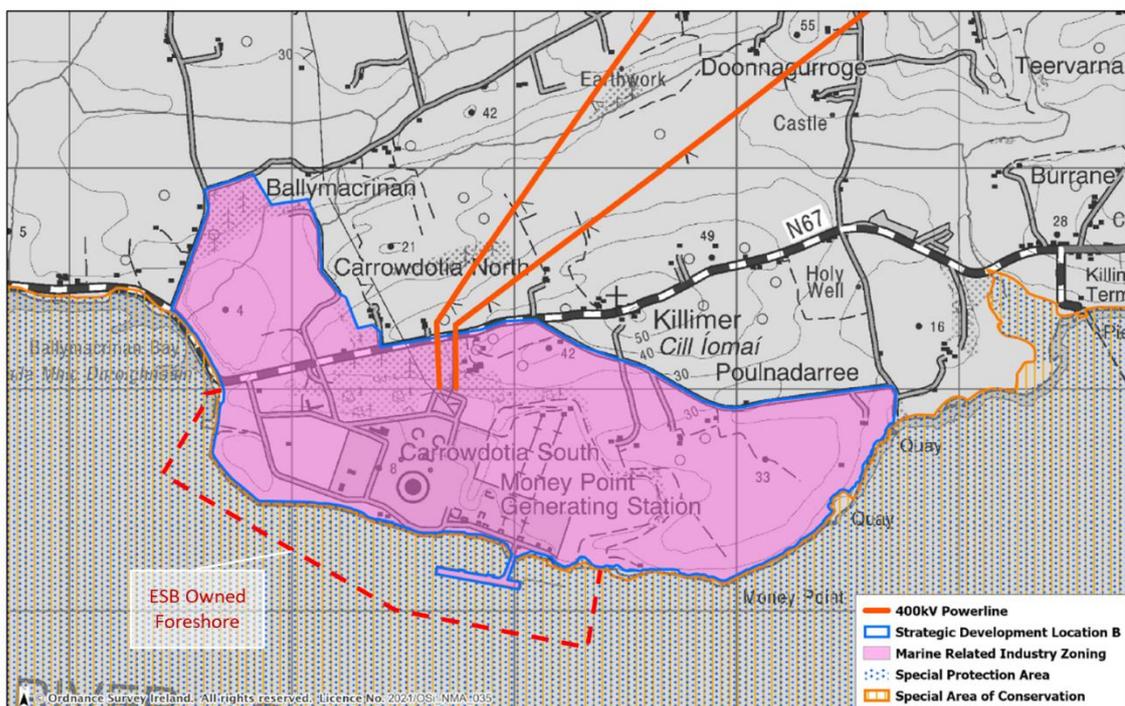


Fig. 1 Extract from Draft CDP – Map 12B with ESB Foreshore Area Displayed

As highlighted, the ESB landholding at Moneypoint will remain an important site for electricity generation and associated infrastructure into the future. In considering the future of Moneypoint we are guided by the need for the protection of this site, to ensure the continuation of core power generation, transmission and distribution functions and to ensure that future expansion requirements in this area are not compromised by inappropriate neighbouring land uses or activities. In progressing our plans at Moneypoint we are cognisant of our environmental obligations to uphold the integrity of the Natura 2000 Network. However, considering the nature of existing and future operations at this location ESB request that the boundary of *Strategic Development Location B* encompassing the *Marine Related Industry Zoning* should be extended to include ESB's Foreshore Area as outlined in Fig. 1 above. It is necessary for ESB to safeguard its entire operational area at this strategic location for the efficient production of electricity now and into the future.

### 2.2.2 Ardnacrusha & Hydro Lands

For the purposes of the Clare County Development Plan the key elements of the Shannon Scheme comprise Ardnacrusha Power Station, Parteen Weir, the Head Race and Tail Race Canals. In addition, there is Transmission, Distribution, Fisheries, engineering plant and equipment which are integral to operations.

