

East Meath - North Dublin Grid Upgrade Environmental Impact Assessment Report (EIAR): Volume 2

Chapter 2 – Need for the Proposed Development

EirGrid

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2. Need for the Proposed Development

2.1 Introduction

This Chapter of the Environmental Impact Assessment Report (EIAR) outlines the need for the East Meath – North Dublin Grid Upgrade (hereafter referred to as the Proposed Development).

2.2 The Need for the Proposed Development

The Proposed Development is required to strengthen the electricity network in the east of Meath and the north of Dublin to improve the transfer of power across the existing transmission network. There is a need to upgrade and strengthen the network to:

- Address the increased electricity demand in east Meath and north Dublin due to economic development and population growth;
- Reduce the use of and reliance on fossil fuels for electricity generation;
- Facilitate further development of renewable energy generation, onshore and offshore; and
- Assist in achieving climate action targets of having up to 80% of electricity coming from renewable sources by 2030. The Proposed Development is essential to meet the Climate Action Plan 2024 (Government of Ireland 2023) target to increase the proportion of renewable electricity to 80% by 2030, which includes transporting electricity from offshore wind energy. In Ireland, based on existing policies and strategies, total electricity demand over the next 10 years is forecast to grow up to 50%, largely driven by new large energy users (Government of Ireland 2022a). This presents a challenge to Ireland's emissions targets and to Ireland's security of supply. Included in the targets for the electricity sector is to "*expand and reinforce the grid through the addition of lines, substations and new technologies*" (Government of Ireland 2021b).

The need for the Proposed Development has been established through a series of studies completed at Steps 1 to 4 of EirGrid's Framework for Grid Development (see Chapter 3 (Consideration of Reasonable Alternatives) in Volume 2 of this EIAR for full details of the various steps in the Framework for Grid Development). The Proposed Development was also identified as one of the candidate solutions in Shaping Our Electricity Future – a roadmap to achieve our renewable ambition, which was published in November 2021 (EirGrid and the System Operator for Northern Ireland (SONI) 2021). The reports completed as part of Steps 1 to 4 of EirGrid's Framework for Grid Development are available in Volume 5 (Supporting Documents) of this EIAR. These reports outline the assumptions and analysis carried out to forecast how electricity will be used and generated into the future. These reports identified two key drivers of the need to further develop the transmission system:

- **Increased demand in North Dublin:** New industry demand is concentrated around North Dublin. These industries (including data centres) are located at, or near, the existing substations at Corduff, Finglas, and Belcamp. There are a limited number of circuits to supply these zones and constraints are likely as installed demand capacity increases; and
- **Low Generation in Dublin:** There are four generation stations in Dublin connected at Finglas, Corduff, Shellybanks, and Irishtown, respectively. The generators at Finglas, Corduff, and Shellybanks can be used to supply the load in North Dublin and offset flows from Woodland towards Corduff. However, these generators are likely to be overtaken in the merit order by newer, more efficient, conventional generators and increasing levels of renewables. Renewable generation is generally built remote from Dublin and new power stations could be located outside Dublin. This means that the power produced will have to be transported to get to where it is needed around Corduff, Finglas, and Belcamp.

The Step 1 - Needs Report (EirGrid 2016a) identified a number of issues that were in breach of EirGrid's Transmission System Security Planning Standards (TSSPS) and needed to be addressed in the North Dublin 220 kilovolt (kV) corridor that were summarised as:

"Network needs were identified in the corridor of transmission network between the Woodland 400 kV station to the north west of Dublin, the key load and generation centres at Finglas and Corduff 220 kV stations, and load and generation in the city centre at Poolbeg and Shellybanks 220 kV stations. The network needs are predominantly on the circuits between Corduff 220 kV and Woodland 400 kV stations. This is because much of the new load is located at Corduff (and between Woodland and Corduff) while Woodland is a strong node with EWIC behind it. Network needs were also identified in the cable circuits between Finglas, and the Poolbeg and Shellybanks 220 kV stations. These needs were more prevalent as availability of generation in the North Dublin network is reduced, or demand in North Dublin increased."

The need in this case involves a strengthening of the network in the east of Meath and the north of the Dublin Region to facilitate the transfer of power across the existing 220kV transmission network from the Woodland 400kV Substation to the East Meath and North Dublin areas. This will help to facilitate the increased demand in East Meath and North Dublin and variability in generation output in Dublin.

As this series of studies progressed, the need for a new connection between Woodland and Belcamp Substations was identified, and that an underground cable would be the best technology for this connection. The Proposed Development, for which planning permission is being sought, is a high voltage (400kV) underground cable circuit between Woodland and Belcamp Substations and the need for the project remains robust.

In addition to supporting future renewable generation, the Proposed Development will improve power quality and support growing electricity demand in the North Dublin area. The Proposed Development will strengthen the transmission network between Woodland and Belcamp Substations to continue to ensure the security of the network feeding the east of Meath and the north of Dublin, between Woodland, Clonee, Corduff, Finglas and Belcamp Substations.

Please refer to the Planning Report (included as a standalone document in this planning application pack) for full details in relation to the planning need for the Proposed Development. The Planning Report includes an assessment of how the Proposed Development supports, and is compliant with, relevant policy.

2.3 Policy Context

This Section outlines the European, National, Regional and Local-Level policy and plans that are relevant to the Proposed Development, in addition to sectoral plans which are specific to the electricity transmission sector.

