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## APPENDICES

Appendices are contained in a separate volume titled **Volume 2A Appendices**

<b>APPENDIX 1</b>	Correspondence to EirGrid from the SEM Committee, dated 30 <sup>th</sup> April 2013
<b>APPENDIX 2</b>	<i>Electricity Transmission Costing Study</i> - Parsons Brinckerhoff, in association with Cable Consulting International Ltd. (January 2012 with errata published in April 2012)
<b>APPENDIX 3</b>	<i>Report to the Independent Expert Panel Date: 29/5/2014 &amp; Addendum Date: 19/06/2014</i>
<b>APPENDIX 4</b>	<i>Approach to the Development of Electricity Transmission Lines</i> , EirGrid (2012)
<b>APPENDIX 5</b>	EU Law and Policy [in chronological order]
<b>APPENDIX 6</b>	<i>Your Grid, Your Views, Your Tomorrow - A Discussion Paper on Ireland's Grid Development Strategy</i> (EirGrid 2015) and associated appendices
<b>APPENDIX 7</b>	Policy Review of County Development Plans
<b>APPENDIX 8</b>	Research References - High Voltage Overhead Line Infrastructure and Property Values

# 1 INTRODUCTION

## 1.1 REPORT CONTEXT

- 1 This planning report has been prepared to accompany an application for planning approval made by EirGrid plc (hereinafter referred to as EirGrid) to An Bord Pleanála (the Board) in respect of that portion of an overall interconnection project (which is termed the ‘proposed interconnector’) located in Ireland (i.e. in counties Monaghan, Cavan and Meath). The application is titled the ‘North-South 400 kV Interconnection Development’ or ‘the proposed development’ for the purposes of this application for planning approval.
  
- 2 The application documentation comprises the following: Statutory Particulars (**Volume 1**), this Planning Report (**Volume 2A**), a Public and Landowner Consultation Report (**Volume 2B**), a multi-volume Environmental Impact Statement (EIS) (**Volume 3**), a Joint Environmental Report prepared by the System Operator for Northern Ireland (SONI) and EirGrid (the respective applicants)<sup>1</sup> in respect of the overall proposed interconnector (**Volume 4**) and a Natura Impact Statement (**Volume 5**). This structure of the application documentation is summarised in **Table 1.1**.

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<sup>1</sup> The planning of that portion of the proposed interconnector within Northern Ireland was originally undertaken by Northern Ireland Electricity (NIE). However, NIE was obligated by the European Commission to transfer its investment planning function (the “Planning Function”) to SONI. The SONI transmission system operator licence (the “Licence”) was amended on 28<sup>th</sup> March 2014 to take account of the transfer of the Planning Function following a consultation process by the Northern Ireland Authority for Utility Regulation (NIAUR). The Licence amendments took effect on 30<sup>th</sup> April 2014. Accordingly, responsibility for the pursuance of the planning application in respect of the proposed interconnector within Northern Ireland has been transferred from NIE to SONI.

**Table 1.1: Structure of Application Documentation**

Volume		Details
Volume 1	Volume 1A	Statutory Particulars
	Volume 1B	Planning Drawings
Volume 2	Volume 2A	Planning Report (this report) Associated Appendices
	Volume 2B	Public and Landowner Consultation Report Associated Appendices
Volume 3	<b>Environmental Impact Statement</b>	
	Volume 3A	Non-Technical Summary
	Volume 3B	Common Chapters (Cavan-Monaghan Study Area (CMSA) and Meath Study Area (MSA)) Associated Appendices Associated Figures Reference Material
	Volume 3C	Cavan-Monaghan Study Area (CMSA) Associated Appendices Associated Figures
	Volume 3D	Meath Study Area (MSA) Associated Appendices Associated Figures
Volume 4		Joint Environmental Report Associated Appendices
Volume 5		Natura Impact Statement

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## 1.2 PURPOSE AND STRUCTURE OF THE REPORT

3 The purpose of this planning report is to present, in summary, the planning issues associated with the proposed development; it is intended to assist the Board in determining whether the proposed development is in accordance with principles of proper planning and sustainable development, and accordingly whether planning approval should be granted for the proposed development.

4 The structure of this planning report is as follows:

- **Chapter 1: Introduction** – report context, purpose and structure, details of the applicant, need for the project and a summary description of the proposal;
- **Chapter 2: Description of Proposed Development** - project development, planning history and description of line route, an outline of the overhead line (OHL) elements, works to the existing Woodland Substation and construction related works (including the temporary construction material storage yard), ancillary elements and construction methodology;
- **Chapter 3: Legislative Context** - Strategic Infrastructure Development (SID), Environmental Impact Assessment (EIA) process, Appropriate Assessment (AA) process, Project of Common Interest (PCI) process, transboundary issues and application related matters;
- **Chapter 4: Planning Policy Context** – European, national, regional, local and planning guidance documents;
- **Chapter 5: Planning Appraisal** - evaluation of proposed development having regard to *inter alia* planning policies and objectives; and
- **Chapter 6: Conclusions.**

