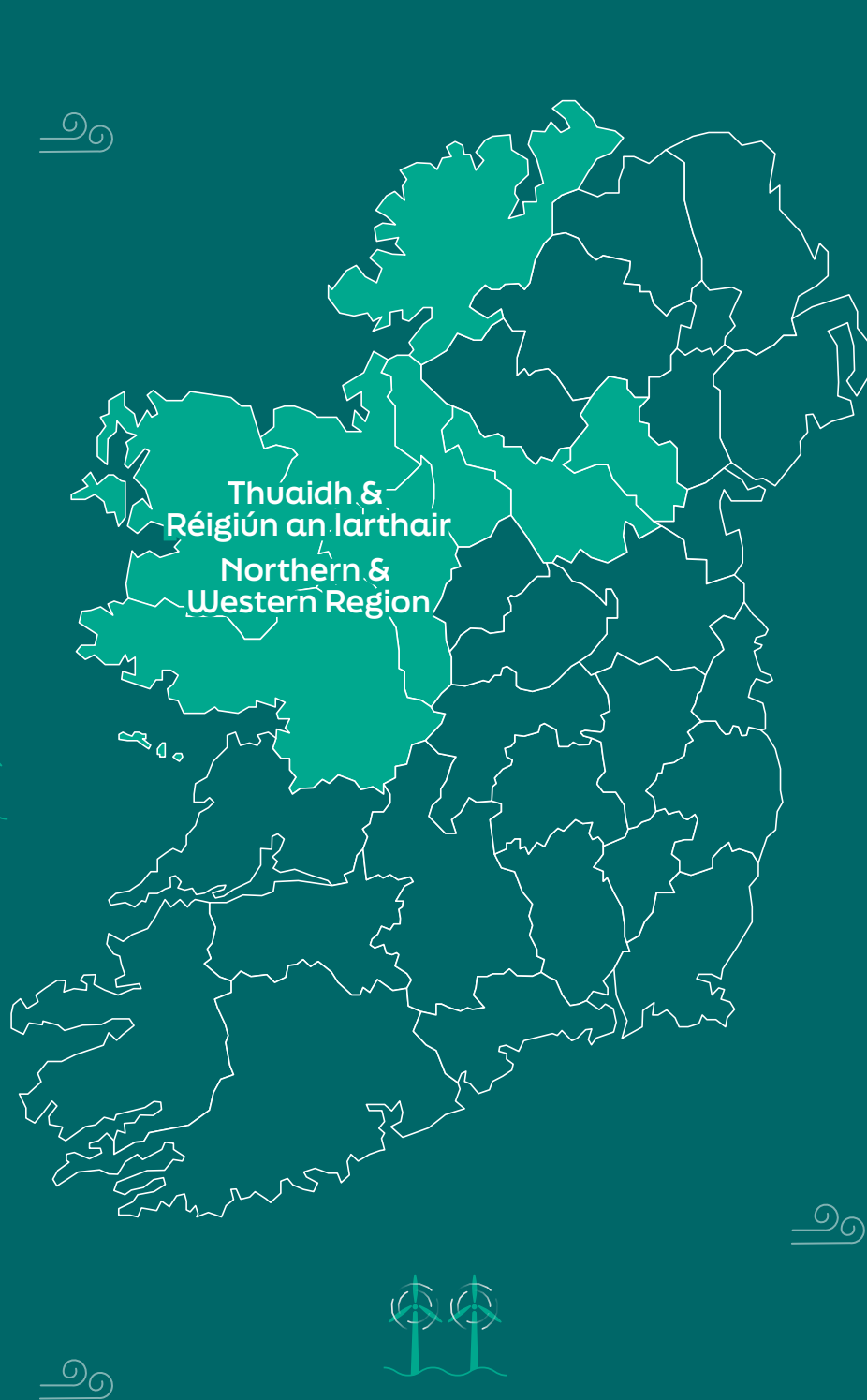




# Strategic Framework for Grid Development

In the Northern & Western Region





Thuaidh &  
Réigiún an Iarthair  
Northern &  
Western Region

# Glossary of terms

## Regional programme

The planned grid development projects in the Northern and Western Region, as outlined in this document.

## New infrastructure project

New overhead lines and underground cables (circuits) or substations.

## Innovation project

'Non-wire' technological solutions such as:

- **Dynamic Line Rating (DLR):**  
This is a device placed on an existing overhead line with a range of sensors inside. It enables a more efficient use of the power carrying capacity of an overhead line while enhancing its safe operation.
- **Power Flow Controller (PFC):**  
This is substation infrastructure connected with circuits to provide control of the circuit's power flow.

We bring innovation (such as new materials, technology, software, etc.) to all of our projects. For this document, innovation projects are just the DLR and PFC projects.

## Optimisation project

Improvements of existing assets (e.g., works to an existing substation or uprate an existing circuit. The uprate can involve new overhead lines or towers. However, as it is a uprate of an existing circuit, it is not considered to be a new infrastructure project).

## Linear circuit project

A new overhead line, underground cable, or marine cable project.

## Existing circuit upgrade project

The improvement or enhancement of an existing overhead line or underground cable.

## Assets

Any high-voltage electrical equipment (e.g., a substation).

## Upvoltage or uprate

The improvement of an existing circuit (overhead line or underground cable) which allows it to carry a greater amount of electricity. This can mean an increase in the electrical flow or the operating temperature of the circuit.









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# Part 1: Introduction

## 1.1 About EirGrid

EirGrid as Transmission System Operator (TSO) develops, manages and operates the transmission grid in Ireland. The grid transports power from where it is generated to where it is needed. EirGrid is also leading the secure transition of the electricity grid to a sustainable low-carbon future.

The grid brings power to industry and businesses that use electricity. It also powers the distribution network, owned and operated by ESB Networks, which supplies the electricity used in homes, businesses, schools, hospitals, and farms.

We balance supply and demand every minute of the day, while also planning for Ireland's long-term electricity needs.

## 1.2 Our role

As the transmission system operator for Ireland, EirGrid has a unique role to play in transforming our power system to meet the needs of today as well as the future. As we continue working towards obtaining 80% of our energy from renewable sources by 2030, we are also working towards meeting the national climate objectives in the run up to 2050.

Meeting government decarbonisation targets, while providing a secure electricity supply will be very challenging and means we will need to redefine the way our energy systems work.

In order to meet the energy demands of tomorrow, we will need to identify solutions that are able to account for aspects such as:

- Increasing demand for electricity – decarbonising means we will need to electrify our energy demands changing the way we travel as well as heat our homes and workplaces.
- Powering our economy by an energy system led by renewables such as wind and solar.
- Building a stronger transmission grid, both onshore and offshore, that can support renewables and increasing demand for electricity.
- Improving our energy security by investing in low-carbon domestic generation capacity.
- Putting in place enough energy storage and interconnections with other countries to complement our system.





To prepare for and facilitate this change, EirGrid must make the electricity grid more resilient and increase flexibility. The grid will need to carry more power, and most of this power will come from renewable generation – including both onshore and offshore sources. To make this possible, EirGrid will need to upgrade and add to existing grid infrastructure – primarily comprising underground cables and overhead lines (referred to in this document as ‘circuits’), and substations.

The European Communities (Internal Market in Electricity) Regulations 2000 (SI 445 of 2000) sets out the role and responsibilities of the TSO; Article 8(1) (a) gives EirGrid, as TSO, the exclusive function:

*“To operate and ensure the maintenance of and, if necessary, develop a safe, secure, reliable, economical, and efficient electricity transmission system, and to explore and develop opportunities for interconnection of its system with other systems, in all cases with a view to ensuring that all reasonable demands for electricity are met having due regard for the environment.”*

It is in this statutory context that EirGrid is undertaking the planning and development of grid infrastructure in the Northern & Western Region (hereafter generally referred to as the NWR).



## How are we planning for the future?

In the energy sector, we are exploring how we best meet society’s needs for energy security while taking positive action to help decarbonise our power supply. In 2023, EirGrid published an update to [Shaping Our Electricity Future \(SOEF\)](#) which was first published in November 2021.

SOEF is a detailed roadmap that profiles the work which needs to be carried out to transform network infrastructure planning, public and industry engagement, electricity system operation and electricity markets, to reach the government’s 2030 climate targets including the requirement to obtain 80% of electricity from renewable sources.

In addition, EirGrid’s published [Tomorrow’s Energy Scenarios 2023](#), a high-level exploration that looks at how much electricity we might need and how it can be provided, beyond 2030, up to 2050. These findings

will guide EirGrid’s strategic planning of the electricity system, in determining what we need to prioritise to enable a sustainable and secure energy transition for Ireland. They will also enable EirGrid to continue to support governments and regulatory authorities in the development of energy policy and market design development required to decarbonise the power system.

At a national level is the latest 5-year Grid Implementation Plan 2023-2028, and the annual Transmission Development Plan (TDP 2023-2032) – which is accompanied by an Environmental Appraisal Report (EAR).

The Grid Implementation Plan, the TDP and Shaping Our Electricity Future each provide a different level of scale and detail. [You can read all of our latest publications on our website.](#)

This is outlined in further detail in Sections 2.1 and 2.2 of this document and outlined in Figure 1.

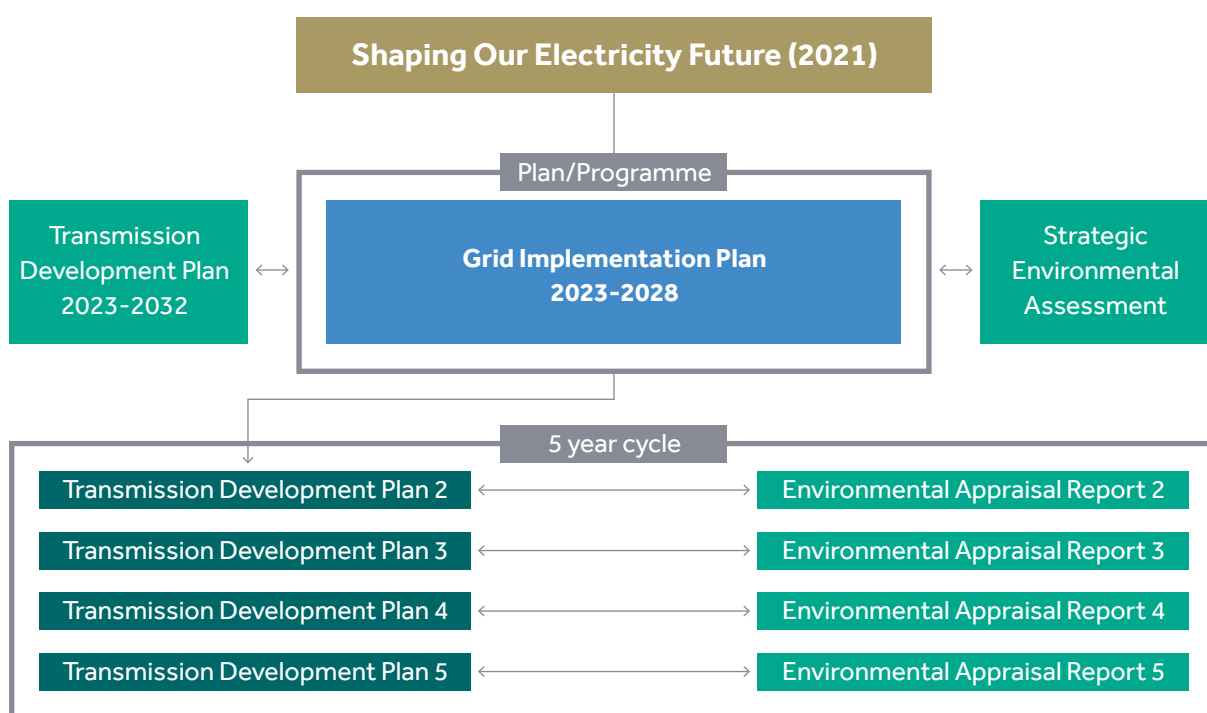


Figure 1: EirGrid hierarchy of plans





### 1.3 About this strategic framework document

This Strategic Framework document allows the planned grid development projects in the NWR to be understood in a regional context, showing the interdependencies of the projects, challenges within the region, how grid development is part of the economic development of the region.

It explains how the electricity transmission system in the NWR is anticipated to be developed over the coming years. It focuses on EirGrid's approach to project development and technology, the environment, consultation and engagement, people, communities and society. It should be noted that in the future, circumstances may change, and additional projects may be required. At the time of writing, the listed projects in this document are all the projects in the NWR that EirGrid are investigating or planning.

The NWR covers parts of Connacht and Ulster and includes the counties of Cavan, Donegal, Monaghan, Galway, Leitrim, Mayo, Roscommon, and Sligo (see Figure 2).

A number of grid infrastructure projects are planned in the NWR (see Figure 2) over the next number of years. These comprise both new circuits, as well as upgrades and refurbishments of existing substations and circuits. Collectively, for convenience, this document refers to these various projects as 'The Northern and Western Regional Programme' or simply 'the Regional Programme'.

Together, the Regional Programme will contribute to an improved and upgraded network in the NWR for all electricity users, responding to increasing demand for electricity and facilitating a transition to a low carbon society based on renewable energy sources.

The NWR Regional Programme consists of the following:

- 4 no. linear circuit projects.
- 29 no. existing circuit upgrade projects.
- 13 no. substation projects.