2.3.1 European Policy

There are a range of key international and EU level agreements and policy frameworks that have contributed towards shaping Ireland's approach to energy transmission, distribution and storage. These include:

- European Green Deal 2019 (European Commission 2019), which proposes stricter EU emissions reduction targets for 2030 to at least 50% and towards 55% compared to 1999 levels;
- The Paris Agreement (United Nations 2015), which is an agreement to strengthen climate change resilience efforts via increased financing, while curbing greenhouse gas emissions via an agreed 'Paris Agreement Rulebook' setting out how countries are held accountable for delivering on their climate action promises;
- Europe 2030 Climate and Energy Framework (European Commission 2014a), which established a binding domestic target to reduce GHG emissions by 40% below 1990 levels by 2030;

- Recast Renewable Energy Directive (RED II), which established a binding target of at least 32% of renewable energy for the EU by 2030;
- Recast Renewable Energy Directive (RED III), which established set a binding renewable energy target of a minimum 42.5%, but aiming for 45%, for 2030; and
- Energy Roadmap 2050 (European Commission 2011), which developed scenarios demonstrating that decarbonising the energy system is technically and economically feasible.

2.3.1.1 European Green Deal 2019

In December 2019, the European Commission (the Commission) published a Communication on a European Green Deal (EGD), setting out its increased ambition on climate action. It presents an initial roadmap of key policies and measures needed to achieve the ambition of becoming the first climate neutral bloc in the world by 2050. This will require a transformation of the EU's economy, with sectors such as transport, buildings, agriculture, and energy production all having key roles to play. As well as setting out the policy and legislative programme for all key economic sectors to deliver on the EU's climate ambition, the EGD also addresses the EU's overall ambition on climate targets. It proposes increasing the EU's emissions reduction targets for 2030 from 40% to at least 50% and towards 55% compared with 1990 levels. In December 2020, EU leaders agreed to reduce greenhouse gas emissions by at least 55% by 2030 compared to 1990 levels.

2.3.1.2 The Paris Agreement 2015

Superseding the 2005 Kyoto Protocol, the 2015 Paris Agreement (United Nations 2015) within the United Nations Framework Convention on Climate Change (UNFCCC), addresses greenhouse gas emissions mitigation, adaptation and finance starting in the year 2020, which aims to keep the global average temperature rise this century to below two degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius.

One of the key achievements of the Climate Change Conference (COP26) in Glasgow in 2021, was the adoption of the Glasgow Climate Pact (the Pact) which aims to turn the 2020s into a decade of climate action and support. The Pact includes a package of decisions which consist of a range of agreed items, including strengthened efforts to build climate change resilience, curbing greenhouse gas emissions and providing the finance for both of these.

For the first time, nations were also called on to phase down unabated coal power and subsidies for fossil fuels. The package of decisions in the Pact also included the finalisation of the 'Paris Agreement rulebook'. This set of rules lays out how countries are held accountable for delivering on their climate action promises and self-targets under their Nationally Determined Contributions (NDCs).

The most recent Climate Change Conference (COP28) was held in Dubai in 2023. The UNFCCC advised:

"COP 28 was particularly momentous as it marked the conclusion of the first 'global stocktake' of the world's efforts to address climate change under the Paris Agreement. Having shown that progress was too slow across all areas of climate action - from reducing greenhouse gas emissions, to strengthening resilience to a changing climate, to getting the financial and technological support to vulnerable nations - countries responded with a decision on how to accelerate action across all areas by 2030. This includes a call on governments to speed up the transition away from fossil fuels to renewables such as wind and solar power in their next round of climate commitments" (UNFCCC 2023).

2.3.1.3 Europe 2030 Climate and Energy Framework

In October 2014, EU leaders agreed new climate and energy objectives for 2030 following a proposal put forward by the European Commission. The Europe 2030 Climate and Energy Framework aimed to make the

EU's economy and energy system more competitive, secure and sustainable and set out binding targets for the EU. As part of this, member states are required to produce National Energy and Climate Plans from 2021 to 2030, and a Long-Term Strategy to reduce Greenhouse Gases to 2050. In December 2020, the European Council committed to increasing the EU emissions reduction target from 40% below 1990 levels by 2030 to at least 55% by 2030 in the Fit for 55 package. The package aims to update EU legislation and put in place new initiatives to ensure that EU policies are in line with the climate goals agreed by the Council and the European Parliament.

EU leaders also agreed on raising the share of renewable energy to at least 27%. The proposed framework will bring multiple benefits: reduced dependency on imported energy, a lower bill for imported energy, greater innovation, economic growth and job creation, increased competitiveness and better health through reduced air pollution.

2.3.1.4 Recast Renewable Energy Directive (RED II)

In 2014, the European Commission's 'A policy framework for climate and energy in the period from 2020 to 2030' (European Commission 2014b), established a framework for future EU energy and climate policies and promoted a common understanding of how to develop those policies after 2020. The European Commission proposed that the EU 2030 target for the share of renewable energy consumed in its Member States should be at least 27%.

The European Council endorsed this proposal and advised that Member States should be able to set their own, more ambitious, national targets to deliver their planned contributions to the Union 2030 target and exceed them.

Also in 2014, Europe 2030 Climate and Energy Framework (European Commission 2014a), and the 2016 publication, The renewable energy progress report (European Commission 2016), went further than the 'A policy framework for climate and energy in the period from 2020 to 2030' publication, stressing that, in light of the Paris Agreement (United Nations 2015) and the recent renewable technology cost reductions, it was desirable to be significantly more ambitious.

