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Re: Submission on Issues Paper, Galway County Development Plan 2022 - 2028

EirGrid plc welcomes the opportunity to make a submission to the Strategic Issues Paper for Galway County Development Plan 2022 – 2028 and requests that this submission is taken into consideration in the development of the Plan.

EirGrid is a Prescribed Authority for the purposes of Section 11 (2) of the Planning and Development Act 2000, as amended and has been involved in the making of Project Ireland 2040 (National Planning Framework) and the North and West Regional Spatial and Economic Strategy in which the strategic issue of the future development of Ireland's electricity transmission grid was highlighted and extensively addressed in Section 8.2. It is requested that the Plan is, in so far as is practicable, consistent with such national plans, policies or strategies as the Minister determines relate to proper planning and sustainable development.

EirGrid's Function

EirGrid is responsible for the safe, secure and reliable transmission of electricity – now and in the future. EirGrid develops, manages and operates the electricity transmission grid. This brings power from where it is generated to where it is needed throughout Ireland. The grid also supplies power to industry and businesses that use large amounts of electricity and powers the distribution network. The distribution network in turn supplies electricity to homes, businesses, schools, hospitals, and farms.

DIRECTORS: Brendan Tuohy *Chair* • Dr Theresa Donaldson *Deputy Chair* • Mark Foley *Chief Executive*
Shane Brennan, Tom Coughlan, Lynne Crowther, Michael Hand, Eileen Maher, Liam O'Halloran, John Trethowan • Michael Behan *Company Secretary*

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EirGrid's function as the national electricity Transmission System Operator (TSO) is set out in the European Communities (Internal Market in Energy) Regulations, 2000 - SI 445/2000. Article 8(1) (a) gives EirGrid as TSO, the exclusive statutory 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.”

The transmission system on the island of Ireland refers to the higher capacity electricity network and primarily comprises substations and circuits at 400 kV (i.e. 400,000 Volts), 220 kV, and 110 kV (in Northern Ireland, transmission infrastructure also occurs at 275 kV). EirGrid's (2016) Transmission System Map (ENCL1) is enclosed.

Regional Context

Galway is within the West region as defined in EirGrid's Transmission Development Plan 2019 – 2028. The territorial classification of regions in the Transmission Development Plan is based on the NUTS 3 definitions. See Figure 1 below. The Border, Midlands and West area has a wide variety of generation sources. These are dispersed around the area and include wind; hydro; gas; and peat burning power stations. The area has considerably more generation than demand.

The existing transmission network is predominantly 110 kV and 220 kV. There is limited high capacity 400 kV infrastructure in the southern part of the county. There is a 110 kV transmission network in the area which supplies a relatively low local demand. Development of this network is mainly required to connect a high level of renewable generation.

The excess of generation in the area is set to increase significantly in the coming years. This is due to generators that currently have connection agreements and live connection offers connecting to the transmission and distribution networks.

To cater for the high levels of generation described above, network reinforcement is necessary. This will enable the efficient export of generation from this area towards areas with high load, such as the eastern seaboard. There are also reinforcement needs due to:

- Local constraints related to a shortage of transmission capacity and voltage support;
- Asset condition; and

- To accommodate further market integration with Northern Ireland.

The Regional Spatial and Economic Strategy (RSES) for the Northern and Western Region recognises (p. 162) that energy is needed for economic growth, and access to affordable and reliable energy is an essential development objective. Decarbonisation can and needs to happen and it is an objective of the National Planning Framework that Ireland becomes a Low Carbon Economy by 2050. This reflects the Governments 2014 National Policy Position on Climate Action and Low Carbon Development and is also a binding EU requirement. Ireland's national energy policy is focused on three pillars: sustainability, security of supply and competitiveness.

The Northern and Western region is particularly well placed to lead the way in the efficient use of resources and developing a low carbon economy and many of the companies involved in supplying the enabling advice or technologies operate from within this region. The Belmullet – Erris energy test hub is an example. New renewable energy technology progresses from the test facilities at the Lir National Test facility in Cork to a quarter scale test bed in Galway Bay and to a full test facility at the Atlantic Marine Energy Test Site (AMETS) near Belmullet, County Mayo. This is part of an international Regime of test sites including Hawaii, Ireland and Scotland. This international chain of test sites brings devices through the various technology readiness levels which ensures investment in the technology is made on a sound and standardised footing. It also illustrates the unique strategic position Ireland and this region has in relation to offshore renewable energy.