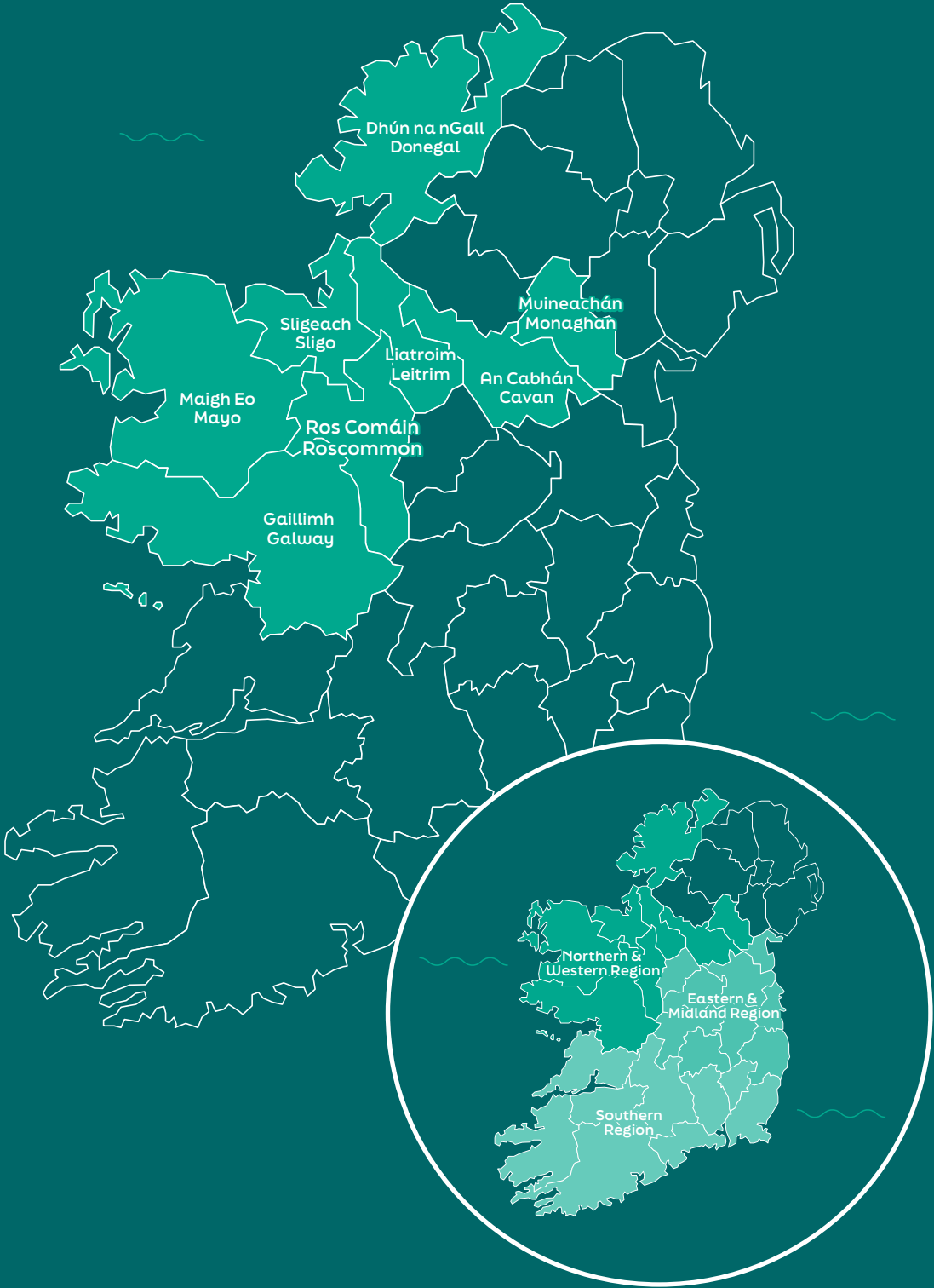


Figure 2: Map of the Northern and Western Region (source: Northern & Western Regional Assembly Regional Spatial and Economic Strategy 2020-2032)



## 1.4 About the Northern & Western Region

The region has a wide variety of existing and potential generation sources and system service providers – including onshore and offshore wind, hydrogen, solar, storage, synchronous condensers, wave, hydro, diesel, and gas.

As illustrated in Figure 3 below, the existing electricity transmission network in the region is predominantly 110 kV, with some limited extent of 220 kV infrastructure. The only existing high capacity 400 kV infrastructure in the region – the cross-country Moneypoint – Woodland 400 kV circuit – is in the southern part of the region, with the Oldstreet 400 kV substation located to the north-west of Portumna, Co. Galway.

The region is characterised by a strong existing and potential renewable energy (primarily wind) resource, with many requests for further connection. This level of generation is greater than the capacity of the existing network in the region, resulting in local constraints related to power transfer needs. Reinforcement of the regional grid infrastructure network is mainly required to connect the forecasted significant level of renewable generation, with benefits for regional economic and social development including creating transmission capacity for increased demand.

The reinforcement of regional grid infrastructure will require outages of existing assets for safety reasons during construction. To aid this EirGrid has launched an initiative to review and transform how outages of the transmission system are planned and granted (the Outage Transformation Project). This initiative will include a review of outage requirements and durations during construction, as well as consideration of outages during project initiation and decision making. This process will seek to minimise the requirement for outages during construction where possible. EirGrid and ESB Networks (ESBN) will continue to work closely to deliver the outage programme and in turn implement the grid delivery programme as effectively and efficiently as possible in all areas of the network requiring reinforcement.

One of the main challenges involved in the reinforcement of grid infrastructure in the NWR is the fact that, given the relatively limited extent of existing infrastructure in the region, there are limited opportunities for multiple simultaneous circuit outages (the switching off of a circuit) for maintenance, upgrading, new connections or substation works.

In summary there are reinforcement needs in the region due to:

- Local constraints related to power-transfer capacity and voltage support needs.
- Asset condition.
- Further market integration with Northern Ireland.



The projects described in this document will enable the transmission network to accommodate more diverse power flows. They will also provide benefits to existing and future users of the transmission network and facilitate future regional load growth.

In this context, the Northern and Western Regional Assembly Regional Spatial and Economic Strategy (RSES) 2020-2032 states that:

*"This region has the unique natural endowment of ample carbon-neutral, energy supplies that gives us an opportunity of forging and leading the new clean economy of the future. Incorporating this natural endowment in our Growth Framework along with innovation, business-friendliness and vision, coupled with our proximity to the UK and EU markets, the investment in clean technology must not be just seen as an environmental strategy, but an economic growth strategy. An opportunity presents for this region in pursuing a path towards a low carbon future.*

*Focusing on four key pillars:*

- 1. Growth – creating scale in the region for the industry to cluster, innovate and commercialise.*
- 2. Resources – we need a better understanding of the availability and use of our natural resources, technical capability, research and development, and technology commercialisation. A regional Energy Hub could be considered to integrate focus and investment.*
- 3. Utilisation – efficient use of energy in domestic, commercial, and industrial applications.*
- 4. Delivery – supporting infrastructural investment and regulatory frameworks are essential for unleashing the region's potential.*

(Section 4 Growth Ambition 1: Economy and Employment – Vibrant Region – Page 165).

EirGrid will continue to assess reinforcement needs in the NWR and to identify candidate solutions as part of Shaping Our Electricity Future, beyond those already progressing through the grid development process.





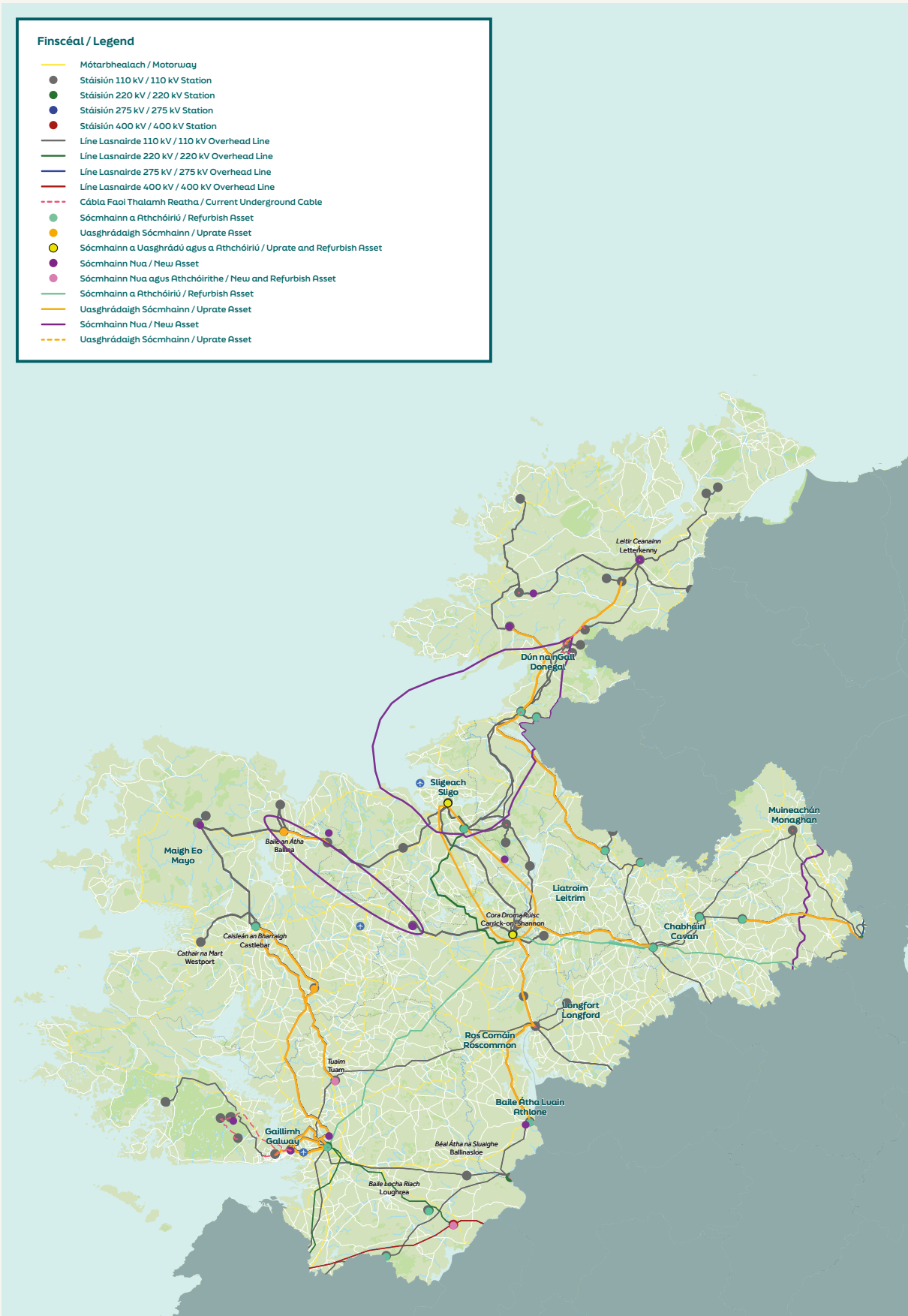


Figure 3: Existing Transmission Network and Planned Projects of the NWR (source: EirGrid)

## 1.5 EirGrid's approach to grid development

Electricity infrastructure is long-term, large-scale investment in the future. Each piece of equipment can last for decades. As the grid is an interconnected or 'meshed' network, EirGrid has to consider the wider grid when making changes at a local level.

EirGrid develops the grid to:

- Replace or upgrade existing infrastructure.
- Respond to changes to the demand for electricity.
- Connect with electricity grids in other countries.
- Accommodate new ways to generate electricity.
- Deal with different locations where it can be generated.

As the state-owned independent electricity Transmission System Operator (TSO), EirGrid is legally obliged to connect those who generate electricity. This means it must develop the grid in response to plans for new electricity generation, such as from renewable sources.

When EirGrid develops the grid, we follow three principles:

1. Ensure that consultation with local communities is central to project development.
2. Consider all practical technology options for developing the network.
3. Optimise the existing grid to minimise the need for new infrastructure.

Through adherence to these principles, EirGrid has due regard for the sustainable planning, development and delivery of grid infrastructure.

EirGrid has developed an end-to-end process for all of its grid infrastructure development projects, from the identification of a need to develop the electricity transmission grid, to design, consenting and subsequent energisation of the grid infrastructure project to address the need. This process is known as EirGrid's Framework for Grid Development.

You can read about this process along with our approach to public engagement in this document here: [Have Your Say](#).



Figure 4: EirGrid's Framework for Grid Development

## 1.6 Relevant national, regional, and local planning policy

Renewable energy is a national priority and government policy and is emphasised as such in the Government’s [White Paper on Energy](#). However, renewable energy is dependent on the ability of the transmission and distribution networks to allow its safe and stable use.

Renewable energy, whilst a principal driver of energy infrastructure development, must therefore be viewed side by side with grid and network system services which facilitate and support them. It is considered that the Regional Programme is in accordance with, and indeed will assist in the delivery of, key strategic energy objectives and land use development policies, set out in national, regional, and local statements, policies, and plans. These include:

- The Climate Action Plan 2021 – Securing Our Future (updated 2024).
- Project Ireland 2040 – National Planning Framework.
- Northern and Western Regional Assembly Regional Spatial and Economic Strategy 2020-2032.
- Cavan County Development Plan 2022-2028.
- County Donegal Development Plan 2024-2030.
- Monaghan County Development Plan 2019-2025.
- Galway County Development Plan 2022-2028.
- Galway City Development Plan 2023-2029.
- Leitrim County Development Plan 2023-2029.
- Mayo County Development Plan 2022-2028.

- Roscommon County Development Plan 2022-2028.
- Sligo County Development Plan 2017-2023 (Extended to July 2024).

The above documents are uniformly supportive of grid development, subject to social and environmental considerations. The Regional Programme is considered to be consistent with strategic policies of proper planning and sustainable development.

EirGrid is committed to working in partnership with the Northern & Western Regional Assembly, the Local Authorities of the region, and other Statutory and non-Statutory stakeholders, to implement policies and objectives relating to sustainable grid development.

The Project Ireland 2040 – National Planning Framework<sup>1</sup> states:

*“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.”*

*“New energy systems and transmission grids 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 and connecting the richest sources of that energy to the major sources of demand.”*

This is supported by the National Policy Objective 72:

*“Support the development and upgrading of the national electricity grid infrastructure, including to support the delivery of renewable electricity generating development.”*

<sup>1</sup> <https://www.npf.ie/wp-content/uploads/Draft-First-Revision-to-the-National-Planning-Framework-July-2024.pdf>





## 1.7 The Northern & Western Region Programme Area

As discussed in more detail in Part B of this Strategic Framework document, the Northern & Western Region Programme Area is focused upon the provision of both new and upgraded/ replacement transmission infrastructure in the region.