The ambition set out in the Paris Agreement, as well as technological developments including cost reductions for investments in renewable energy, led to new objectives being set in the Recast Renewable Energy Directive (RED II). RED II established a binding target of at least 32% of renewable energy for the EU by 2030. This target will be reviewed upwards in light of:

- Substantial cost reductions in the production of renewable energy; and
- The EU's international commitments for decarbonisation, or where a significant decrease in energy consumption in the EU justifies such an increase.

Member States are required to establish their contribution to the achievement of that target as part of their integrated national energy and climate plans. Also, in RED II, the European Commission encouraged investments in new, flexible and clean technologies. The European Commission also established an adequate strategy to manage the retirement of technologies which do not contribute to the reduction of emissions or deliver sufficient flexibility, based on transparent criteria and reliable market price signals. RED II therefore has directly influenced the national policy context specifically relating to energy in Ireland, as outlined further in the National, Regional and Local Policy subsections of this Chapter (Section 2.3.2, Section 2.3.3 and Section 2.3.4 respectively).

2.3.1.5 Recast Renewable Energy Directive (RED III)

The Fit for 55 package included a proposal for a revision of the Renewable Energy Directive (RED III) increasing the current EU-level target and on 30 March 2023, the European Parliament and the Council reached a provisional agreement and set a binding renewable energy target of a minimum 42.5%, but aiming

for 45%, for 2030. In October 2023 the revised Recast RED III was adopted by the European Parliament. The revision of the directive also introduces new measures to complement the already existing building blocks established by the 2009 and 2018 directives to ensure that all potentials for the development of renewable energy are optimally exploited and accelerated, which is a necessary condition to achieve the EU's objective of climate neutrality by 2050.

2.3.1.6 Energy Roadmap 2050

The Energy Roadmap 2050 was published by the European Commission in 2011 (European Commission 2011) and explores the transition of the energy system in ways that would be compatible with the greenhouse gas reductions targets set out in the RED I (to reduce greenhouse gas emissions by at least 20% by 2020 (European Commission 2010)), while also increasing competitiveness and security of supply. To achieve these goals, the Energy Roadmap 2050 states that significant investments need to be made in new low-carbon technologies, renewable energy, energy efficiency, and grid infrastructure. Four main routes are identified to achieve a more sustainable, competitive and secure energy system in 2050:

- Energy efficiency;
- Renewable energy;
- Nuclear energy; and
- Carbon capture and storage.

The Energy Roadmap 2050 combined these routes in different ways to create and analyse seven possible scenarios for 2050. The analysis found that decarbonising the energy system is technically and economically feasible. Each of the scenarios assumes in the analysis that increasing the share of renewable energy and using energy more efficiently are crucial, irrespective of the particular energy mix chosen. An important component of this energy mix is grid infrastructure, with the Energy Roadmap 2050 stating:

"With electricity trade and renewables' penetration growing under almost any scenario up to 2050, and particularly in the high renewables scenario, adequate infrastructure at distribution, interconnection and long-distance transmission becomes a matter of urgency. By 2020 interconnection capacity needs to expand at least in line with current development plans. An overall increase of interconnection capacity by 40% up to 2020 will be needed, with further integration after this point." (European Commission 2011)

As outlined in the Energy Roadmap 2050, the extension of current planning methods to a fully integrated network planning for transmission (onshore and offshore), distribution, storage and electricity highways for a potentially longer timeframe will be needed.

With more decentralised generation, smart grids, new network users (e.g. electric vehicles) and demand response, there is a greater need for a more integrated view on transmission, distribution and storage.

2.3.2 National Policy

This Section outlines the national-level plans, policies and strategies relevant to the Proposed Development.

2.3.2.1 Project Ireland 2040 – National Planning Framework

The National Planning Framework (hereafter referred to as the NPF) (Government of Ireland 2018) is the Government's high-level strategic plan for shaping the future growth and development of Ireland to the year 2040 and marks the highest tier of Ireland's spatial plans. The National Strategic Outcomes (NSOs), the main policy principles of the NPF, support and strengthen the economy and a transition to a low carbon, climate resilient society (NSO 3, 6 and 8), provide access to quality services (4, 7, and 10) and achieve sustainable

growth of settlements and manage environmental resources (NSO 1 and 9). The NPF states that Ireland's National Energy Policy is focused on three pillars:

- Sustainability;
- Security of Supply; and
- Competitiveness.

In line with these principles, NSO 8: 'Transition to a Low Carbon and Climate Resilient Society' notes that in creating Ireland's future energy landscape, new energy systems and transmission grids will be necessary to enable a more distributed energy generation system which connects established and emerging energy sources to the major sources of demand. NSO 8 aims to:

"Reinforce the distribution and transmission network to facilitate planned growth and distribution of a more renewables focused source of energy across the major demand centres". (p.147)

In addition, it contains, in National Policy Objective 42, the following commitment to transmission network reinforcement to:

"...support, within the context of the Offshore Renewable Energy Development Plan (OREDPP) and its successors, the progressive development of Ireland's offshore renewable energy potential, including domestic and international grid connectivity enhancements". (p.104)

The NPF promotes the growth of Dublin as Ireland's capital with the following outline strategy:

"Supporting the future growth and success of Dublin as Ireland's leading global city of scale, by better managing Dublin's growth to ensure that more of it can be accommodated within and close to the city; Enabling significant population and jobs growth in the Dublin metropolitan area, together with better management of the trend towards overspill into surrounding counties; Addressing infrastructural bottlenecks, improving citizens' quality of life and increasing housing supply in the right locations". (p.22)

County Meath is located in the Mid-East Region as set out within the NPF, which states that:

"The Mid-East has experienced high levels of population growth in recent decades, at more than twice the national growth rate. Managing the challenges of future growth is critical to this regional area. A more balanced and sustainable pattern of development, with a greater focus on addressing employment creation, local infrastructure needs and addressing the legacy of rapid growth, must be prioritised". (p.33)

Refer to the Planning Report (included as a standalone document in this planning application pack) for full details in relation to the planning need for the Proposed Development. The Planning Report includes an assessment of how the Proposed Development supports and is compliant with relevant policy.