SEAI is developing the Atlantic Marine Energy Test Site (AMETS) to facilitate the testing of full scale ocean energy converters both wind and wave, in an open ocean environment. It is located off Annagh head, west of Belmullet in Co Mayo and will be connected to the national grid, AMETS is an integral component of Irelands ocean energy strategy and test facilities and is being developed in accordance with the national Offshore Renewable Energy Plan (OREDPA). AMETS will provide for full scale test opportunities in extreme Atlantic conditions and is intended as the ultimate test site for pre commercial stage devices.

An understanding of locations of the higher voltage electricity infrastructure is useful when seeking to identify regional opportunities that may attract industries (e.g. data centres, renewables, etc.). As detailed previously, the Northern and Western Region is particularly rich in renewable energy resources. These generation sources are dispersed across the region but particularly concentrated along the western coastline. There is also a large conventional thermal generator located at Tynagh substation.

EirGrid has a number of proposed infrastructure upgrades in the region set out below in Table 1 and the RSES gives full support to the delivery of these projects. The total improvements will comprise 200km of a new transmission network and line upgrade of 700km. The delivery of these projects will ensure that the population growth projections outlined in the RSES will have sufficient electricity infrastructure to service them. The infrastructure improvements will also facilitate the incorporation of known renewable energy generated power into the transmission network.