While the Northern and Western Region Programme has a number of clearly defined projects, these cannot be divorced from a wider programme of national grid infrastructure development being undertaken by EirGrid. This is due to the meshed nature of the Irish national grid and interconnection to the grid in Northern Ireland, and to Great Britain – and under construction to mainland Europe.

A number of proposed key strategic grid infrastructure projects are located in the NWR.

These include:

- **North South 400 kV Interconnection Development**  
A new circuit and associated infrastructure further linking the grid systems of Ireland and Northern Ireland.
- **North Connacht 110 kV Project**  
A new circuit, and associated infrastructure (including an uprate of the existing Flagford – Tonroe 110 kV circuit) between substations in Ballina Co. Mayo, and Ballaghaderreen, Co. Roscommon.
- **Flagford – Sligo Capacity Needs**  
Grid reinforcement between Carrick-on-Shannon and Sligo.
- **Donegal Capacity Needs (Donegal – Srananagh Corridor Reinforcement)**  
Grid reinforcement between Sligo and Donegal.
- **Galway – Salthill 110 kV circuit (Galway Area Transmission Network Needs)**  
Uprate of existing overhead line around Galway City.
- **Letterkenny GIS Substation Project**  
Replacement substation in Letterkenny, Co. Donegal.

## 1.8 Existing environment

This section provides a summary of the region's environment for the key areas of biodiversity, cultural heritage, and surface water. As will be detailed in Section 7 (Our Approach to Environment) of this document, environmental considerations will inform the progression of all EirGrid projects forming the NWR Regional Programme.



The NWR is a wide area with numerous natural environmental features, including national parks, designated environmental sites, two potential World Heritage sites, National Monuments, and many rivers and waterbodies. Section 7.3 identifies some of the key features of the region and sets out information on how a range of environmental topics, including those relating to people and communities, are typically considered.

### 1.8.1 Biodiversity

The NWR contains areas of high environmental sensitivity, particularly along the coastline, rivers and waterbodies. There are many areas protected by international, European, and national designation. Additionally, there are many areas of ecological interest outside of the designated sites. Woodland cover in the region is on average 11.5% of landcover<sup>2</sup> compared to a national average of 11.2%.

The counties within the region have a large variation: Leitrim has the highest forest cover nationally at 20.1%, while Monaghan is second lowest nationally at 4.6%. The majority of the forests in the region are commercial coniferous forests<sup>3</sup>. The region's land quality is more mixed compared to other regions in Ireland; this has resulted in comparatively less intensive agriculture, particularly in the upland areas, resulting in a greater biodiversity. Areas like Connemara are of particular note for their biodiversity, and this is reflected in its designation. Waterbodies are addressed below but are well noted for their water quality in most areas, resulting in strong aquatic biodiversity.

<sup>2</sup> <https://www.teagasc.ie/news--events/daily/forestry/irelands-forests---statistics-2023.php>

<sup>3</sup> <https://www.nwra.ie/pdfs/NWR-RSES-2020-2032.pdf>. Section 5.9 Page 207.



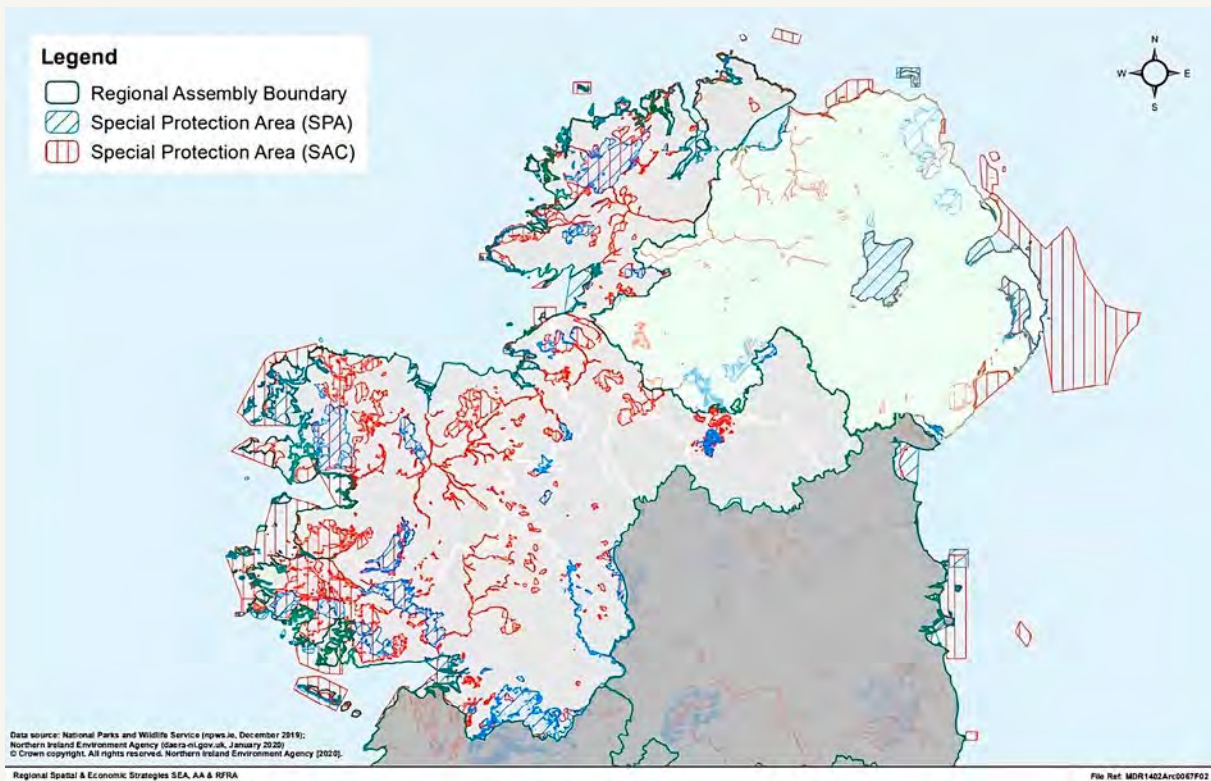


Figure 5: SPAs and SACs within the Northern and Western Region (source: NWR<sup>4</sup>)

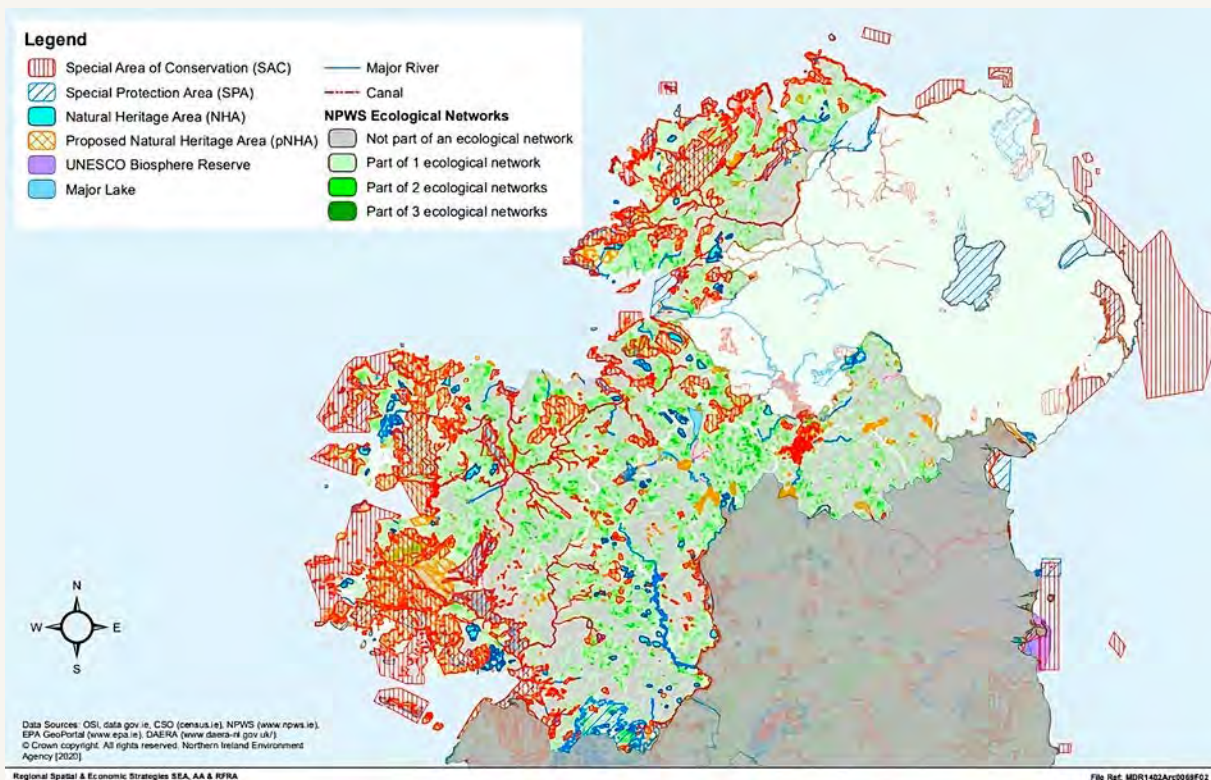


Figure 6: Biodiversity constraints within the Northern and Western Region (source: NWR<sup>5</sup>)

4 <https://www.nwra.ie/wp-content/uploads/2020/06/rses-natura-impact-report-post-consultation.pdf>

5 <https://www.nwra.ie/wp-content/uploads/2020/06/rses-natura-impact-report-post-consultation.pdf>



## 1.8.2 Cultural heritage

The archaeological, architectural heritage, and cultural heritage features of the region are rich, varied, and tied intrinsically to the landscape of the region. The region has a rich history of mythology, and recorded history from the earliest Irish settlers to the modern industrial heritage.

There are three World Heritage sites on the island of Ireland, and a further three are on the tentative list<sup>6</sup>. Two of the tentative sites are in the region – the Passage Tomb Landscape of County Sligo and the Rathcroghan Complex in County Roscommon (part of the Royal Sites of Ireland).

The Passage Tomb Landscape is approximately one hundred intensely interconnected megalithic passage tomb sites and undisturbed cairns in often dramatic topographical environments, over an area of approximately 16 km<sup>2</sup>. The site is reflective of the importance of setting and strong connections between the landscape and heritage.

The Rathcroghan Complex, 13 km northeast of Castlerea, is a complex of archaeological sites that include the Royal Seat of Connacht including the seat of Queen Medb, mounds, forts, a cave, and standing stone ranging from the Neolithic (4000–2500 BC), through the Bronze (2500–500 BC) and Iron Age (500 BC–400 AD), to the early medieval period.

Nationally, there are over 1,000 individual national monuments at 760 locations in state care<sup>7</sup>. Of these locations, 209 are in the Northern and Western Region, reflecting the less developed built heritage landscape compared to the other regions.

## 1.8.3 Surface water

The Water Framework Directive (WFD) provides a framework for establishing a system to improve and/or maintain the quality of water bodies across the European Union (EU). Under the WFD, river basin management planning and monitoring is required to achieve the general protection of the aquatic ecology, specific protection of unique and valuable habitats, protection of drinking water resources, and protection of bathing water. Waterbodies may be assigned a status of Bad, Poor, Moderate, Good or High, and the Directive requires all water bodies (river, lakes, groundwater, transitional, coastal) to attain 'Good Water Status' by 2027. An overall 'Good Status' refers to achieving this standard for both ecological and chemical parameters.

The WFD was transposed into Irish law by the (Water Policy) Regulations 2003 (as amended), which outline the water protection and water management measures required to maintain high status of waters where it exists, prevent any deterioration in existing water status and achieve at least 'Good' status for all waters. These regulations require the assessment of permanent impacts of a project on WFD waterbodies. This includes all operational impacts and may also include construction impacts depending on the works required.

<sup>6</sup> <https://whc.unesco.org/en/statesparties/ie>

<sup>7</sup> <https://www.archaeology.ie/national-monuments/>



The key river in the region is the River Shannon, which rises in County Cavan and drains a large area of region through tributaries. Other large rivers include the Finn, Derg, Erne, Swilly in Donegal; River Garvogue in Sligo; River Moy and Robe River in Mayo; River Corrib in Galway; and River Blackwater in Monaghan. The region contains many sizeable loughs including Lough Eske, Lough Melvin, Lough Allen, Lough Gill, Lough Conn, Lough Mask, Lough Corrib and Lough Ree. The Ulster Canal is another key waterbody located in the region, which runs through Cavan and Monaghan and connects the Shannon and Erne Waterways.

Because of proximity and landform, some of waterbodies of the region will drain into Northern Ireland and will be affected by drainage from Northern Ireland. Parts of the region will drain into Lough Neagh, and also into Lough Erne, which then in turn discharges through County Donegal into the Atlantic Ocean. Any possible transboundary effects will need to be considered at a project level.

### 1.8.4 People and communities

The NWR is a broad mix of communities shaped by its diverse landscape. The region forms part of the three Fáilte Ireland regions: Wild Atlantic Way; Hidden Heartlands; and Ancient East<sup>8</sup>. The region has a diversity of communities from Galway City to regional growth centres of Letterkenny, Sligo and Athlone and key towns of Ballina, Ballinasloe, Castlebar, Cavan, Carrick-on-Shannon, Monaghan, Roscommon, and Tuam. In addition, there are many smaller towns, villages, rural settlements, and islands throughout the region. The total population of the region is 900,937, which is 17.5% of the national population (based on the 2022 census<sup>9</sup>). The RSES identifies the age structure of the region and notes a decline in residents of 20 to 44 years of age as a result of emigration (page 17). This is as a result of 'employment opportunities' elsewhere and 'growth and the prioritisation of development' is one method to halt the decline.