2.3.2.2 Project Ireland 2040 – National Development Plan 2021-2030

The National Development Plan 2021-2030 (hereafter referred to as the NDP) (Government of Ireland 2021a) is the national capital investment strategy plan that is integrated and aligned with the NPF. It sets out the framework of expenditure commitments to secure the strategic investment priorities to the year 2030 and supports the delivery of the ten NSOs identified in the NPF. One of the core strategic investment priorities identified within the NDP is decarbonising energy, stating:

"We need to plan our energy system as a whole to create greater links between different energy carriers (such as electricity and hydrogen); infrastructures; and consumption sectors (such as

transport and heating). The long-term objective is to transition to a net-zero carbon, reliable, secure, flexible and resource-efficient energy services at the least possible cost for society by mid-century."

The NDP states that doing so requires a coordinated programme of investment in, among other things, "*an expanded and strengthened electricity transmission and distribution network*", in order to support an increase in both renewable and conventional electricity generation.

The NDP identifies the strategic investment priorities for Sectors including energy stating:

"Significant expansion and strengthening of the electricity transmission and distribution grid onshore and offshore, including transmission cables and substations, to link renewable electricity generation to electricity consumers and to accommodate higher levels of renewables on the electricity system and reinforcement of the natural gas network by our system operators EirGrid, ESB Networks and Gas Networks Ireland"(Government of Ireland 2021a).

2.3.2.3 National Energy and Climate Plan 2021-2030

The National Energy and Climate Plan 2021-2030 (hereafter referred to as the NECP) (Department of Communications, Climate Action and Environment 2020) is a 10 year plan mandated by the EU to each of its member states, in order for the EU to meet its overall greenhouse gas emissions targets. The plan establishes key measures to address the five dimensions of the EU Energy Union: decarbonisation, energy efficiency, energy security, internal energy markets and research, innovation and competitiveness. The NECP takes into account energy and climate policies developed to date, the levels of demographic and economic growth identified in the NPF and includes all of the climate and energy measures set out in the NDP.

2.3.2.4 The White Paper: Ireland's Transition to a Low Carbon Energy Future 2015-2030

The White Paper: Ireland's Transition to a Low Carbon Energy Future 2015-2030 (hereafter referred to as The White Paper) (Department of Communications, Energy and Natural Resources 2021) sets out a framework to guide Ireland's energy policy development. The White Paper acknowledges that "*an uninterrupted supply of energy is vital to the functioning of Irish society and economy*" (Section 6.2). It establishes the need for the 'development and renewal' of energy networks to meet economic and social goals. The Proposed Development is considered to be an 'enhanced and extended energy infrastructure' development which includes "*linear facilities – such as gas pipelines, electricity interconnectors and roads – as well as point infrastructure, including power stations, electricity switching stations, ports and oil and gas terminals*" (Section 7.3).

2.3.2.5 Climate Action and Low Carbon Development (Amendment) Act 2021 and Climate Action Plan 2021, 2023 and 2024

The Climate Action and Low Carbon Development (Amendment) Act was published in 2021 and commits to achieving 51% reduction in overall greenhouse gas emissions by 2030 and setting Ireland on a path to reach net-zero by no later than 2050. Climate Action Plan 2021 (Government of Ireland 2021b) aimed to increase the proportion of renewable electricity to up to 80% by 2030. The decarbonisation pathway for the electricity sector is challenging given the rapid growth in demand for power, as well as the need to ensure security of supply through the decarbonisation journey. The Climate Action Plan 2023 (CAP23) (Government of Ireland 2022b) is the second annual update to Ireland's Climate Action Plan 2019 (Government of Ireland 2019). CAP23 was the first to be prepared under the Climate Action and Low Carbon Development (Amendment) Act 2021, and following the introduction in 2022 of economy-wide carbon budgets and sectoral emissions ceilings. CAP23 was launched on 21 December 2022. The supplementary Annex of Actions was published in March 2023. The plan implements the carbon budgets and sectoral emissions ceilings and sets out a roadmap for taking decisive action to halve our emissions by 2030 and reach net zero no later than 2050, as

committed to in the Programme for Government. CAP24 (Government of Ireland 2023) sets out how Ireland can accelerate the actions that are required to respond to the climate crisis, putting climate solutions at the centre of Ireland's social and economic development:

"Most fundamentally, significant investment is needed in the transmission and distribution systems to maximise the usage of renewable electricity and to reduce constraints and congestion on the system. System Operators and the CRU must ensure the timely investment in, and delivery of, the required electricity network infrastructure, including key priorities such as the North South Interconnector, to meet the targets set out in this, and subsequent, Climate Action Plans."
(Government of Ireland 2023)

Driving climate action through the transformation of the electricity system is at the heart of EirGrid's purpose and is also the most impactful positive contribution EirGrid can make to climate change. Central to this is transforming the electricity grid so that it carries clean, renewable energy. Through innovative work over the past 10 years EirGrid has been able to ensure that 75% of instantaneous electricity requirements are being met by renewable sources. EirGrid plans to further deliver network, operations, markets and engagement initiatives to increase this figure to 95% by 2030. This will help deliver the Government target for annual renewable electricity generation of up to 80% by 2030. EirGrid has committed to publicly report on sustainability performance. EirGrid is the first public body in Ireland to have targets validated by the international Science Based Targets initiative.