Ardnacrusha Hydro Electric Power Station has been strategically located in order to facilitate use of the River Shannon. The Headrace and Tailrace Canal is a purpose-built water course used in conjunction with Ardnacrusha Power Station for the generation of electricity. The Headrace Canal is a 12.6km canal into which part of the Shannon is directed and conveyed to Ardnacrusha. The water emerging from the power station is carried by a 2.4km long Tailrace Canal back into the Shannon. The lands in ESB ownership which border the Headrace and Tailrace Canal are an integral part of this infrastructure.

Ardnacrusha Power Station is the largest of its type in the country. It currently has a capacity of 86MW. About two percent of Ireland's electricity generating capacity is in the form of hydropower. This power derives mainly from ESB's hydropower stations, with minor contributions coming from smaller, independently owned sites. Ardnacrusha accounts for about 40% of ESB's Hydro Generating Capacity and is fully integrated into the local and national electricity transmission and distribution network.

Parteen Weir is a Category 'A' dam that controls the flow of water from the Shannon and divides it into both the headrace serving the power station and the original river channel. Therefore, ongoing dam safety measures, and associated works for their implementation, are of critical importance. The control of water levels is the key function of the weir and adequate control of these water levels plays an essential role in the continued successful operation of Ardnacrusha power station and the control of water in the river, both upstream and downstream of the dam.

The Headrace and Tailrace Canals are an essential component of Ardnacrusha Power Station and are essential to the provision of electricity. ESB needs to maintain unimpeded access to the Headrace and Tailrace Canal Lands for the critical purpose of ongoing regular maintenance, checking for and monitoring leakage from the canal, monitoring of pore water pressure and in the event of emergency due to embankment damage/failure.

In this regard we welcome the recognition under section 2.9.10 *Ardnacrusha Hydroelectric Power Station* of the pivotal role the facility has played in the development of Ireland. We support the safeguarding of the station and its environs through Plan Objective CDP2.22:

### CDP2.22

*“To support the utilisation of all of the existing infrastructure at Ardnacrusha Hydroelectric Power Station, to increase its power input to the National Energy Grid.”*

When the station is generating at full capacity an exceptionally strong current is created. In addition, embankments and rock cut sections have steep inclines. Irish Water Safety carried out an independent audit and issued a comprehensive set of risk assessments recommending, among other things, that access to the Headrace and Tailrace Canal Lands should be discouraged in the interests of public safety. ESB note that the ‘*Lough Derg Way*’, as identified on Map 6.2 *Recreational Routes*, traverses the Headrace Canal Lands at O’Brien’s Bridge and Clonlara. ESB will continue to express their cautious support for this public walkway due to its established nature. However, ESB would not encourage its continued expansion into the future.

### 2.2.3 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 Clare is already making a significant contribution to wind energy delivery, with c.153MW of installed capacity in the County. As mentioned above, among the existing wind farms in County Clare, ESB owns and operates the wind farm at Moneypoint (17MW) with 5 turbines installed.

We acknowledge that section 6.6 *Policy*, in the Draft Plan sets out that the existing Wind Energy Strategy for County Clare is incorporated into the Clare County Development Plan 2023 - 2029 (Volume 6) and forms the policy basis for onshore wind development in the County. ESB welcome that the planning authority is committed to reviewing the WES once the new National Wind Energy Guidelines are issued.

The current WES designates areas that have the potential to accommodate wind energy development. ESB support a Plan led approach through the identification of areas for wind energy development. The identified areas have been derived following a comprehensive sieve mapping analysis. Wind Energy Designations Map, displayed in Figure 6.1 of the RES designates areas as being either a) strategic, b) acceptable in principle, c) open for consideration or d) not normally permissible. 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.

As an owner and operator of an existing wind farm 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.

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, an opportunity exists to incorporate this into the planned review of the WES. 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.

## 2.2.4 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. There is wide recognition in the Draft Plan of support of the development of marine renewables including offshore wind and land side support infrastructure. Multiple Plan Objectives highlight support, including CDP6.10, CDP6.17, CDP11.47, CDP11.48, CDP11.49, CDP13.5. In addition, Chapter 9 of the RES reinforces the support for sustainable development of offshore wind energy at appropriate locations and related grid infrastructure.