<sup>8</sup> <https://www.failteireland.ie/regionalstrategies.aspx>

<sup>9</sup> <https://www.cso.ie/en/statistics/population/censusofpopulation2022/>



The Northern and Western Regional Assembly Regional Spatial and Economic Strategy (RSES) predicts an increase in population to 986,500–1,014,500 by 2031<sup>10</sup>. The region also is home to the largest Gaeltacht communities in Ireland. These are spread throughout counties Donegal, Mayo, Galway, and the islands.

Employment in the region is a broad mix with multinational businesses (e.g., technology, manufacturing, and pharmaceuticals), and higher than the national average employment in forestry, agricultural, and fishing<sup>11</sup>. The region also supports a strong tourism economy with attractions such as 34 no. Blue Flag beaches<sup>12</sup>, the Marble Arch Caves Global Geopark, the Shannon Blueway, the Ulster Canal and Great Western Greenways (and many other planned greenways), hiking routes on hills and mountains, the islands, and scenic landscapes, etc.

The RSES states “...risks around infrastructure constraints persist and could impede the Northern and Western Region’s ability to attract labour and investment.” (page 27). It also identifies that the Region’s competitiveness has been challenged by a number of factors including comparatively lower investment in infrastructure such as utilities (page 29).

To combat this and to promote growth, the RSES has five Growth Ambitions. The Infrastructure Ambition is:

*“Provision and maintenance of economic infrastructure, such as energy, water, and wastewater, are key to delivering compact growth and a connected, vibrant, inclusive, resilient and smart region.”*

In Section 8.2 (Growth Ambition 5: Infrastructure – Enabling our Region), the RSES links grid development to economic development – not just allowing the export of surplus renewable energy to other regions but by attracting inwards investment:

*“Developing the grid will enable the transmission system to safely accommodate more diverse power flows from surplus regional generation and also to facilitate future growth in electricity demand. These developments will strengthen the network 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.”*

10 <https://www.nwra.ie/pdfs/NWR-RSES-2020-2032.pdf>, Table 2 Page 40.

11 <https://www.nwra.ie/pdfs/NWR-RSES-2020-2032.pdf>, Section 3.5 Page 42.

12 <https://www.nwra.ie/pdfs/NWR-RSES-2020-2032.pdf>, Section 5.3 Page 191.



# Part 2: Project delivery

## 2.1 The planned projects

There are three categories of projects in the Regional Programme:

- New Infrastructure Projects:  
10% of the Regional Programme**  
 These are new circuits (overhead lines and underground cables) or substations.
- Innovation Projects<sup>13</sup>:  
20% of the Regional Programme**  
 These are 'non-wire' technological solutions to challenges (e.g., dynamic line rating or power flow controllers).
- Optimisation Projects:  
70% of the Regional Programme**  
 These are improvements of existing assets (e.g., thermal uprate and voltage upgrade of an existing circuit or works to an existing substation).

The Regional Programme includes the following:

- 4 no. new linear circuit projects.
- 29 no. existing circuit upgrade projects.
- 13 no. substation projects.

It should be noted that in the future, circumstances may change, and additional projects may be required. At the time of writing, the listed projects in this document are all the projects in the NWR that EirGrid are investigating or planning.

Should additional projects arise, these will be consulted on as outlined in Section 5 of this document.

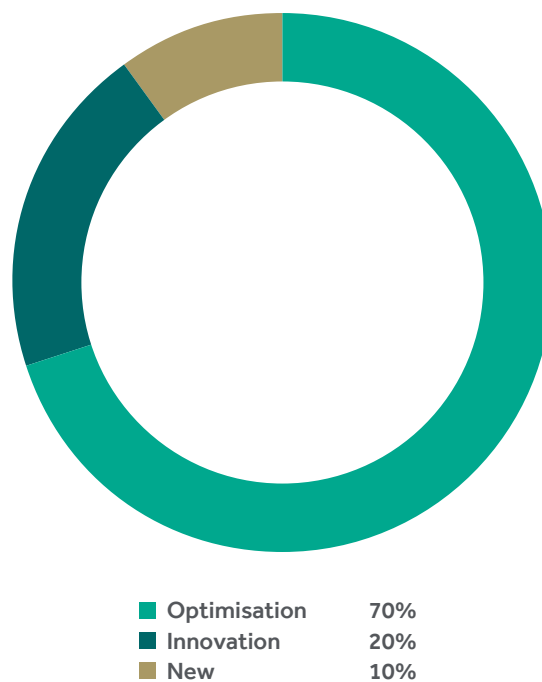


Figure 7: Breakdown of project type of the Northern & Western Regional Programme

## 2.2 Scope of the Northern & Western Regional Programme

It is intended that the Regional Programme will be delivered as an integrated programme of works to transform the Northern & Western Region's electricity transmission network.

EirGrid has sought to optimise and innovate as far as possible in order to maximise the use of existing assets and new technologies. The construction of new projects forms roughly 10% of the Regional Programme as seen in Figure 7, with the remaining 90% seeking to improve existing assets.

<sup>13</sup> We bring innovation (such as new materials, technology, software, etc) to all of our projects. For this document, innovation projects are just the DLR and PFC projects.

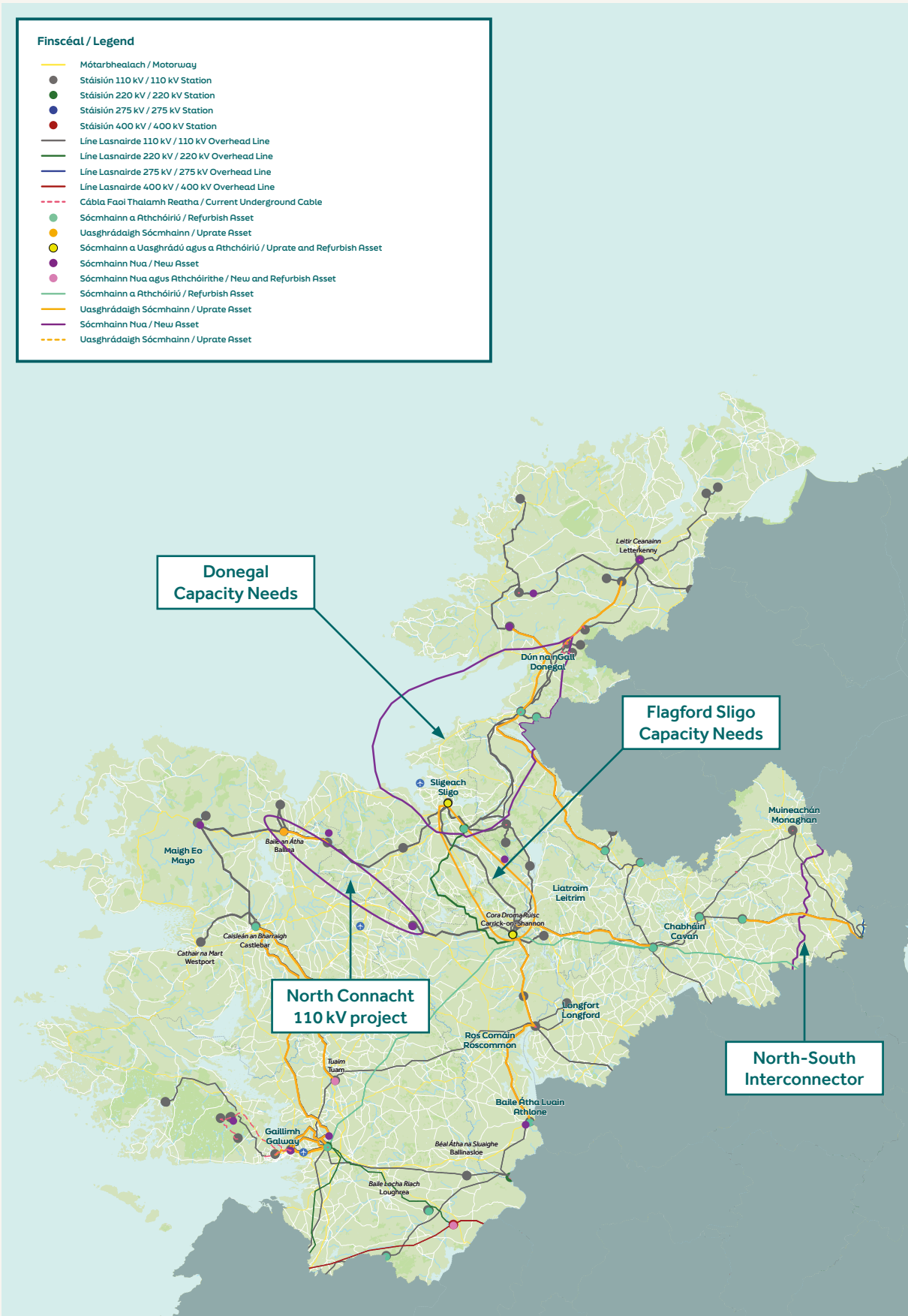


Figure 8: Projects of the Northern & Western Regional Programme (source: EirGrid)

Table 1 below provides a summary of the Regional Programme and Figure 8 shows the general location of the planned projects. However, the specific nature and/or location of certain projects are not yet known as further design, surveys, consultation, and assessment are required before the exact project details are identified.

Table 1: Projects making up the Northern and Western Regional Programme

EirGrid project no.	Project name	Description	Administrative council*
CP0982	Flagford Sligo Capacity Needs	Grid reinforcement between Flagford, Srananagh and Sligo substations (preplanning as at July 2024)	Sligo County Council, Roscommon County Council
CP1233	Donegal Capacity Needs (Donegal – Srananagh Corridor Reinforcement)	New 220 kV circuit connection between Clogher and Srananagh substations (preplanning as at July 2024)	Sligo County Council, Leitrim County Council, Donegal County Council
CP0816	North Connacht 110 kV Project	110 kV underground cable circuit between Moy and Tonroe substations, combined with an uprate of the existing overhead line circuit between Tonroe and Flagford substations (consented)	Mayo County Council, Roscommon County Council
CP0466	North South 400 kV Interconnection Development	138 km of overhead line circuit between a new substation (Turleenan) Co. Tyrone and Woodland substation, Co. Meath (consented)	In Ireland: Cavan County Council, Monaghan County Council, Meath County Council. In Northern Ireland: Armagh City, Banbridge and Craigavon Borough Council, Mid Ulster District Council, Newry, Mourne and Down District Council

New Infrastructure projects





EirGrid project no.	Project name	Description	Administrative council*
CP0817	Flagford – Sliabh Bawn 110 kV circuit uprate	Line uprate	Roscommon County Council
CP0841	Arva – Carrick on Shannon 110 kV circuit	Line uprate	Roscommon County Council, Leitrim County Council, Longford County Council, Cavan County Council.
CP0848	Castlebar – Cloon 110 kV Thermal Uprate	Line uprate	Galway County Council, Mayo County Council
CP0867	Flagford – Louth 220 kV Line Refurbishment	Line refurbishment	Cavan County Council, Leitrim County Council, Roscommon County Council
CP0905	Louth – Rathrussan 110 kV No 1 Line Uprate	Line uprate	Cavan County Council, Monaghan County Council, Louth County Council
CP1078	Lanesboro – Sliabh Bawn	Line uprate	Roscommon County Council
CP1079	Binbane – Cathaleen’s Fall 110 kV circuit thermal capacity	Uprate of the existing overhead line circuit between Binbane and Cathaleen’s Fall substations	Donegal County Council
CP1119	Cashla Flagford 220kV Line Refurbishment	Line refurbishment	Galway County Council, Roscommon County Council
CP1155	Glenree – Moy 110 kV circuit	Line uprate	Mayo County Council
CP1168	Cashla-Salthill 110 kV Thermal Uprate	Line uprate	Galway County Council
CP1191	Cashla-Galway 110 kV cot 1 Line Uprate	Line uprate	Galway County Council
CP1275	Cashla-Galway 110 kV cct 2 Uprating	Line uprate	Galway County Council
CP1276	Cashla-Galway 110 kV cct 3 Uprating	Line uprate	Galway County Council
CP1282	Clogher – Drumkeen 110 kV line alteration	Line alteration	Donegal County Council
CP1311	Athlone – Lanesboro 110 kV circuit 1	Line uprate	Roscommon County Council
CP1318	Binbane – Clogher – Cathaleen’s Fall – 110 kV Clogher tie in	New ‘tie in’ circuits	Donegal County Council
CP1327	Clogher to Drumkeen 110 kV circuit	Line uprate (TBC)	Donegal County Council
CP1428	Cashla – Dalton 110 kV circuit uprate	Line uprate	Galway County Council, Mayo County Council

Optimisation projects

EirGrid project no.	Project name	Description	Administrative council*
CP1429	Castlebar – Dalton 110 kV circuit uprate	Line uprate	Mayo County Council
CP0839	Moy 110 kV Station reconfiguration and busbar uprate	Busbar uprate	Mayo County Council
CP0871	Galway 110 kV Station Redevelopment Project	Substation upgrade	Galway County Council
CP0907	Dalton 110 kV station busbar uprate	Busbar uprate	Mayo County Council
CP0969	Oldstreet Series Compensation	Substation upgrade	Galway County Council
CP1023	Letterkenny Station Redevelopment	Replacement of station	Donegal County Council
CP1139	Sligo & Srananagh 220 & 110 kV protection upgrade	Protection-upgrade	Sligo County Council, Leitrim County Council
CP1153	Oldstreet, Tynagh & Cashla 400 kV and 220 kV Protection Upgrade	Protection-upgrade	Galway County Council
CP1156	Sligo 110 kV Station – Srananagh 1 & 2 Bay uprates	Substation upgrade	Sligo County Council
CP1186	Agannygal, Ennis and connected stations 110 kV Protection Upgrade	Protection-upgrade	Galway County Council
CP1227	Cashla and Connected Stations 220 kV & 110 kV Protection Upgrade	Protection-upgrade	Galway County Council
CP1228	Shannonbridge and Connected Stations 220 kV & 110 kV Protection Upgrade	Protection-upgrade	Roscommon County Council
CP1250	Sprecher and Schuh Circuit Breaker replacement	Substation upgrade	Mayo County Council
CP1300	Climate Change Adaptation Measures	Substation upgrade	Roscommon County Council

EirGrid project no.	Project name	Description	Administrative council*
CP1048	Binbane 110 kV station PFC	Power Flow Controller	Donegal County Council
CP1152	Arva and Connected Stations 110 kV protection upgrade	Protection-upgrade	Cavan County Council
CP1161	Cathaleen's Fall and Connected Stations 110 kV protection upgrade	Protection-upgrade	Donegal County Council
CP1321	Cashla to Dalton 110 kV circuit dynamic line rating (DLR)	Dynamic Line Rating	Galway County Council, Mayo County Council
CP1322	Cathaleen's Fall to Coraclassy 110 kV circuit dynamic line rating	Dynamic Line Rating	Donegal County Council, Leitrim County Council, Cavan County Council
CP1381	Flagford – Sliabh Bawn – Lanesboro 110 kV lines (PFC)	Power Flow Controller	Leitrim County Council, Longford County Council
CP1387	Letterkenny – Cathaleen's Fall or Letterkenny – Clogher 110 kV lines PFC	Power Flow Controller	Donegal County Council
CP1388	Letterkenny – Tievebrack – Binbane 110 kV lines PFC	Power Flow Controller	Donegal County Council
CP1404	Sligo – Srananagh – Corderry 110 kV lines PFC	Power Flow Controller	Sligo County Council, Leitrim County Council
CP1471	Lisdrum-Louth 110 kV dynamic line rating (DLR)	Dynamic Line Rating	Monaghan County Council, Louth County Council

\*The Council areas are provided to indicate the location of the projects. As identified above, the exact locations of some of the new circuit projects is currently unknown and will be confirmed during project development. Projects correct as of 30th June 2024 and are subject to future changes.