EirGrid's verified targets are:

- Reduce absolute scope 1 and 2 greenhouse gas emissions by 50%;
- Reduce scope 3 greenhouse gas emissions related to dispatch of electricity generation by 35% per megawatt hour within the same timeframe; and
- Reduce all other absolute scope 3 greenhouse gas emissions by 30% by 2030, using 2019 as a base year.

CAP23 states that *"Measures to Deliver Sectoral Emissions Ceilings Our 2030 decarbonisation ambition will require all sectors to increase emission mitigation actions if we are to achieve our national and EU targets"*. For the electricity sector, the following measures will be critical to success:

- *"EirGrid will carry out further grid, operational, and market studies, through an updated version of Shaping Our Electricity Future, due Q1 2023, and updated regularly thereafter, to assess additional supply and demand side measures, beyond current plans";*
- *"Strengthen the electricity system by upgrading the network and building supporting infrastructure at key strategic locations";* and
- *"Enable the use of the public road and potentially the rail networks for routing of new public and private electricity circuits".* (Government of Ireland 2022b)

2.3.2.6 Climate Action Plan 2024

Climate Action Plan 2024 (CAP24) (Government of Ireland 2023) was published in December 2023 and explicitly sets out updated emission reductions aligned with carbon budgets and sectoral emissions ceilings.

These include targets for electricity of:

- Carbon Budget 1: 2021-2025: 40 MtCO₂ equivalent;
- Carbon Budget 2: 2026-2030: 20 MtCO₂ equivalent;
- Reduce electricity sector emissions to 3 MtCO₂ equivalent per annum;
- 80% of electricity demand generated from renewable sources;
- 9GW of onshore wind capacity (6GW by 2025);

- 8GW of Solar PV capacity (up to 5GW by 2025);
- At least 5GW of offshore wind capacity;
- At least 2GW new flexible gas plant;
- Ensure that 20-30% of system demand is flexible by 2030 (15-20% by 2025); and
- Delivery of three new transmission grid connections or interconnections to Northern Ireland, Great Britain, and the EU and explore further interconnection.

2.3.3 Regional Policy

This Section outlines the regional policy relevant to the Proposed Development.

2.3.3.1 Regional Spatial and Economic Strategy for the Eastern and Midland Region 2019-2031

The vision of the Eastern and Midlands Regional Assembly (EMRA) Regional Spatial and Economic Strategy for the Eastern and Midland Region 2019-2031 (hereafter referred to as the RSES) (EMRA 2019) is:

"To create a sustainable and competitive Region that supports the health and wellbeing of our people and places, from urban to rural, with access to quality housing, travel and employment opportunities for all."

This vision is underpinned by three key principles, including *"Climate Action – The need to enhance climate resilience and to accelerate a transition to a low carbon society recognizing the role of natural capital and ecosystems services in achieving it"*.

The RSES sets out 16 Regional Strategic Outcomes including: *Support the Transition to Low Carbon and Clean Energy*. National Strategic Outcome 8: Transition to a Low Carbon and Climate Resilient Society is referenced in the RSES. The Proposed Development is located within Meath and Fingal County Councils.

There are a number of guiding principles for sustainable development within the Dublin Metropolitan Area, in which the Proposed Development is partially located, these include 'Alignment of growth with enabling infrastructure' which is specified as *"to promote quality infrastructure provision and capacity improvement, in tandem with new development and aligned with national projects and improvements in water and waste water, sustainable energy, waste management and resource efficiency"*.

The RSES states, in relation to the Dublin Metropolitan Area, that the *"Development of the energy distribution and transmission network in the region will enable distribution of more renewable sources of energy to facilitate future energy demand in strategic development areas"*. Chapter 7: Environment and Climate of the RSES identifies the need for the *"expansion and upgrading of the grid with the aim of increasing the share of variable renewable electricity that the all-island system can accommodate"*.

The RSES goes on to state:

"The provision of infrastructure should be supported in order to facilitate a more distributed, renewables-focused energy generation system, harnessing both on-shore and off-shore potential from energy sources such as wind, wave and solar and connecting sites of optimal energy production to the major sources of demand".

Chapter 10 of the RSES addresses provision of services and infrastructure. It states:

"High-quality infrastructure is an important element of a modern society and economy, it provides essential functions and services that support societal, economic and environmental systems at local, regional and national levels".

Section 10.3 states:

"A secure and resilient supply of energy is critical to a well-functioning region, being relied upon for heating, cooling, and to fuel transport, power industry, and generate electricity. With projected increases in population and economic growth, the demand for energy is set to increase in the coming years".

However, the chapter goes on to state that:

"the development of onshore and offshore renewable energy is critically dependent on the development of enabling infrastructure including grid facilities to bring the energy ashore and connect to major sources of energy demand".

Objective RPO 10.23 specifically references the Proposed Development, it provides support for EirGrid's Grid Implementation Plan 2017 – 2022 (EirGrid 2018) and Transmission Development Plan (TDP) 2016 (EirGrid 2016b) and any subsequent plans prepared during the lifetime of the RSES that facilitate the timely delivery of major investment projects, subject to appropriate environmental assessment and the outcome of the planning process.