### 2.2.4.1 Offshore Wind

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 Ireland's 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 Ireland's 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 Atlantic, off the coast of Clare, as highlighted on Map 9.1 in RES. Moneypoint Offshore Wind Farm is ESB's flagship floating offshore wind development project proposed in Ireland. If developed, the project will be delivered in two phases. The first phase, Moneypoint Offshore One, is located 16km off the

Clare/Kerry Coast. The expected capacity from the first phase is estimated to be 400MW with the final wind farm area likely to be in the order of 70km<sup>2</sup>. The second phase, Moneypoint Offshore Two would be located a further 20km west of Moneypoint Offshore One, taking the total project capacity to between 1GW – 1.5GW. The latter phase would have a likely area of 180km<sup>2</sup>.

The creation of a new industry presents a major opportunity for economic growth on the western seaboard and the Shannon Estuary has the potential to be at the centre of that development. We are of the view that the Moneypoint site represents the best location for the fabrication of floating wind substructures along the west coast of Ireland given both the presence of the deep-water jetty and its industrial character. The construction of this facility can become the catalyst for the creation of a broader offshore wind enterprise zone which can be a major employment centre for the region. This is further underpinned by the above referenced objectives and by RES Objective 9.4 *Marine Energy Service and Port Infrastructure*:

#### **RES 9.4**

*“A. To actively explore and pursue opportunities to service the marine renewable energy sector at existing ports, to facilitate the growth of new ports, supporting infrastructure and associated development, in compliance with the Strategic Integrated Framework Plan for the Shannon Estuary and any future coastal zone management plans*

*B. To facilitate the expansion of ports and provision of additional quayside harbour working areas and/or additional quay length to further enhance their attractiveness to marine renewable industry developers.”*

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.

#### **2.2.4.2 Wave Energy**

It is acknowledged that the best wave resources occur in areas where strong winds have travelled over long distances and that the best wave resources in Europe occur along the western coast of Ireland which lie at the end of a long fetch across the Atlantic Ocean. Nearer the coastline, wave energy decreases due to friction with the seabed, therefore waves in deeper, well exposed waters offshore will have the greatest energy.

The Climate Action Plan supports emerging offshore renewables technologies. Action 26 supports ocean energy research, development and demonstration pathway for emerging marine technologies, including wave, tidal & floating wind and associated test infrastructure. The Offshore Renewable Energy Development Plan (OREDP 1) published in 2014 identified a total development potential of 31,100MW of wave energy in Ireland that could be extracted without having likely significant adverse effects on the environment. An updated OREDP2 will be developed in 2022 and will identify Strategic Marine Activity Zones where development of marine renewable energy (offshore wind and wave) will be prioritised. This is in addition to the forthcoming new offshore renewable energy consenting regime, the Marine Area Planning Act provides the framework to set out detailed forward planning procedures, including spatial designations, for specified areas and uses termed Designated Marine Area Plans, where Offshore Renewable Energy Developments will be facilitated.

The EU has set deployment objectives for wave and tidal energy: 100 MW by 2025, at least 1 GW by 2030 and 40 GW by 2050. This can only be fulfilled at scale at a number of EU locations including Ireland due to the geographical concentration of the wave resource. The accessible wave energy resource off our coast is estimated to be 21 TWh which would be sufficient to supply

75% of the Republic of Ireland's annual power demand. In addition, wave can be seen as complimentary to offshore wind on the west coast in order to develop this potential.

ESB have long recognised the potential of wave energy and the contribution it can make to meeting Net Zero targets and worked on developing the Accessible Wave Energy Resource Atlas for the Marine Institute and SEI in 2005. In addition, ESB provided technical and environmental consenting input to the Sustainable Energy Authority's Atlantic Marine Energy Test Site (AMETS) in Mayo. However, as wave energy technology continues to evolve, ESB have been investing in a pilot project off the coast of Clare. The ESB Westwave project is an exciting 5 MW wave energy project currently being developed near Doonbeg. This will be the first wave farm in Ireland with power expected to start generating soon.