## 2.3 New infrastructure projects

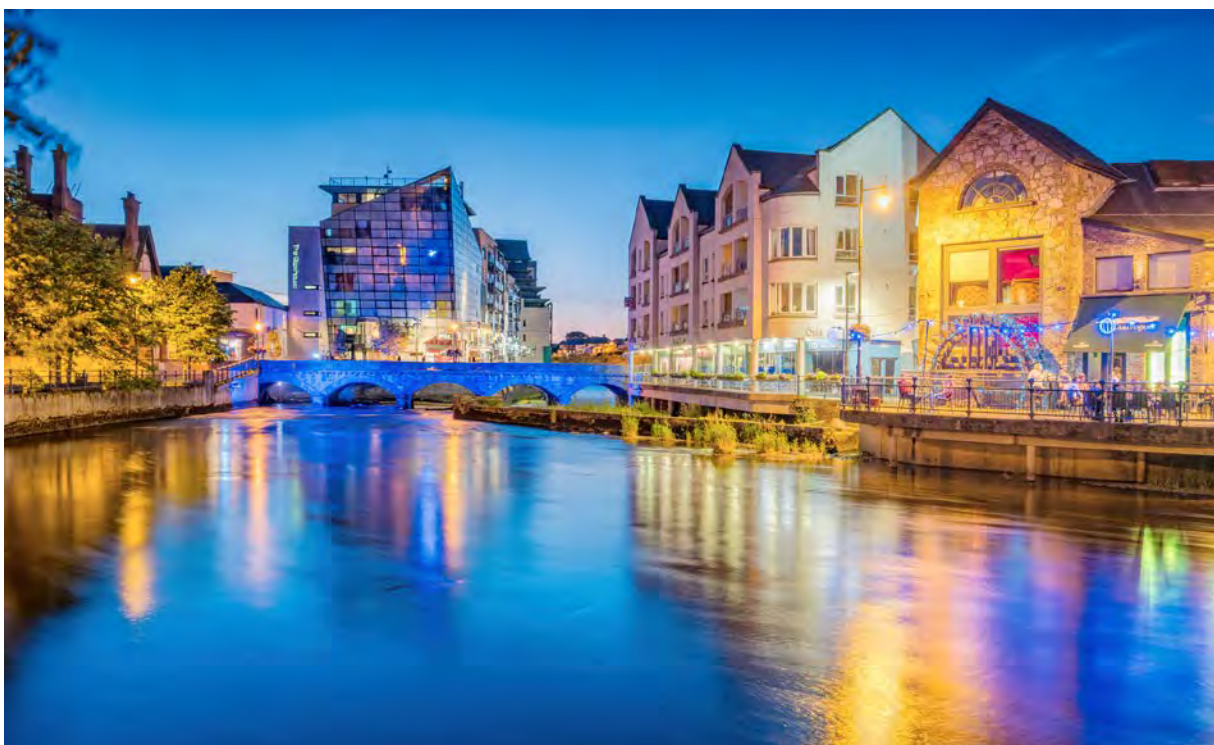
The following new infrastructure projects seek to both expand and reinforce the grid in the region and are at various stages of development:

- **North-South 400 kV Interconnection Development**  
(Step 6 construction phase).
- **North Connacht 110 kV project**  
(Step 6 construction phase).
- **Donegal Capacity Needs (Donegal – Srananagh Corridor Reinforcement)**  
(Step 3 pre-planning phase).
- **Flagford Sligo Capacity Needs**  
(Step 3 pre-planning phase).

The Donegal Capacity Needs and the Flagford Sligo Capacity Needs projects are being progressed in parallel by EirGrid as an overall strategic solution for enhanced grid infrastructure in the northwestern part of the NWR.

### 2.3.1 North South 400 kV interconnection development

The North-South Interconnector is a 400 kV overhead line which will run for approximately 138 kilometres between Meath and Tyrone, through Cavan, Monaghan and Armagh. The interconnector will protect and enhance the supply of electricity across the island of Ireland and enable us to allow more renewables onto the electricity grid. It will transport up to 1,500 MW of electricity and remove a significant bottleneck on the all-island electricity system. At present there is only one interconnector between Ireland and Northern Ireland, leaving the system vulnerable to widespread power failures if a problem occurs. The project has undergone an extensive planning process and subsequent legal challenges. It now has full planning and legal consent in both Ireland and Northern Ireland. The project is now at Step 6 – construction, energisation and benefit sharing.



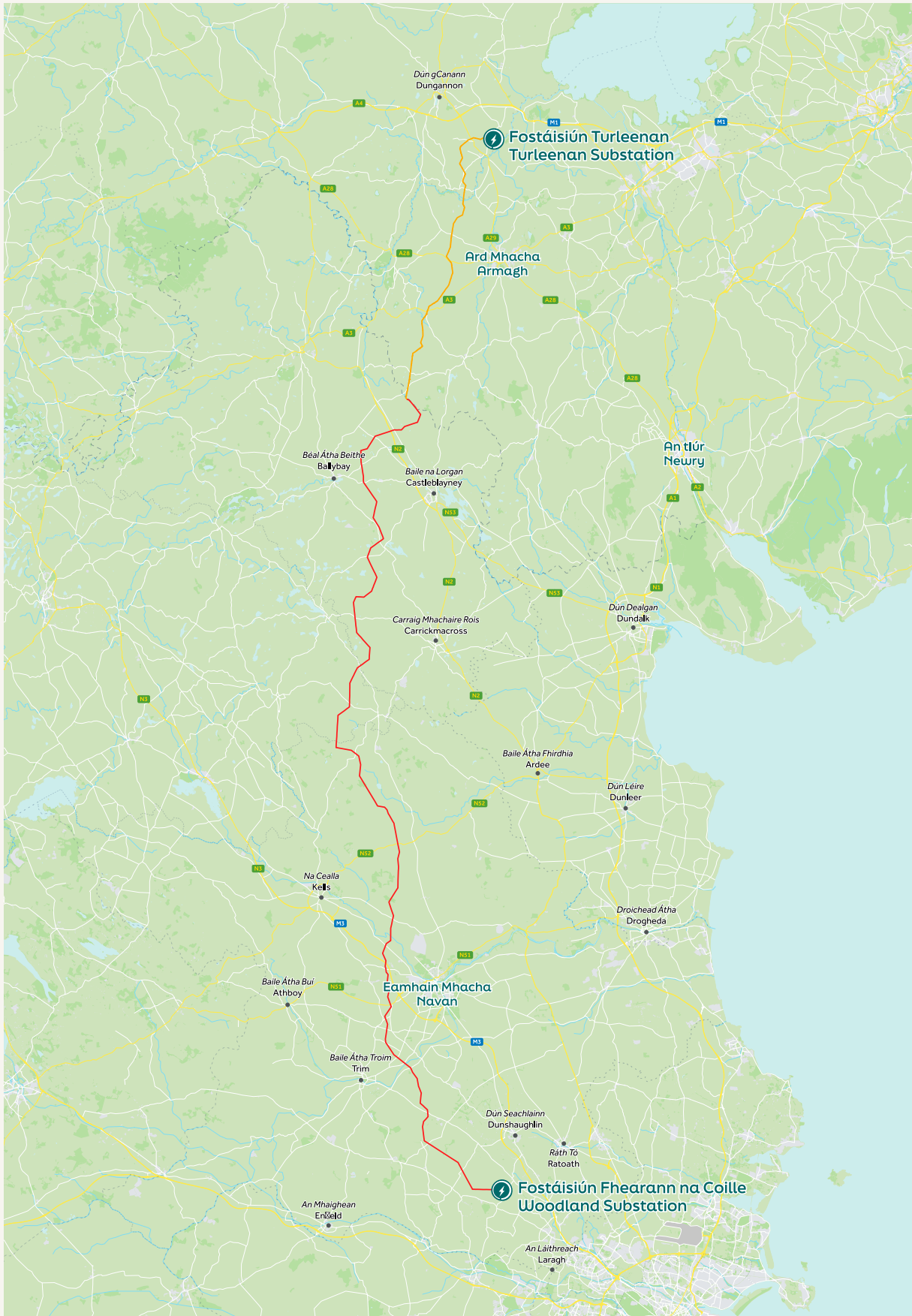


Figure 9: Map of the North-South Interconnector (source: EirGrid)

### 2.3.2 North Connacht 110 kV project

The North Connacht 110 kV Project will create a new circuit in the electricity transmission network in the Northern and Western Region. The new circuit will enhance the network in the area and provide capacity to connect new demands for electricity to support economic growth in the area, and to connect new renewable generation to help with meeting our Climate Action Plan targets.

- A new 110 kV underground electricity cable circuit from Moy substation in Ballina Co. Mayo to Tonroe substation in Ballaghaderreen Co. Roscommon.
- Upgrade and extension work to Moy and Tonroe substation.
- An upgrade of the existing 110 kV overhead line between Tonroe and Flagford substations in County Roscommon. The location of the existing overhead line will not change.

The North Connacht 110 kV Project consists of the following elements:

The project is now at Step 6 – construction, energisation and benefit sharing.



Figure 10: North Connacht 110 kV Project (source: EirGrid)



### 2.3.3 Flagford Sligo Capacity Needs

The Flagford Sligo Capacity Needs is a proposed project that will help to resolve the network need in the NWR. The existing Sligo and Flagford (Carrick-on-Shannon) substations are currently connected by a 110 kV overhead line, which does not connect to the adjacent Srananagh (County Sligo) substation. The proposed project will provide a 220 kV circuit from Flagford to Srananagh substations along with the refurbishment of the existing 110 kV to provide improved connectivity into Srananagh, additional capacity and security of supply, as well as strengthening the existing grid connection to Sligo town.

Multiple technology options are being considered to fulfil the need for the project. The available technology options for the project include upgrading a segment of the existing 110 kV overhead line to 220 kV with

new circuit tie-ins to Srananagh substations; or technical improvements to the existing 110 kV overhead line (thermal uprate) with a new 220 kV underground cable between Flagford and Srananagh.

As part of the assessing of new technologies, EirGrid is working with ESB to determine if conventional steel lattice towers or new composite poles should be used for the overhead line. The new composite poles are longer lasting and could reduce the visual impacts.

It is currently envisioned that the technology options will be consulted on with the public in 2025 before the Best Performing Technology Option is selected. Following consultations, the planning application for the project would likely be submitted in 2027. The construction of the project would require approximately four years.



Figure 11: Flagford – Sligo Capacity Needs project area map (source: EirGrid)

### 2.3.4 Donegal Capacity Needs (Donegal – Srananagh Corridor Reinforcement)

The Donegal Capacity Needs (Donegal – Srananagh Corridor Reinforcement) project will help to strengthen the grid network in the NWR. There are no 220 kV circuits in Counties Leitrim and Donegal and an improved grid is required to facilitate new renewable energy and investment in the NWR. This project will significantly extend the 220 kV grid into County Donegal by providing a new connection from Srananagh substation, Co. Sligo to Clogher substation, Co. Donegal.

All appropriate technologies for the project will be assessed. The available technology options for the project include a new 220 kV overhead line with conventional steel lattice towers or new composite poles (see Section 2.3.3 for further details); or upgrading the existing 110 kV overhead line to 220 kV and also providing an underground or marine cable.

It is currently envisioned that the technology options will be consulted on with the public in 2025 before the Best Performing Technology Option is selected. Following consultations, the planning application for the project would likely be submitted in 2027. The construction of the project would require approximately five years.