Developing the grid in the Region through the Proposed Development and other projects, will enable the transmission system to safely accommodate more diverse power flows from renewable generation and also to facilitate future growth in electricity demand. These developments will strengthen the grid for all electricity users, and in doing so will improve the security and quality of supply. This is particularly important if the Region is to attract high technology industries that depend on a reliable, high quality, electricity supply.

2.3.4 Local Policy

This Section outlines the local policy relevant to the Proposed Development.

Please refer to the Planning Report (included as a standalone document in this planning application pack) for an assessment of how the Proposed Development supports, and is compliant with, relevant local planning policy and key policy drivers.

2.3.4.1 Fingal Development Plan 2023-2029

The Fingal County Council (FCC) Fingal Development Plan 2023-2029 (hereafter referred to as the FDP) (FCC 2023a) came into effect in April 2023. The FDP contains two strategic objectives (SO) that are of particular relevance to the Proposed Development:

- SO1 – Transition to an environmentally sustainable carbon neutral economy; and
- SO10 – Protect, enhance and ensure the sustainable use of Fingal's key infrastructure, including water supplies and wastewater treatment facilities, energy supply including renewables, broadband and transportation.

The FDP also contains policies that are of specific relevance to electrical infrastructure such as the Proposed Development:

- **Policy CAP1 – National Climate Action Policy:** Support the implementation of national objectives on climate change including the national Climate Action Plan 2023 (CAP23), the National Adaptation Framework 2018 and the National Energy and Climate Plan for Ireland 2021–2030 and other relevant legislation, policy and agreements in relation to climate action;
- **Policy CAP13 – Energy from Renewable Sources:** Actively support the production of energy from renewable sources and associated electricity grid infrastructure, such as from solar energy, hydro energy, wave/tidal energy, geothermal, wind energy, combined heat and power (CHP),

- heat energy distribution such as district heating/cooling systems, and any other renewable energy sources, subject to normal planning and environmental considerations;
- **Policy IUP27 – Energy Networks and ICT Infrastructure:** Facilitate and promote the development of energy networks and ICT infrastructure where necessary to facilitate sustainable growth and economic development and support the provision of critical energy utilities and the transition to alternative, renewable, decarbonised, and decentralised energy sources, technologies, and infrastructure;
 - **Policy IUP29 – Enhancement and Upgrading of Existing Infrastructure and Networks:** Work in partnership with existing service providers, businesses and local community groups to facilitate required enhancement and upgrading of existing infrastructure and networks and support the development of new energy systems, local community sustainable energy generation projects and transmission grids, which will be necessary for a more distributed, renewables-focused energy generation system, harnessing both the considerable on-shore and off-shore potential from energy sources such as wind, wave, and solar energy;
 - **Policy IUP31 – Enhancement and Upgrading of Existing Infrastructure and Networks:** Support EirGrid’s Grid Development Strategy – Your Grid, Your Tomorrow 2017, Implementation Plan 2017–2022, Shaping our Electricity Future-A Roadmap to achieve our Renewable Ambition 2021 and Transmission Development Plan (TDP) 2020-2029, and the Government’s Policy Statement on Security of Electricity Supply November 2021 and any subsequent plans prepared during the lifetime of this Plan, to provide for the safe, secure, and reliable supply of electricity; and
 - **Policy IUP32 – East Meath – North Dublin Grid Upgrade:** Support the development of the East Meath-North Dublin Grid Upgrade to strengthen the electricity supply network in anticipation of the future development of renewable energy, onshore and offshore.

The Proposed Development will largely be routed along public roads. However, there will be instances where the Proposed Development will pass through the zoned lands illustrated in Table 2.1. Where the Proposed Development passes through zoned lands, it is considered to be relatively minor and mainly consisting of the Planning Application Boundary.

Table 2.1: Fingal Development Plan Zoning Objectives

Zoning Objective	Objective
HT – High Technology	Provide for office, research and development and high technology/high technology manufacturing type employment in a high quality built and landscaped environment.
GB – Green Belt	Protect and provide for a Greenbelt.
GE – General Employment	Provide opportunities for general enterprise and employment.
OS – Open Space	Preserve and provide for open space and recreational amenities.
DA – Dublin Airport	Ensure the efficient and effective operation and development of the Airport in accordance with an approved Local Area Plan.
FP – Food Park	Provide for and facilitate the development of a Food Industry Park.
RS – Residential	Provide for residential development and protect and improve residential amenity.

2.3.4.1.1 Dublin Airport Local Area Plan 2020

The Proposed Development will be routed through an area covered by the Dublin Airport Local Area Plan 2020 (FCC 2020), which was adopted in January 2020. This policy document sets out the following strategic aims for Dublin Airport:

- Support for airport safeguarding;
- Support the continued sustainable growth of Dublin Airport and connectivity as a hub airport whilst ensuring protection of the environment;
- Support the timely delivery of required infrastructure to facilitate airport growth;
- Support the growth of the Airport as a major economic driver for the region; and

- Support the continued communication between the Airport and neighbouring communities to protect community amenity and mitigate potential impact from airport growth in the interests of long-term stability.

The Dublin Airport Local Area Plan 2020 extends beyond the boundary of the airport and contains restrictions on development that may impact on the operation of the airport including safeguarding policies of relevance to the Proposed Development (refer to Appendix D in the Planning Report included as a standalone document in this planning application pack).