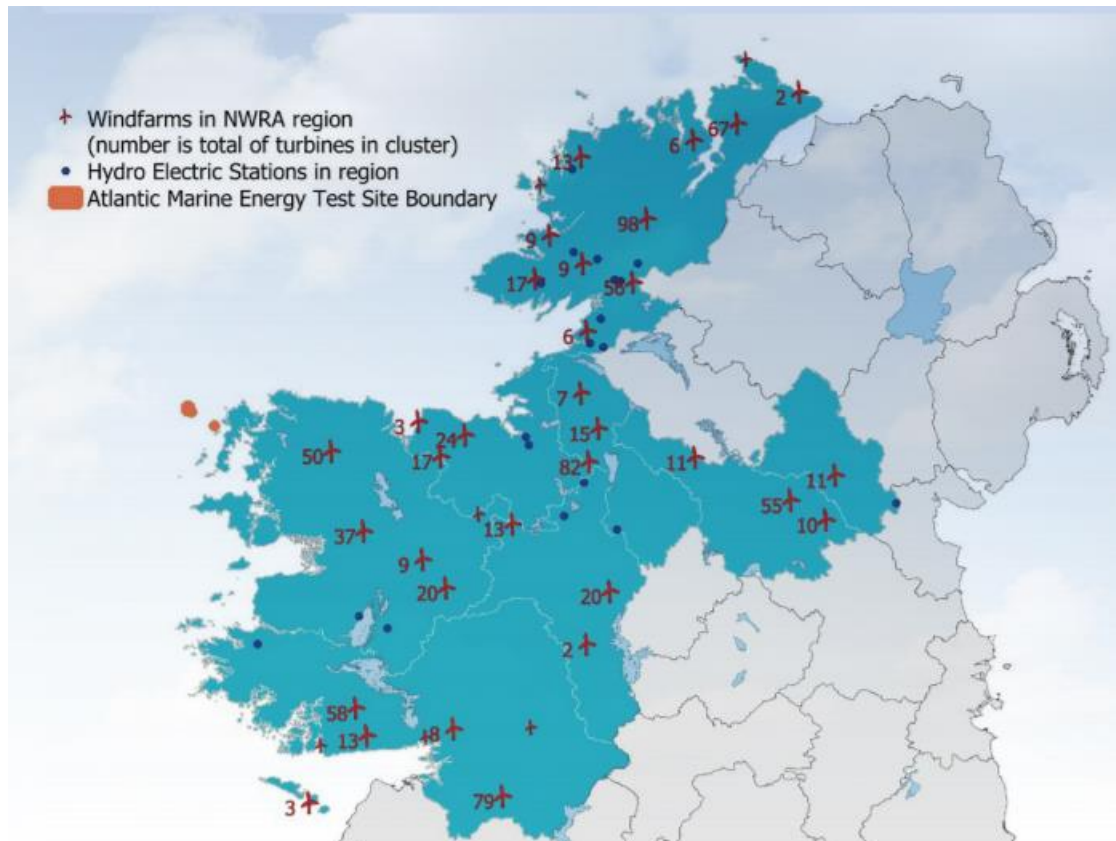


Figure 2 - Wind Farms and Hydro-Stations in the Region (RSES, p. 163)

EirGrid has a number of proposed infrastructure upgrades in the region set out below in Table 1 and the RSES gives full support to the delivery of these projects. The total improvements will comprise 200km of a new transmission network and line upgrade of 700km. The delivery of these projects will ensure that the population growth projections outlined in the RSES will have sufficient electricity infrastructure to service them. The infrastructure improvements will also facilitate the incorporation of known renewable energy generated power into the transmission network.

Project Name	Location
North Connacht Project	Roscommon, Sligo, Mayo
Regional Solution Project (series compensation on 400 kV network)	Galway
North South 400 kV Interconnector	Meath, Cavan, Monaghan, Armagh, Tyrone
Bellacorick – Castlebar 110 kV Line update	Mayo
North West Project (study area)	Donegal, Leitrim, Sligo
Bellacorick – Moy 110 kV Line update	Mayo
Cashla – Salthill 110 kV Line update	Galway
Galway 110 kV Station Redevelopment	Galway

Table 1 – EirGrid projects within the NWRA region

The total improvements will comprise 200km of a new transmission network and line upgrade of 700km. The delivery of the above projects will ensure that the population growth projections outlined elsewhere in our strategy will have sufficient electricity infrastructure to service them. The infrastructure improvements will also facilitate the incorporation of known renewable energy generated power into the transmission network.

EirGrid notes and welcomes reference and emphasis placed on climate action and energy in the Issues Paper. EirGrid considers that policies and objectives which support a safe, secure and reliable supply of electricity need to be explicit in the Plan in order to assist EirGrid in the successful implementation of its Grid Development Strategy - Your Grid, Your Tomorrow (2017) (ENCL2). This is imperative to meeting national targets for electricity generation, climate change targets, and security of energy supplies.

In this context the policies and objectives in the adopted Regional Spatial and Economic Strategy (Section 8.2) should be reviewed and considered as an example of robust and sustainable policies and objectives. The planning authority may consider these adequate for inclusion in the forthcoming Draft Development Plan.



Figure 3 – EirGrid transmission network

The RSES contains a number of Regional Policy Objectives that support the transmission network improvements and facilitation of renewable energy development in the Region. These are RPO 4.16 to RPO 4.22 and RPO 8.1 to RPO 8.4

RPO 4.16

The NWRA shall co-ordinate the identification of potential renewable energy sites of scale in collaboration with Local Authorities and other stakeholders within 3 years of the adoption of the RSES. The identification of such sites (which may extend to include energy storage solutions) will be based on numerous site selection criteria including environmental matters, and potential grid connections

RPO 4.17

To position the region to avail of the emerging global market in renewable energy by:

- *Stimulating the development and deployment of the most advantageous renewable energy systems*
- *Supporting research and innovation*
- *Encouraging skills development and transferability*
- *Raising awareness and public understanding of renewable energy and encourage market opportunities for the renewable energy industry to promote the development and growth of renewable energy businesses*
- *Encourage the development of the transmission and distribution grids to facilitate the development of renewable energy projects and the effective utilisation of the energy generated from renewable sources having regard to the future potential of the region over the lifetime of the Strategy and beyond.*

RPO 4.18

Support the development of secure, reliable and safe supplies of renewable energy, to maximise their value, maintain the inward investment, support indigenous industry and create jobs.