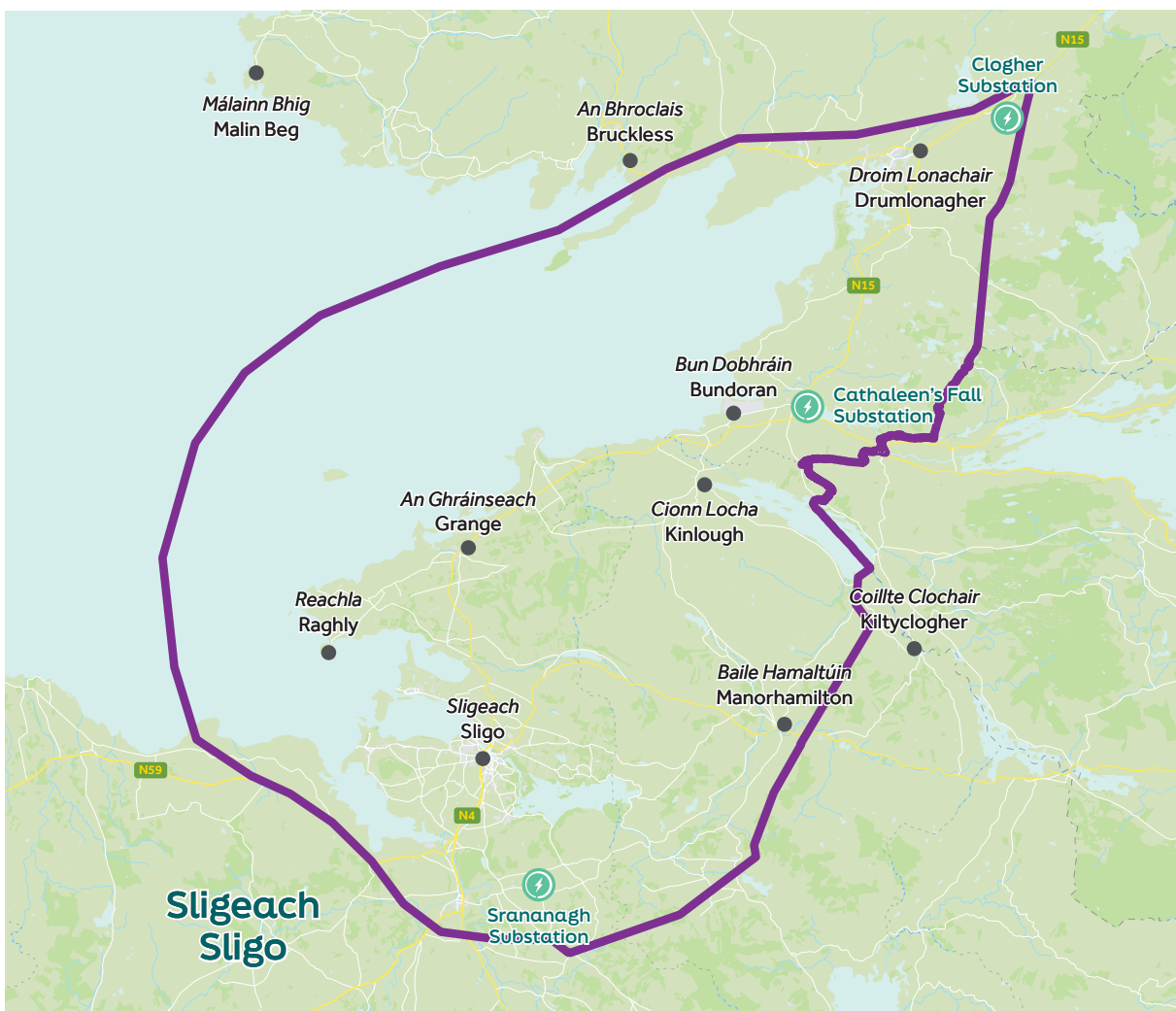


Figure 12: Donegal Capacity Needs study area (Source: EirGrid)





## 2.5 Optimisation projects

The aim of these projects is to maximise the capacity of existing infrastructure, thus reducing the need for new infrastructure, minimising additional land use and social and environmental impact.

There are a number of line uprate and station reconfiguration projects that are listed in Table 1 above. These are relatively minor in nature and involve works within the stations and on existing lines themselves and generally do not involve any expansion or amendments to the existing station footprints, lines or structures.

Line uprate and upgrade projects involve increasing grid capacity using existing lines and corridors. These can occur through various means that include replacing components such as conductors, insulators and structures to uprate or upvoltage overhead lines so they can carry higher loads.

### 2.5.1 Letterkenny GIS Substation Project

The capacity of the existing 110 kV busbar at Letterkenny Substation is a limiting factor in connecting additional generation to the transmission grid. There is also a risk to security of supply to County Donegal during maintenance situations due to the configuration of the existing Letterkenny Substation. During maintenance of the busbar, there is risk of loss of electricity supply in most parts of County Donegal if there is loss of another circuit.

The Letterkenny GIS Substation Project is therefore essential to enable the further integration of renewable energy in line with Government Policy targets and to ensure a more secure supply of electricity for County Donegal. It will also enhance the network for electricity demand users and wider industry in County Donegal – it is a key enabler in creating electricity demand opportunities in Donegal.



Figure 14: Typical GIS station

## 2.6 Other key infrastructure projects in the Northern & Western Region

The NWR Regional Programme for grid infrastructure development is an ambitious and challenging, yet a vital, major programme of electricity transmission infrastructure development in the region, and for the country as a whole. However, it is important to consider the potential for cumulative impacts, considering other planned major infrastructure development projects, with which the Programme is likely to interact, in terms of project timelines, environmental and other impact, and potential construction efficiencies.

Key projects, among others, include:

- Various renewable energy and associated projects;
- The Sligo Leitrim Northern Counties Railway (SLNCR) Greenway Project;
- The Barnesmore Gap Greenway (BGG) Project; and
- TEN-T road schemes.

As identified in the 2024 Climate Action Plan:

*"To reach 80% of electricity demand from renewable sources by 2030...All relevant public bodies will carry out their functions in a manner which supports the achievement of the renewable electricity targets, including, but not limited to, the use of road and rail infrastructure to provide a route for grid infrastructure where this is the optimal solution"*

(Section 12.4.1.1 Accelerate Renewable Electricity Generation, page 168)

EirGrid has engaged with, and will continue to engage with, Transport Infrastructure Ireland, the Northern & Western Regional Assembly, and County Councils in the NWR to explore opportunities for the co-sharing of new grid infrastructure with existing and planned transportation and other relevant infrastructure. This will be identified on a project-by-project basis and will follow extensive routing assessments to establish the optimal solution on the use of the transport infrastructure.

ESB, in its role as Distribution System Operator (DSO), have requested new 110 kV stations around the country, including in the Northern and Western Region. These new stations are needed to ensure a safe secure supply to DSO demand. It is too early in the connection process to determine the location and connection method of these 110 kV stations to the transmission system. As we develop these projects with the DSO they will be included in our Transmission Development Plan (TDP) and Network Delivery Portfolio (NDP). The DSO and TSO projects will all be subject to relevant requirements and best practice for planning and statutory consenting.



There are a wide variety and number of different renewable energy and associated projects in the region, including wind and solar, battery storage, system service infrastructure that are being progressed by developers. EirGrid has a general obligation to connect these types of projects to the grid; however, these are not grid reinforcement projects but are known as customer projects.

These are identified in Table 2 but are outside of the Northern and Western Regional Programme. Additional customer projects are likely to be added in the future.

Table 2: Customer projects in the Northern and Western Region

<b>EirGrid project name</b>	<b>Project name</b>	<b>Connection type</b>	<b>County</b>
CP1073	Oweninny 3	Connection to existing substation	Mayo
CP1126	Mully Graffy Windfarm	Connection of Windfarm	Donegal
CP1142	Firlough 110 kV Station (Firlough WF)	Connection to existing substation	Mayo
CP1237	Ferry View 110 kV Station	Connection to existing substation	Galway
CP1259	T-3 P482 Cuilleen Power	Connection of 100 MW generation facility in Athlone	Roscommon
CP1286	Tonroe 110kV Station DSO	Connection to existing substation	Mayo
CP1341	Barnacurragh Solar Park (ECP 2-2-20)	Connection of a solar farm south of Tuam	Galway
CP1345	Barnesmore Windfarm Repowering	Uprated connection of windfarm	Donegal
CP1352	Ballymoneen Solar Park	Connection of a solar farm near Claregalway	Galway
CP1393	Offshore Phase 1 – Skerd Rocks	Connection of offshore wind, NW of the Aran Islands	Galway
*Known projects as of 30th June 2024.			



The expansion of offshore wind energy in Ireland will be major source of renewable energy. The government aims to deliver 37 GW of offshore wind capacity by 2050, providing long-term jobs, economic benefits and low-cost energy for customers. Phase 1 of this expansion includes seven offshore windfarms, one of which is off the coast of the NWR.

The NWR Regional Programme outlined in this document is in large part required to facilitate the connection of these projects to the grid. The offshore windfarm off the coast of NWR is:

- Sceirde Rocks, off the Galway coast, that will be up to 30 turbines at least 5km from the shore. This will deliver 450 MW annually.



# Part 3: Our approach

## 3.1 Stakeholder engagement

Effective engagement is essential for EirGrid to achieve our purpose – to transform the power system for future generations. We actively engage with policymakers, industry and society at all levels, from local to European, in line with our strategic objectives and government policy.

### Public engagement

EirGrid's public engagement strategy aims to develop a cohesive approach that reflects and is framed by the energy transition and the urgent context of climate action. As part of this, EirGrid has made community engagement and participation part of its core competence, developing effective systems to deliver meaningful public engagement.

The six step approach to project development as outlined earlier in section 1.5 has public engagement and consultation embedded within the process. This ensures that from the earliest stages of our projects we are engaging with those who live in the communities that will be impacted by our projects.

It's important that we gain the support of individual landowners, their neighbours, and their wider communities when we are developing projects in an area. We must acknowledge the challenges of what we ask from individuals and communities for the benefit of the entire population ensuring that they are consulted with and listened to from the outset.

A tailored approach is provided for each project with a bespoke engagement plan developed. A key aspect of all our plans is to seek to engage with the community at the earliest stages possible.

- Our Community Liaison Officers and Landowner Liaison Officers are located within the project regions and start developing relationships in the community and engaging with landowners.
- We seek to establish a community forum. The purpose of the forum is to bring together people and organisations in the study area of a project. In doing this it ensures that stakeholders and community views are understood and considered as part of the overall project delivery. It gives a voice to local communities and those impacted most by our infrastructure. The forum provides for open dialogue between the project teams and stakeholders.
- We acknowledge that when we are upgrading or adding new transmission infrastructure in an area, to help make the grid more efficient and sustainable, it will often involve some disruption to the local community. [Our Community Benefit Policy](#) recognises the importance of the local communities who support our work and the temporary disruption which may be caused during the construction phase of the project.

Under this initiative, we create a community benefit scheme in proportion to the scale of the project. We work with the Community Forum to ensure that the scheme is designed for the local community, by the local community. A community benefit strategy for each Grid Infrastructure Project is designed in consultation with the affected community. The strategy will guide the process for prioritising, selecting and supporting projects for investment.



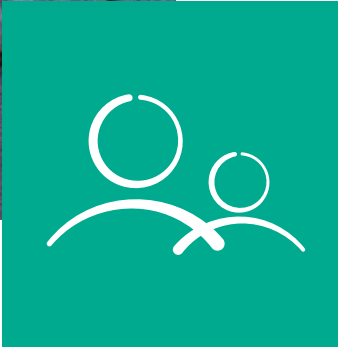
As we work through the steps of the project development we will provide project information and seek to consult at specified steps as the project progresses.

Typically, this would involve us developing project brochures and updates and holding open days in the local area where members of the public can meet the experts and have their queries addressed. We promote these events and raise awareness of them via targeted social media content, advertising in local and national press, letters to landowners and statutory bodies, and providing spokespeople for discussions on public radio.

Stakeholders are invited to provide feedback in multiple formats including feedback forms online and at open days, through fora and webinars and by email or letter.

### Statutory engagement

EirGrid is uniquely positioned to lead the island's electricity sector on sustainability and decarbonisation and to be a trusted, independent advisor to policy makers in Ireland and Europe through use of our deep expertise, knowledge and data. To support this, we engage in active and ongoing consultation with the government and regulatory authorities on key policies and strategic issues as required by legislation. This is done through formal correspondence, bilateral engagement, and participation in working groups, taskforces and meetings. EirGrid is also active across the European Union and beyond in terms of our engagement with key organisations.





## Industry engagement

The collaboration of our industry stakeholders is critical to delivery of the government's climate action targets. We respond to a wide range of needs across the wholesale energy sector in Ireland covering electricity generation and supply, interconnection and also the supply of necessary services to operate the system securely, especially at times with high penetration of generation from renewable sources.

## Industry forums

In 2023, we worked with industry via a number of specific industry forums that would allow us to engage more meaningfully and effectively. One of these forums is the HV Interface Forum.

Established by EirGrid in late 2022, with an independent Chair, the HV Interface Forum has brought together stakeholders such as DECC, Transport Infrastructure Ireland (TII), ESB Networks and local roads authorities, to address key challenges impacting on progress of planning applications and development projects.

Bringing together so many invested and informed parties in open dialogue is invaluable for shaping EirGrid's development plans and projects. By seeking to establish ways of working, we will together be able to support the delivery of the shared objectives within Ireland's Climate Action Plan.

The HV Interface Forum's purpose is to ensure the best possible outcome for all. And through our facilitation of regular cooperative engagement, we are working towards securing our renewable electricity targets, particularly as we address the challenges presented by accommodating electricity transmission infrastructure within the road and rail networks.

Read about EirGrid's approach to [Stakeholder Engagement](#) in full (covering public, statutory and industry engagement) on our website. Here you will also find our [2024 Network Stakeholder Engagement Plan](#) which details our approach, activities, events and publications.





Industry
Partners
Generators
Customers
Providers
Storage
Suppliers
Industry bodies

Statutory
Governments
Regulators
Agencies
Politicians
UK and EU

Society
Agriculture
Academia and schools
Community
Environment
Lobby groups
NGO
Public/Consumers

## 3.2 Approach to project development

A focus in the development of all EirGrid projects, including the NWR projects, is on matters of proper planning and sustainable development. This requires a careful balancing of the technical need and solutions for a project with appropriate and adequate opportunities for public participation in the project development process. It must also include significant emphasis and focus on the environmental impact of the project, primarily in reference to the EU Habitats Directive and Environmental Impact Assessment Directive, but also in terms of social impact.

As outlined at Section 1.4 of this document, EirGrid has been proactive in developing clear structured processes for the planning and development of electricity transmission infrastructure.

The six-step Framework for Grid Development ensures the technical development of projects in collaboration with matters of planning, environment, public affairs, administrative, financial and corporate governance.