In this regard, we welcome the inclusion of supporting Plan Objectives such as CDP13.5, RES 9.2 *Facilitate the development of Marine Renewables* and CDP 9.5, *Marine Energy Research and Development*, part A which states:

**RES 9.2 (A) & RES 9.5 (A)**

*"To support the ocean energy research, development and demonstration pathway for emerging marine technologies (wave, tidal, floating wind) and associated test infrastructure."*

Support for innovative renewable technologies will assist Ireland realise its full offshore energy potential.

## 2.2.5 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 Clare, particularly in the west of the County, 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 Plan Objectives CDP2.18, RES 7.1 and RES 7.2. In the absence of national policy guidelines, Map 7.2 in the RES, provides guidance to developers for the development of solar farms.

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.

## 2.2.6 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 11 of the Written Statement and also in Chapter 15 of the RES. Plan Objective CDP11.51 states the following:

### **CDP11.51**

*“a) To support and facilitate the development of secure, appropriately scaled energy storage facilities, particularly green hydrogen gas storage and pumped freshwater hydro energy storage, at suitable location throughout the County, in compliance with the requirements of Objective CDP3.1 of this plan; and  
b) To support initiatives to develop innovation, advances in technology and pilot projects for the sustainable development of energy storage and carbon capture with the Region and to work with key stakeholders in developing sustainable forestry to support carbon sequestration and enhance biodiversity.”*

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.

As outlined above, ESB's is installing a synchronous condenser at Moneypoint, 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.

As recognised in the Draft Plan, ESB plans at Moneypoint also include the development of a green hydrogen production, storage and generation facility as part of the 'Green Atlantic @Moneypoint' project. 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.

## 2.2.7 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, Clare is well served by the grid with an existing 400kV, 220kV and 110kV transmission lines providing a high-capacity path for power through the Mid-West 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 and help to reinforce the supportive RES in Volume 5 of the Draft CDP.

*“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.”*

## 2.2.8 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 County Clare 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 Clare 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 Clare 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 CDP2.15, CDP11.10 and RES Objectives 13.1, 13.2 and 13.3 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 Chapter 16 *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 Clare 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
<b>Residential multi-unit developments both new buildings and buildings undergoing major renovations (with private car spaces including visitor car parking spaces).</b>	A minimum of 1 EV charge point space per five car parking spaces (ducting for every parking space shall also be provided)
<b>New dwellings with in-curtilage car parking.</b>	Installation of appropriate infrastructure to enable installation of recharging point for EV's.
<b>Non-residential developments (with private car parking spaces including visitor car parking spaces with more than 10 spaces e.g., office developments)</b>	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.
<b>Developments with publicly accessible spaces (e.g., supermarket car park, cinema etc.)</b>	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.
- ESB support the approach of an inter-jurisdictional land and marine based framework plan (SIFP) and the policies of the current County Development to guide the future development and management of the Shannon Estuary. Moneypoint Power Station under the '*Green Atlantic @Moneypoint*' project is a Strategic Development Location within the Shannon Estuary plan area with the associated national grid infrastructure facilitating the growth of further synergistic industries and renewable generation. ESB request that the boundary of *Strategic Development Location B* encompassing the *Marine Related Industry Zoning* should be extended to include ESB's Foreshore Area.
- 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.
- Renewable energies are an integral part of our fight against climate change. The need for curtilage management and for the restriction of land uses for the Shannon Scheme, between Parteen Weir and Ardnacrusha Power Station, is critical to maintain the ability for ESB consolidation and/or expansion as well as essential access, monitoring and maintenance of the canal banks.
- 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.
- Clare'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.
- 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,

A handwritten signature in blue ink that reads 'Gerard Crowley'.

**Gerard Crowley | Planning and Asset Manager | Group Property and Security, 42 Merrion Sq., Clare 2.**  
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