RPO 4.19

Support the appropriate development of offshore wind energy production through the adequate provision of land-based infrastructure and services, in line with national policy and in a manner that is compatible with environmental, ecological and landscape considerations.

RPO 4.20

Support and encourage the development of the bio-economy sector, and facilitate its development for energy production, heat, and storage distribution, in particular advocating Combined Heat and Power Units integrated into District Heating networks, in combination with Pyrogenic Carbon Capture and Storage (PyCCS) or Bio-Energy Carbon capture and storage (BECCS) all to be done in collaboration with EPA and other regulators.

RPO 4.21

Promote innovative new building design and retrofitting of existing buildings, both private properties, and publicly owned, to improve building energy efficiency, energy conservation and the use of renewable energy sources following National Regulations and Policy.

RPO 4.22

Safeguard and support the strategic role and function of existing test and development sites, for example, the Atlantic Marine Energy Test Site (AMETS). The test site forms part of Ireland's Ocean Energy Strategy and is being developed following the Offshore Renewable Energy Development Plan.

RPO 8.1

The Assembly support the development of a safe, secure and reliable electricity network and the transition towards a low carbon economy centred on energy efficiency and the growth projects outlined and described in this strategy.

RPO 8.2

Support the reinforcement and strengthening of the electricity transmission network with particular reference to the regionally important projects contained within Table 11 (reproduced in Table 1 of this document.)

RPO 8.3

The Assembly support the necessary integration of the transmission network requirements to allow linkages with renewable energy proposals at all levels to the electricity transmission grid in a sustainable and timely manner.

RPO 8.4

That reinforcements and new electricity transmission infrastructure are put in place and their provision is supported, to ensure the energy needs of future population and economic expansion within designated growth areas and across the region can be delivered in a sustainable and timely manner and that capacity is available at local and regional scale to meet future needs. Ensure that development minimises impacts on designated areas.

Currently, just 30% of the electricity that we use comes from renewable energy. The Government's Climate Action Plan 2019 has set the target of achieving 70% of electricity consumption via renewable energy sources by 2030. The vast majority of this renewable energy will come from wind farms and EirGrid is required by law to connect them to the national grid.

Policy-Led Strategy

The electricity transmission grid's importance in supporting our environment, society and economy should not be understated in the forthcoming Draft Development Plan. EirGrid welcomes the commitment in the Strategic Issues Paper that the existing Wind Energy Strategy for County Galway will be replaced with a new Local Authority Renewable Energy Strategy (LARES) as part of the development plan review process. In identifying the most suitable locations for renewable energy across the County, it is recommended that LARES reflects the opportunities identified in the RSES for renewable energy generation.

EirGrid also requests the Draft Plan be explicit as to how the various Government (and State Agency) policy documents have been considered, and how they have informed the policy and objectives. A section should be included setting out how these policy documents have been considered in a holistic and integrated way to inform subsequent Plan policy. This gives a clear policy-led foundation to the Plan, which will prove invaluable as it subsequently informs the strategies, policies and objectives of local authority plans and public and private projects.

In terms of electricity transmission there are a number of important Government Policy documents namely:

- Department of Communications, Energy and Natural Resources (2012) *Government Policy Statement on the Strategic Importance of Transmission and Other Energy Infrastructure*
- Department of Communications, Energy and Natural Resources (2015) *White Paper On Energy: Ireland's Transition to a Low Carbon Energy Future 2015-2030;*
- Department of Communications, Energy and Natural Resources (2019) *Climate Action Plan;*
- EirGrid's (2017) *Grid Development Strategy - Your Grid, Your Tomorrow;*
- EirGrid (2017) *Tomorrow's Energy Scenarios 2017: Planning our Energy Future.*
- Department of Housing, Planning and Local Government (2019) *National Planning Framework*
- Department of Housing, Planning and Local Government (2019) *Draft National Marine Planning Framework*

In this regard, the Department of Communications, Energy and Natural Resources (2015) White Paper on Energy titled *Ireland's Transition to a Low Carbon Energy Future 2015-2030* reaffirms the Government's position on energy matters and should be relied upon as a source for policy formulation for energy in the Plan. The White Paper acknowledges that developing, maintaining, and upgrading the grid is essential to meeting its short, medium and longer-term objectives. It also has considerable regard to wider emerging EU Policy which promotes smart low-carbon economies centred on energy

efficiency. This policy in turn acknowledges the role of sustainable development of individual country's transmission grids to assist in their delivery.