2.3.4.2 Fingal County Council Climate Action Plan 2024 - 2029

The Fingal Climate Action Plan 2024-2029 (FCAP) has been prepared in partnership with the other Dublin local authorities and builds on the Dublin Local Authorities Climate Change Action Plan 2019-2024 (CCAP). The primary focus of the FCAP is to deliver and promote best practice in climate action, at a local level and is aligned to the Government's overall National Climate Objective of the pursuit and achievement of a transition to a 'climate resilient, biodiversity rich, environmentally, sustainable and climate neutral economy' no later than 2050.

The FCAP sets the following targets in delivering on the goals set out in the plan:

- 50% improvement in the Council's energy efficiency by 2030;
- 51% reduction in the Council's greenhouse gas emissions by 2030;
- To make Dublin a climate resilient region, by reducing the impacts of future climate change-related events; and
- To actively engage and inform our communities on climate action.

The FCAP sets out the key climate challenges that have been faced at a local level and identifies the mitigation and adaptation response to these challenges under the following key headings:

- Energy and Buildings;
- Transport;
- Flood Resilience;
- Nature Based Solutions;
- Circular Economy & Resource; and
- Community Engagement.

2.3.4.3 Meath County Development Plan 2021 - 2027

The current statutory plan for County Meath is the Meath County Development Plan 2021 – 2027 (hereafter referred to as the MCDP) (MCC 2021).

The MCDP emphasises the importance of reliable service provision and infrastructure for sustainable future growth and asserts that the strengthening of the national grid is important to improve security of supply for the domestic, residential and enterprise market as well as attracting high-end enterprise.

The MCDP contains policies that are of specific relevance to electrical infrastructure such as the Proposed Development. These are:

- **INF Pol 46** – To support and facilitate the development of enhanced electricity and gas supplies, and associated networks, to serve the existing and future needs of the County and to facilitate new transmission infrastructure projects that may be brought forward during the lifetime of the plan including the delivery and integration, including linkages of renewable energy proposals to the electricity transmission grid in a sustainable and timely manner.

- **INF Pol 47** – To co-operate and liaise with statutory and other energy providers in relation to power generation in order to ensure adequate power capacity for the existing and future business and enterprise needs of the County.
- **INF Pol 48** - To ensure that energy transmission infrastructure follows best practice with regard to siting, design and least environmental impact in the interest of landscape protection.
- **INF Pol 50** - To require that the location of local energy services such as electricity, be undergrounded, where appropriate.

The Proposed Development will be predominantly located on public roads and the off-road sections are mostly zoned for Rural use. The land use zoning objectives of relevance to the Proposed Development are detailed in Table 2.2.

Table 2.2: Meath County Development Plan Land Use Zoning Objectives

Zoning	Objective
RA – Rural Area	To protect and promote in a balanced way, the development of agriculture, forestry and sustainable rural-related enterprise, community facilities, biodiversity, the rural landscape, and the built and cultural heritage.
F1 – Open Space	To protect for and improve open spaces for active and passive recreational amenities.
A1 – Existing Residential	To protect and enhance the amenity and character of existing residential communities.
E2 – General Enterprise and Employment	To provide for the creation of enterprise and facilitate opportunities for employment through industrial manufacturing, distribution, warehousing and other general employment. enterprise uses in a good quality physical environment.
C1 – Mixed Use	To provide for and facilitate mixed residential and employment generating uses.
E2/E3 – General Enterprise and Employment/Warehousing and Distribution	To facilitate logistics, warehousing, distribution and supply chain management inclusive of related industry facilities which require good access to the major road network.
TU – Transport and Utilities	To provide for essential transport and public utilities and infrastructure including rail stations, park and ride facilities, water and wastewater infrastructure, electricity, gas and telecommunications infrastructure.
A2 – New Residential	To provide for new residential communities with ancillary community facilities, neighbourhood

2.3.5 Sectoral Policy

This Section outlines the sectoral plans which are specific to the electricity transmission sector.

2.3.5.1 EirGrid’s Shaping our Electricity Future – A Roadmap to Achieving our Renewable Ambition

In 2021, EirGrid and SONI published Shaping Our Electricity Future – a roadmap to achieve our renewable ambition (EirGrid and SONI 2021), which set out to achieve at least 70% of electricity coming from renewable sources by 2030. This aim is seen as an important step on the journey to 80% to get to net-zero carbon emissions by 2050.

The Roadmap is the product of a major public and stakeholder consultation regarding how as a nation and society we can reach these ambitious targets. The consultation focused on four distinct network development approaches to achieving this renewable ambition including:

- Generation-led;
- Developer-led;
- Technology-led; and
- Demand-led.

Based on the modelling undertaken by EirGrid, and its refinement in response to public and stakeholder consultation, EirGrid completed a set of transmission network planning studies. These studies will help

determine what potential transmissions network projects will be required by 2030 to deliver their renewable ambition. These studies are illustrated in Figure 5: Map of Ireland and Northern Ireland detailing reinforcements within EirGrid's Shaping our Electricity Future – A Roadmap to Achieve our Renewable Ambition.

Importantly, the Roadmap notes that prior to commencing the transmission needs identification process, a number of transmission projects were included in EirGrid's network model, including grid reinforcements that are scheduled to complete by 2030. Therefore, the base case network model analysed for 2030 consists of the transmission network as it is today plus these critical projects. The Proposed Development is one of those new circuits which are assumed in service and included in the base network model.

2.3.5.2 EirGrid's Transmission Development Plan 2021 – 2030

The Transmission Development Plan 2021-2030 (hereafter referred to as the TDP 2021-2030) (EirGrid 2021) sets out the development of the Irish transmission network over a nine-year period to the year 2030. The TDP 2021-2030 presents projects which are needed for the operation of the transmission network whilst also identifying future needs that may drive future potential projects.