Cross-functional project teams include experienced experts in the areas of programme and project management, technology and engineering, ecology, public planning, community and landowner engagement. These experts ensure a consistent approach to the sustainable planning and development of all EirGrid projects, which in turn ensures an appropriate balance between the timely and cost-efficient development of our transmission projects, and a clear and transparent structure to facilitate opportunities for public participation in project development.



### 3.3 Approach to planning and consenting of projects

Grid infrastructure development such as the NWR projects occurs within a strategic and statutory planning and environmental context, where the focus is on matters of proper planning and sustainable development. EirGrid's in-house Planning and Environmental team provides strategic advice to project teams regarding matters of planning and consenting of projects.

Under the provisions of Section 182A of the Planning and Development Act 2000 (as amended), electricity transmission infrastructure development generally comprises Strategic Infrastructure Development (SID). This requires an application for Statutory Approval to be made directly to An Bord Pleanála, following formal pre-application consultation with the Board.

However, An Bord Pleanála can also confirm that certain grid infrastructure development is not SID for the purposes of statutory consenting and directs EirGrid to seek Planning Permission from the relevant Planning Authority.

EirGrid also undertakes certain development which comprises exempted development – development which does not require a prior statutory consent. EirGrid has developed an internal process for deciding whether certain development is or is not exempted development. This requires, in part, a comprehensive Screening for Appropriate Assessment (AA) of the proposed development to assess risks to European sites for Nature Conservation, undertaken or managed by EirGrid's Senior Ecologist.







Where EirGrid's ecologist determines that likely significant effects can be excluded in the absence of mitigation measures intended to protect European sites, the AA Screening concludes in the publication of an Appropriate Assessment Screening Determination. This is published on EirGrid's website, as required by Irish legislation transposing the EU Habitats Directive which provides for Appropriate Assessment.

As part of the exempted development process, a statutory Declaration of Exempted Development, in accordance with Section 5 of the Planning and Development Act 2000 (as amended), may be obtained from the relevant Planning Authority.

The Irish planning system is one of the most open and transparent in Europe, and internationally, with considerable opportunity for public participation, facilitated formally by the Competent Decision-Making Authorities (An Bord Pleanála and/or the relevant Planning Authorities), but also informally by EirGrid (see Section 1.5 of this document).

This requires EirGrid's planning applications to be robust, informative, accessible, and easy to understand by all parties.

EirGrid acknowledges that there will continue to be interest in the planning and consenting of their projects by those who are directly or indirectly affected by, or have concerns regarding, those project proposals. Planning applications must be prepared in a way which facilitates public understanding and provides accessibility and opportunity for participation in the planning process, while also complying with relevant legislation and guidelines in respect of the planning and consenting of transmission infrastructure development projects.

Project proposals and consent applications, as well as Declaration Requests and decisions, will also have regard to precedent arising from decisions of the Competent Authorities, and of the High Court in Judicial Review of decisions, relating to the planning and consenting of transmission infrastructure development projects, including matters of Environmental Impact Assessment (EIA) and Appropriate Assessment (AA).

## 3.4 Our approach to the environment

EirGrid has a statutory obligation to ensure that the operation, maintenance and development of the national transmission system has due regard for the environment.

EirGrid is a 'competent authority' under the Strategic Environmental Assessment (SEA) Directive 2001/42/EC and national regulations for the purpose of its Programmes and Plans.



EirGrid also sits on and contributes to the national SEA Forum chaired by Ireland's SEA Environmental Authorities. The forum assists plan makers such as EirGrid to follow and adopt best practice and understand and comply with emerging policy and legislation.

EirGrid's five-year [Grid Implementation Plan 2017-2022](#) (IP) was adopted in 2018<sup>14</sup> following SEA and AA in accordance with legal requirements and best practice.

EirGrid has undertaken an analysis of SEA monitoring to determine if targets for each Strategic Environmental Objective in the 2017-2022 IP were met, and if not, or in the case of knowledge gaps, what process improvements are required.

[EirGrid's SEA monitoring report \(2023\)](#)<sup>15</sup> on the 2017-2022 IP shaped and influenced the SEA EirGrid's next cycle plan, namely the [Grid IP 2023-2028](#). The Grid IP and SEA has a significant marine focus, in the context of EirGrid's statutory role as Transmission Asset Owner for all future offshore grid required to connect 5GW of offshore wind by 2030.

The Draft IP was subjected to Scoping for Strategic Environmental Assessment from December 2022 to January 2023<sup>16</sup>. Informed by the scoping responses from statutory and non-statutory consultees, a Draft SEA Environmental Report was prepared and published for consultation for a 10-week period from October to December 2023<sup>17</sup>.

The Draft IP also includes a Monitoring framework informed by the recommendations of EirGrid's Monitoring Report on the Grid Implementation Plan 2017-2029. The framework will monitor and manage the potential significant negative effects and any unforeseen effects of the Grid IP, with reporting on indicators annually starting in 2024, to be published in EirGrid's Annual Report or annual Sustainability Report.

The Implementation Plan and SEA will be formally published in 2024.

This Strategic Framework document forms part of a suite of Regional Strategic Framework documents which derive from the National Grid Implementation Plan and associated SEA.

<sup>14</sup> <https://cms.eirgrid.ie/sites/default/files/publications/EirGrid-Grid-Implementation-Plan-2017-2022-Final.pdf>

<sup>15</sup> [https://cms.eirgrid.ie/sites/default/files/publications/210727-EirGrid-SEA-Monitoring-Report\\_PUBLISHED\\_FINAL.pdf](https://cms.eirgrid.ie/sites/default/files/publications/210727-EirGrid-SEA-Monitoring-Report_PUBLISHED_FINAL.pdf)

<sup>16</sup> [https://cms.eirgrid.ie/sites/default/files/publications/EirGrid-SEA-Scoping-2022\\_Final\\_revised-for-consultation\\_CLEAN.pdf](https://cms.eirgrid.ie/sites/default/files/publications/EirGrid-SEA-Scoping-2022_Final_revised-for-consultation_CLEAN.pdf)

<sup>17</sup> <https://consult.eirgrid.ie/en/consultation/draft-grid-implementation-plan-2023-2028>





EirGrid ensures best practice in the effective application of SEA, by explicitly transferring environmental policy in the Grid IP on all lower-level plans, programmes, and projects as per Objective Env015 in the Grid IP:

*“To integrate Grid IP policies into lower-tier plans and programmes, and projects (so-called ‘tiering’ or transfer of mitigation from higher to lower levels), and monitor, report, and continually improve on the degree of effective implementation via the SEA monitoring process.”*

In the context of the NWR Regional Programme, implementation of Grid IP Objective Env015 is evidenced by the integration of all IP policies into the programme.

The IP, the TDP and the SOEF Roadmap each provide a different level of scale and detail – from the long-term vision statements contained in the SOEF, to the objectives and policies to implement the strategy set out in this IP, to the specific projects outlined in the TDP.

The programmatic approach in the NWR Regional Programme exemplifies implementation of Grid IP policy EnvP3 which is:

*“To apply a strategic/programmatic approach to onshore and offshore grid development to optimise environmental assessment and public engagement at a regional/landscape scale. Through programmatic approaches, reduce timescales and resources, and increase project delivery rate to achieve the 2030 target of 80% electricity from renewable sources.”*



## 3.5 Appropriate Assessment (AA)

EirGrid undertook Screening for Appropriate Assessment (AA) of the Grid Implementation Plan (2023-2028), to determine if that plan is likely to have significant effects on European sites for nature conservation, either alone or in combination with other plans or projects.

In accordance with Article 6 (3) of the EU Habitats Directive, a Natura Impact Statement (NIS) was prepared in respect of the Implementation Plan, as likely significant effects from the plan alone or in combination with other plans or projects, could not be excluded in the absence of mitigation. A Draft NIS was issued for public consultation along with the Draft SEA Environmental Report and Draft IP in October 2023.

The Draft NIS determined what mitigation measures were required to avoid the Grid Implementation Plan (2023-2028) having adverse effects on European sites. Mitigation measures include inserting or amending policies, or actions into organisational policies and practices which ensure prioritisation of nature protection or identifying research to fill knowledge gaps.

Screening for AA of each proposed development is an integral function of EirGrid's Environmental team and is fundamental in determining the planning status of projects that normally fall under the category of exempted development (see Section 3.3 of this document).

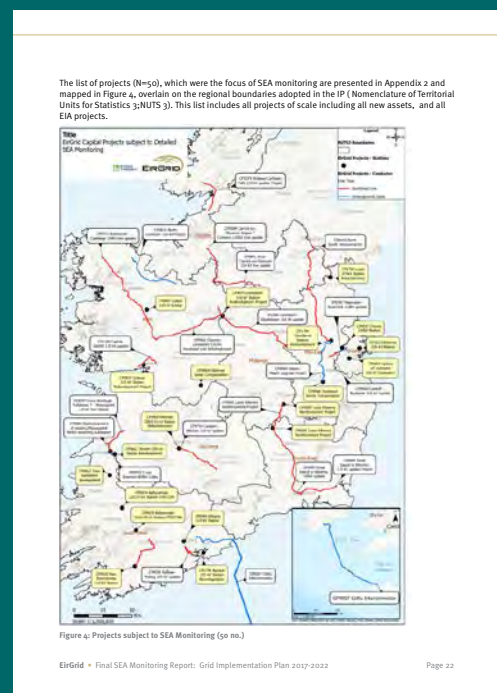


Figure 15: EirGrid's SEA Monitoring Report on the 2017-2022 IP



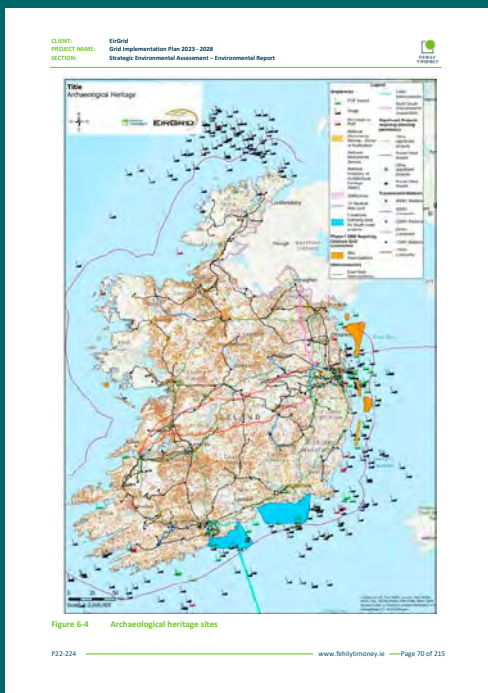


Figure 16: EirGrid's Draft NIS of the Draft Grid IP 2023-2028

In addition, during the pre-application process, EirGrid's planning and ecology specialists liaise closely with statutory and non-statutory planning and environmental agencies to discuss and address any issues regarding the planning and environmental aspects of a proposed development.

Where EirGrid's ecologist determines that likely significant effects can be excluded in the absence of mitigation measures intended to protect European sites, the Screening for AA concludes with the publication of a Screening Determination. This is published on EirGrid's website, as required by Irish legislation transposing the EU Habitats Directive which provides for Appropriate Assessment. If potential for likely significant effects is confirmed, further assessment will be undertaken, culminating in the preparation of a NIS.

[Read EirGrid's Strategic Environmental Assessment \(SEA\) Scoping Report in full here](#), where you can find more information that also includes information on Screening for Appropriate Assessment (AA) (page 3).





## 3.6 Environmental assessment

EirGrid's Planning and Environmental team is embedded into the Cross Functional Team decision-making on every grid development project, in order to ensure that environmental issues are at the forefront of decision-making. Early involvement of the team in projects allows potential environmental issues to be identified and avoided or managed in the course of project development.

EirGrid is committed to ensuring continued compliance with governing law and best practice particularly in relation to protected sites and habitats, mitigating against climate change, and avoiding and mitigating against adverse environmental impacts to biodiversity, cultural heritage, water, landscape, soils and noise. In the context of the twinned climate and biodiversity emergency, EirGrid has committed at the highest management level, to go beyond protection nature, to aim for restoration on every project (see Section 7.3.1).

EirGrid has also prepared Evidence-based Environmental Studies, which examine the environmental impact of the construction and existence of transmission infrastructure in Ireland. These studies have been prepared by environmental experts with peer review from industry experts, and contributions from a steering group made up of various industry stakeholders and environmental organisations. The studies are published on the EirGrid website will continue to be updated to take account of new information and/or developments in understanding arising from practice and research.

This section provides a brief environmental overview, focussing on EirGrid's key environmental policies and objectives (especially those in the Grid IP) which ensure appropriate protection of the environment in grid development.





### 3.6.1 Biodiversity and nature inclusive design

At EirGrid, protecting and restoring nature is integral to the work to decarbonise the electricity grid. Since the Irish government declared the biodiversity and climate emergency in 2019, EirGrid has accelerated their action for nature. The stated mission of our executive leadership is to go beyond simply protecting nature, to restoring it.

EirGrid's approach to nature protection and restoration is achieved in line with EirGrid's published Ecology Guidelines for Electricity Transmission Projects (2020)<sup>18</sup>, and their Nature Inclusive Design commitments (2022)<sup>19</sup>.

[EirGrid's Ecology Guidelines](#), authored in collaboration with ESB, sets out the standards of ecological surveys likely to be required for different types of transmission projects to identify the range of sensitive ecological features requiring protection.

The Guidelines also assist project teams in understanding how to mitigate the impact of different construction practices and electrical infrastructure on species and habitats (examples include pollution protection when drilling cables under watercourse crossings, use of ground matting to protect vegetation from tracking of machinery and silt control measures).

Adherence to EirGrid's Guidelines will ensure the following biodiversity objectives are achieved:

- Ecological sensitivities and opportunities for biodiversity restoration influence route optioneering and design of the Programme.
- Best Practice Standards of Ecological Survey, Impact Assessment and Mitigation.
- Local knowledge on ecological sensitivities is harnessed through consultation with the National Parks & Wildlife Service and Inland Fisheries Ireland staff.
- Protection of sensitive watercourses, including those crossed by Horizontal Directional Drilling.
- Adherence to good biosecurity practices and invasive species control in water and on land.
- Coastal and inland ('ex-situ') habitats for wetland birds are protected, for instance through routing, seasonal works, or use of visual or sound-reducing hoarding.
- Environmental monitoring of construction works builds in additional protection by informing adaptive mitigation (e.g., following unforeseen weather or species behaviour).
- Biodiversity restoration opportunities are considered at the start of projects, and at key decision points including land acquisition.
- Time and resource are assigned to integrate biodiversity into the design of other project elements, serving multiple functions also as climate adaptation and visual screening.