The Climate Action Plan 2019, published on June 17th 2019 by the Department of Communications, Climate Action and Environment, sets out a 'roadmap' to achieve a net zero carbon energy system by 2050. This Plan builds on the policy framework, measures and actions set out in the National Mitigation Plan, Project Ireland 2040 and the Draft National Energy and Climate Plan in order to create a resilient, vibrant and sustainable country. The plan acknowledges that Ireland has to date been very successful in deploying renewable electricity with 30.1% of electricity produced from renewable sources in 2017. As of the 28th of March, 2019, the Irish government has confirmed that Ireland will now aim for at least 70% of Ireland's electricity supply to be generated from renewables by 2030. This aim is increased from the current target for 2030 which was 55% (RES-E) in Project Ireland 2040.

The plan notes that demand for electricity is forecasted to increase by 50% above existing capacity in the next decade. Therefore, in order to achieve the target of 70% in the context of rising energy demand, significant progress in renewable electricity deployment will need to continue, with an increased deployment rate of all renewable electricity technologies.

- At least 3.5 GW of offshore renewable energy;
- Up to 1.5 GW of grid-scale solar energy; and
- Up to 8.2 GW total of increased onshore wind capacity

The Climate Action Plan states that increased levels of renewable generation will require very substantial new infrastructure, including grid infrastructure.

EirGrid's (2017) Grid Development Strategy - Your Grid, Your Tomorrow is consistent with the Government White Paper on Energy and Climate Action 2019 and should also be incorporated/referenced in the Plan. The Grid Development Strategy is also set in the context of Government Policy, in particular the Department of Business, Enterprise and Innovations (2017) Action Plan for Jobs 2017 and the Irish Development Authority's (IDA) (2015), Winning: Foreign Direct Investment 2015-2019. The Grid Development Strategy acknowledges the need to achieve a balance between social, environmental and economic factors.

It is important that the Draft Development Plan reflects EirGrid's need for robust policies to develop the electricity grid in a safe and secure way. This is necessary to meet projected demand levels; to meet Government Policy; and to ensure a long-term, sustainable and competitive energy future for Ireland. The Plan should facilitate the development of grid reinforcements including grid connections and a

transboundary network into and through the county and between all adjacent counties and to support the development of international connections.

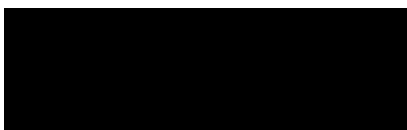
Conclusion

The development of the transmission grid as summarised above and outlined in detail in EirGrid's *Grid Development Strategy - Your Grid, Your Tomorrow* (2017) and associated Technical Report (2017) (ENCL3), is of critical importance to support the environment, economy and society, as well as to realise the transformation of Ireland's energy system to meet climate change and energy obligations. Electricity infrastructure is critical to balanced regional and local economic and spatial development.

To ensure Ireland's sustainable development and growth, EirGrid requires appropriate and robust policies and objectives for planning the national grid infrastructure and prioritising it appropriately in order to deliver national, regional and local benefit. In this regard, EirGrid requests that the importance of the grid is acknowledged as a strategic issue.

EirGrid is available to collaborate with the planning authority and to provide expert and focused input into the preparation of the Draft Development Plan, particularly from a strategic energy policy perspective. Should you have any comments in regard of this submission please contact the undersigned. EirGrid once more welcomes the opportunity to participate in the making of the plan and looks forward to further engagement.

Yours sincerely,



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Public Planner

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Enclosures (links to website)

ENCL 1: [Transmission System Map;](#)

ENCL 2: [Grid Development Strategy - Your Grid, Your Tomorrow](#)

ENCL 3: [Grid Development Strategy - Your Grid, Your Tomorrow – Technical Report](#)

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