There is an obligation on EirGrid to provide all customers with a 'safe, secure, reliable, economical, and efficient transmission network to meet all reasonable demands for electricity, in accordance with legal obligations' (p. 81) which is essential for enabling economic activity and economic growth. Under this context, drivers of transmission network development are summarised as:

- Ensuring the security of electricity supply;
- Ensuring the competitiveness of the national economy; and
- Ensuring the long-term sustainability of electricity supply in the country.

The TDP 2021-2030 highlights that achieving these strategic objectives, requires investment in the development and maintenance of the electricity transmission network including, but not limited to, securing transmission network supplies and promoting the integration of renewable energy sources and complementary thermal generation. It is also identified that in order to accommodate electricity demand or generation changes to the transmission network due to continuing investment, it will be necessary to modify or strengthen the transmission network to ensure performance and reliability levels are upheld.

2.3.5.3 EirGrid's Grid Implementation Plan 2017-2022 for the Electricity Transmission System in Ireland

EirGrid published its Grid Implementation Plan 2017-2022 for the Electricity Transmission System in Ireland (hereafter referred to as the Grid Implementation Plan) in December 2018 (EirGrid 2018). The Grid Implementation Plan is the latest of the Implementation Plans, however EirGrid is developing a third plan which will sit under EirGrid's Shaping Our Electricity Future Roadmap 2030. The Grid Implementation Plan when adopted will be known as the Grid Implementation Plan 2023-2028. The Grid Implementation Plan sets out the manner in which the Irish transmission system is likely to be developed in its lifetime and was prepared following consultation on EirGrid's, Ireland's Grid Development Strategy – Your Grid, Your Tomorrow (EirGrid 2017a) in 2017, which replaced the 'Grid 25 Strategy' (EirGrid 2008) from 2008. This Grid Implementation Plan identifies those parts of the transmission system that are likely to need development over the five-year period 2017 - 2022, which are primarily as highlighted in the TDP 2021-2030 (EirGrid 2021).

The Grid Implementation Plan is consistent with The White Paper (Department of Communications, Energy and Natural Resources 2021). It is also set in the context of other Government Policy, in particular the Department of Business, Enterprise and Innovations Action Plan for Jobs (Department of Business, Enterprise

and Innovations 2017), and the Irish Development Authority's (IDA's) Winning: Foreign Direct Investment 2015- 2019 Strategy (IDA 2015).

The Grid Implementation Plan contains the following key policies and objectives:

- **PDP1:** To have regard to EirGrid's approach to developing the grid, and any associated guidelines, policies and processes, to ensure the structured, consistent development of all its transmission projects;
- **PDP2:** To promote sustainable grid development by balancing complex and/or competing technical, economic, environmental, social and deliverability goals and priorities in decision-making;
- **PDO1:** To undertake a timely and appropriate managed transition of our transmission projects to the new approach to grid development; and
- **PCP3:** To promote sustainable grid development by balancing complex and/or competing technical, economic and environmental goals and priorities in decision-making.

2.3.5.4 Government Policy Statement on the Strategic Importance of Transmission and Other Energy Infrastructure

In 2012, the Department of Communication, Energy and Natural Resources published a Government Policy Statement on the Strategic Importance of Transmission and Other Energy Infrastructure (hereafter referred to as the Statement) (Department of Communication, Energy and Natural Resources 2012).

The Statement highlights the need and urgency for the new energy infrastructure for the economy, delivery of regional development, creation of jobs and growth and ensure the wellbeing of everyone as well as realising the economic potential of Ireland's own renewable energy resources. It states that significant energy infrastructure is required to deliver a world class electricity transmission system in all regions of the country. The Government endorses, supports and promotes the strategy programmes of the energy infrastructure providers.

The Statement further states that:

"energy infrastructure developers are encouraged to work with the forward planning processes at regional and local level to set a clear context for assessment of individual applications for planning consent to facilitate as wide a degree of consensus as possible as to how (and where) to meet grid development needs". (Department of Communication, Energy and Natural Resources 2012).

The Statement requires energy developers to adhere to international and national standards on health, environment, biodiversity, landscape and safety and address or mitigate any associated impacts in delivering the best engineering solutions. This process is aligned with EirGrid's six-step Framework for Grid Development (refer to Chapter 3 (Consideration of Reasonable Alternatives) in Volume 2 of this EIAR for further details on the Framework for Grid Development).

2.3.5.5 Shaping Our Electricity Future (Version 1.0 November 2021 and Version 1.1 July 2023)

In 2021, EirGrid and SONI published Shaping Our Electricity Future – a roadmap to achieve our renewable ambition (EirGrid and SONI 2021), which provided an outline of the key developments from a networks, engagement, operations and market perspective needed to support a secure transition to at least 70% renewables on the electricity grid by 2030 – an important step on the journey to 80% and to net zero by 2050. It identifies the transmission network reinforcements needed to manage renewable generation and demand growth.

Shaping Our Electricity Future Roadmap – Version 1.1, published in July 2023, builds on the original Roadmap and outlines a pathway towards meeting enhanced 2030 government electricity ambitions in Ireland and Northern Ireland (EirGrid and SONI 2023). The power sector is no longer aiming to achieve an end of decade target but must now also do so within prescribed carbon allowances across five-year blocks. This document states "*additional network infrastructure must be built to achieve the Renewable Ambition*".

It states that public roads remain a key enabler for delivery of network infrastructure where an underground cable has been selected as the preferred option following multi-criteria analysis and decision making.

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