Integration of Nature Inclusive Design has been required by EirGrid's consultants on all major grid projects since 2022. A summary of [Nature Inclusive Design pilots was published in 2022](#).

18 <https://cms.eirgrid.ie/sites/default/files/publications/Ecology-Guidelines-for-Electricity-Transmission-Projects.pdf>

19 [https://cms.eirgrid.ie/sites/default/files/publications/211603-EirGrid-Nature-Inclusive-Design-Pilots\\_Published\\_Final.pdf](https://cms.eirgrid.ie/sites/default/files/publications/211603-EirGrid-Nature-Inclusive-Design-Pilots_Published_Final.pdf)

The various projects in the NWR may, to greater or lesser extents, be in close proximity to areas of high biodiversity value, including the interconnected complex of internationally designated Special Areas of Conservation (SAC) and Special Protection Areas (SPAs) and nationally designated Natural Heritage Areas (NHA).

The routing, mitigation design, and any monitoring requirements of the various projects within the Northern and Western Region will consider the designated features of all these protected sites, with reference to the latest Conservation Objectives published by the National Parks & Wildlife Service in the case of SACs, and SPAs.

As reported in EirGrid's own Evidence-based Studies on birds<sup>20</sup>, a major scientific review of the effectiveness of 'bird flight diverters' globally found bird deaths were reduced by 78% overall on lines fit with such devices.

As of mid-2024, in collaboration with our partners ESB, we have helped bird conservation by retrofitting 25 km of existing overhead lines with 'Bird Flight Diverters'.

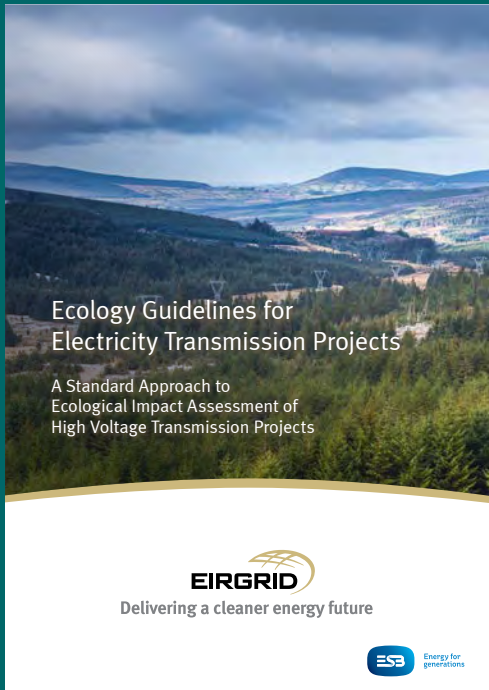
EirGrid is an active member of the European Offshore Coalition for Energy and Nature (OCEaN), committed to implement OCEAN recommendations to achieve European climate, energy and biodiversity targets. In support of this, in 2023, EirGrid's Chief Infrastructure Office approved the policy pillars in EirGrid's draft Marine Biodiversity Policy Statement, which will:

- Support Marine Protected Areas and Fisheries, including implementation of the Seafood Offshore Renewable Energy Working Group's recommendations.
- Make high quality Environmental Data Publicly Available to benefit academic research and optimise the evidence base for sustainable offshore development.
- Integrate design features into EirGrid's marine cables and substations to provide refuge habitat for fish and promote 'artificial reef' establishment.

Our Grid Implementation Plan 2023-2028 includes an ongoing commitment to meet no net loss of biodiversity on our projects (wherever possible, unless constrained by external factors), and net biodiversity gain. The plan, which has been subject to SEA, will be subject to SEA monitoring through the plan cycle.

Our Grid IP also commits to risk assess if we can revise the current restriction on planting shrubs over buried cables. Our approach combines international engagement and technical innovation, to demonstrate our commitment to restore Ireland's biodiversity.

20 <https://cms.eirgrid.ie/sites/default/files/publications/EirGrid-Evidence-Based-Environmental-Study-5-Birds.pdf>



All of the above biodiversity initiatives will be implemented on projects within the NWR where relevant and/or appropriate.

The various projects in the NWR may, to greater or lesser extents, be in close proximity to areas of high biodiversity value, including the interconnected complex of internationally designated Special Areas of Conservation (SAC) and Special Protection Areas (SPAs) and nationally designated Natural Heritage Areas (NHA).



Figure 17: EirGrid's Ecology Guidelines





The routing, mitigation design, and any monitoring requirements of the various projects within the Northern and Western Region will consider the designated features of all these protected sites, with reference to the latest Conservation Objectives published by the National Parks & Wildlife Service in the case of SACs, and SPAs.

Finally, in accordance with the concept of 'tiering' (transfer of policy and mitigation from high level plans through lower tier plans down to project level), EirGrid will ensure all relevant biodiversity policy in the Grid IP is implemented on the Regional Programme, and the projects therein once developed.

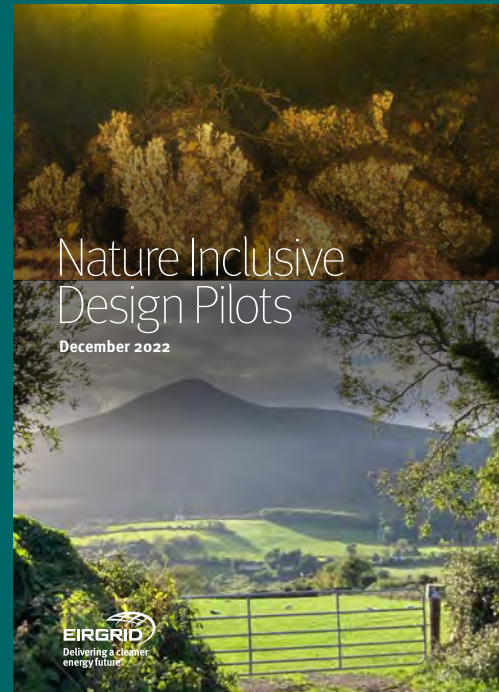


Figure 18: EirGrid's Nature Inclusive Design Pilots document

### 3.6.2 Cultural heritage

In accordance with EirGrid's published Cultural Heritage Guidelines for Electricity Transmission Projects (2015)<sup>21</sup>, it is EirGrid's policy to ensure that the special interest of protected structures, including their curtilages and settings, are avoided where possible/protected to the greatest extent possible when considering site or route options for transmission infrastructure development. It is also policy to protect known and unknown (potential) archaeological material in transmission infrastructure development, by avoidance or by best practice mitigation measures.

The projects in the NWR have the potential to affect Cultural Heritage assets including Protected Structures, Architectural Conservation Areas and National Inventory of Architectural Heritage and proposed Natural Heritage Areas (NHA).

The routing, mitigation design, and any monitoring requirements of the various projects within the Northern and Western Region will consider the protected sites – both in terms of direct effects and impacts to setting. Preconstruction archaeological investigations would be undertaken following consultation with Local Councils and the Department of Housing, Local Government and Heritage.

EirGrid will ensure all relevant cultural heritage policy in the Grid IP is implemented on the Regional Programme, and the projects therein once developed.

### 3.6.3 Population and social impact

The projects in the NWR could affect resident, working and visiting populations. EirGrid, in developing the various projects under the Programme, will seek to minimise any population and social impact. EirGrid's aim is to develop a cohesive approach that reflects and is framed by the secure transition to a low carbon electricity system – and by the urgent context of climate action.

As part of this, EirGrid will continue to consider and address social impact and the impact on human beings in the development of transmission infrastructure projects in accordance with EirGrid's established methodology for Social Impact Assessment. Grid development projects are screened for the requirement for a Social Impact Assessment, and where required, such assessment will accompany an application for statutory consent.

EirGrid will ensure all relevant population and social policy in the Grid IP is implemented on the Regional Programme, and the projects therein once developed.



21 <https://cms.eirgrid.ie/sites/default/files/publications/Cultural-Heritage-Guidance-for-Electricity-Transmission-Projects.pdf>

### 3.6.4 Land use

The projects in the NWR will have the potential to affect land use. In this regard, EirGrid will have regard to any future National Landscape and/or Seascape Character Assessment in the development of its transmission projects, in addition to the imperative to restore biodiversity in response to the national biodiversity emergency. EirGrid will continue to protect and enhance landscapes and will seek to avoid and reduce visual impact on residential receptors through the sustainable planning and design of transmission infrastructure development.

EirGrid will continue to engage with landowners through its Land Management Unit. It will also engage with State landowners – in particular the relevant Planning Authorities, the Office of Public Works (OPW), and ESB Networks – in order to explore options for the siting of the various projects which avoid or reduce potential impact on their receiving environments.

EirGrid will ensure all relevant land use policy in the Grid IP is implemented on the Regional Programme, and the projects therein once developed.

### 3.6.5 Traffic

The projects in the NWR will generally result in very low traffic generation during operation, with traffic movements being limited to a small workforce and/or periodic maintenance visits.

However, there will be potential for traffic disruption, as a result of construction traffic and where there are in-road works. EirGrid will give significant focus to avoiding or reducing construction disruption by effective design and careful management.

Environmental assessment and input to aspects such as site access and traffic routeing is considered from outset – through route and site selection, to detailed design and construction.

A Traffic Management Plan (TMP) is normally developed for each project to manage and reduce any potential temporary construction traffic impacts, informed by engagement with the local Roads Authorities to agree the scope of the TMP and the measures required. Measures included in the TMP will address the need for traffic management and avoidance of undue delays for road users, safe access to and from the site, timing of vehicle trips (such as site operatives and the delivery of equipment and materials), protection and maintenance of provision for other transport modes such as walking or cycling, and the suitability of the wider road network for any abnormal loads.

EirGrid will ensure all relevant roads and traffic policy in the Grid IP is implemented on the Regional Programme, and the projects therein once developed.





### 3.6.6 Material assets, utilities and safety

In terms of material assets, projects of the type planned in the NWR generally do not generate significant waste during operation, typically being limited to materials generated through cleaning and maintenance. The construction phase has a higher potential to generate waste, and the appointed contractor(s) will therefore be required to prepare a detailed Construction Environment Management Plan (CEMP) prior to the commencement of construction.

The CEMP will contain a Construction Waste Management Plan (CWMP) to minimise waste and ensure correct handling and disposal of construction waste streams.

The key principles underlying the plan will be to minimise waste generation, to segregate waste at source to optimise reuse and recycling, and to direct correct disposal of waste to licensed/permitted disposal facilities where it cannot be reused or recycled.

The implementation of Method Statements will also be required for key construction activities. Their production includes a review of the environmental/health and safety risks and commitments, so that appropriate control measures are developed and included within the construction process. Method Statements will be reviewed by the Contractor's Project Manager with input from environmental specialists where appropriate and may also be submitted to the relevant regulatory authorities.

Method Statements will cover aspects such as the location and duration of the activity, activities and methods of construction: plant and materials to be used; labour and supervision requirements; health, safety, and environmental considerations (including relevant control measures); and permit or consent requirements.



Consultation will also take place with utilities service providers (e.g., water, telecommunications, gas or electricity) to inform appropriate site location, design and layout, including opportunities for coordinating works to minimise duplication of construction programmes. Specific risk assessments will be completed as appropriate, and any protective provisions agreed in advance with the service providers to ensure a safe working environment.

EirGrid will ensure all relevant material assets policy in the Grid IP is implemented on the Regional Programme, and the projects therein once developed.

## 3.7 Social Impact Assessment (SIA)

EirGrid has made a commitment to demonstrate how social impact is considered as grid infrastructure projects are developed.

Social Impact Assessment (SIA) is the tool used to address a range of tangible (measurable) considerations, but also intangible issues such as local knowledge, perceptions, vulnerabilities, language and beliefs for those individuals, community or network of communities that are most likely to be impacted by a project.

SIA is conducted within a defined boundary or 'social area of influence' which largely consists of the people potentially impacted by the project; these may be both local 'communities of place' and broader 'communities of interest'.

The social area of influence may therefore be significantly different to the zone of impact typically applied in the context of Environmental Impact Assessment (EIA). Stakeholder analysis and mapping is required to understand where these boundaries lie.

EirGrid has developed a methodology for SIA to provide a consistent format in assessing the potential social impacts of grid development projects. This SIA methodology, which has had regard to the six-step approach to development projects, will facilitate the early identification of social concerns and issues. This will thereby inform the identification, avoidance or minimisation of potential adverse impacts of transmission infrastructure on receiving communities.



## Part 4: Next steps

This Strategic Framework for Grid Development in the Northern & Western Region provides a high-level overview of the nature and extent of planned grid infrastructure development in the region, as well as how EirGrid plans and develops its projects.

The Strategic Framework document demonstrates how EirGrid uses a consistent project planning process to explore options and make decisions on every project. The decision-making tools used, and the type and level of engagement at each step, depends on the scale and complexity of each project. Each project will therefore have its own development strategy, although projects could be combined in whole or in part for planning, engineering, and communications purposes.

Initial screening and scoping of project requirements will be undertaken to confirm the appropriate approach to matters of project development, planning and consenting, and consultation and engagement.

There will be ongoing and extensive engagement with key stakeholders focussed on the sustainable development of grid infrastructure in the region. This includes the Northern & Western Regional Assembly, relevant Planning Authorities, An Bord Pleanála, prescribed bodies, other Statutory and non-Statutory agencies and authorities, the general public and communities, and landowners – including utility and infrastructure-related developers and operators.

The overall vision of this approach is that the planned projects in the Northern & Western Region will be realised as a key enabler of National Policy for climate action, regional and National economic and social growth, and proper planning and sustainable development.









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