## 1.3 THE PROPONENTS OF THE PROPOSED INTERCONNECTOR

### 1.3.1 EirGrid

5 With the enactment and coming into force<sup>2</sup> of the *Electricity Regulation Act, 1999* (‘the 1999 Act’), the liberalisation of the electricity sector commenced. This liberalisation has been driven in large part by European Directives – in particular Directives 96/92/EC,<sup>3</sup> 2003/54/EC<sup>4</sup> and 2009/72/EC. The 1999 Act established the Commission of Electricity Regulation (now the Commission for Energy Regulation (CER)) as the independent regulator of the electricity industry in Ireland. The liberalisation of the electricity industry has involved the separating of or “unbundling” of various functions which were once concentrated in the Electricity Supply Board (ESB). The function of Transmission System Operator (TSO) has been conveyed to EirGrid plc<sup>5</sup> (EirGrid), whilst the function of Distribution System Operator has been conveyed to ESB Networks Limited (ESBNL). The Transmission System Owner (TAO) is the ESB<sup>6</sup>. On June 29 2006, the CER issued a TSO Licence to EirGrid pursuant to Section 14(1)(e) of the 1999 Act, as inserted by Regulation 32 of the European Communities S.I. No. 445/2000 (Internal Market in Electricity) Regulations, 2000 (‘the 2000 Regulations’). Thus, from July 1 2006, EirGrid has assumed the role of TSO.

6 Regulation 8(1)(a) of S.I. No. 445/2000 provides that EirGrid, as TSO, has 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 and having due regard for the environment”.*

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<sup>2</sup> The *Electricity Regulation Act, 1999* came into force in February 2000.

<sup>3</sup> The 1999 Act and the *European (Internal Market in Electricity) Regulations, 2000*; The *European (Internal Market in Electricity) (Amendment) Regulations, 2002*; The *European (Internal Market in Electricity) (Amendment) Regulations, 2003* were amongst the measures enacted / passed to give effect to this directive.

<sup>4</sup> The *European (Internal Market in Electricity) Regulations, 2005*, The *European (Internal Market in Electricity) Regulations, 2006* and The *European (Internal Market in Electricity) (Electricity Supply Board) Regulations, 2008* were amongst the measures enacted / passed to give effect to this directive.

<sup>5</sup> EirGrid is a public limited company established pursuant to Regulation 34 of the European Communities (Internal Market in Electricity) Regulations 2000 (S.I. No. 445/2000) and the licensed Transmission System Operator for Ireland pursuant to Section 14 of the *Electricity Regulation Act 1999*.

<sup>6</sup> ESB is the licensed Transmission System Owner (TAO) for Ireland pursuant to Section 14 of the *Electricity Regulation Act 1999*.



- 7 EirGrid operates and develops the national electricity grid power system, providing services to all users of the electricity transmission system<sup>7</sup>. This includes all generators, suppliers, and high voltage customers. SONI Limited (SONI), the System Operator of Northern Ireland, is a wholly owned subsidiary of EirGrid. SONI is the applicant for planning approval for that part of the proposed interconnector within Northern Ireland (see **Section 1.3.2** and **Section 1.4.1**). The Single Electricity Market Operator (SEMO) is the market operator of the all-island wholesale electricity trading system. SEMO is a joint venture between EirGrid and SONI.
- 8 The ESB, a statutory corporation, is the licensed TAO in Ireland. The ESB owns the transmission system and is responsible for its construction in accordance with EirGrid's development plan and is further responsible the execution of maintenance. However, EirGrid is solely responsible for making applications to the Board (or relevant Planning Authority) for planning approval.
- 9 It is in its capacity, as TSO, that EirGrid is proposing to develop that part of the proposed interconnector located in Ireland (refer to **Section 1.5** and **Section 2.3.1**).

### **1.3.2 System Operator Northern Ireland Ltd (SONI)**

- 10 The planning of that portion of the proposed interconnector within Northern Ireland was originally undertaken by Northern Ireland Electricity (NIE). However, NIE was obligated by the European Commission<sup>8</sup> to transfer its investment planning function (the "Planning Function") to SONI. The SONI transmission system operator licence (the "Licence") was amended on 28<sup>th</sup> March 2014 to take account of the transfer of the Planning Function following a consultation process by the Northern Ireland Authority for Utility Regulation (NIAUR). The Licence amendments took effect on 30<sup>th</sup> April 2014. Accordingly, responsibility for the pursuance of the planning application in respect of the proposed interconnector within Northern Ireland has been transferred from NIE to SONI.
- 11 Following the transfer of its Planning Function to SONI, NIE will continue to be responsible for the construction, ownership and maintenance of the transmission system in Northern Ireland. Subject to development consent being obtained for the proposed interconnector within Northern Ireland, NIE will be responsible for its construction, in accordance with said consents.

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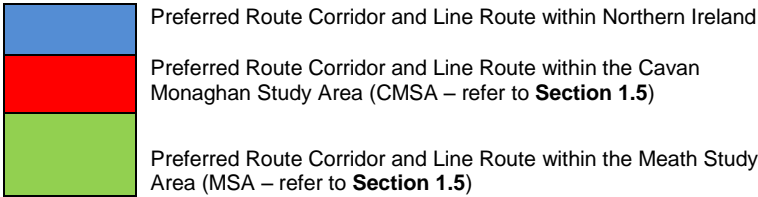
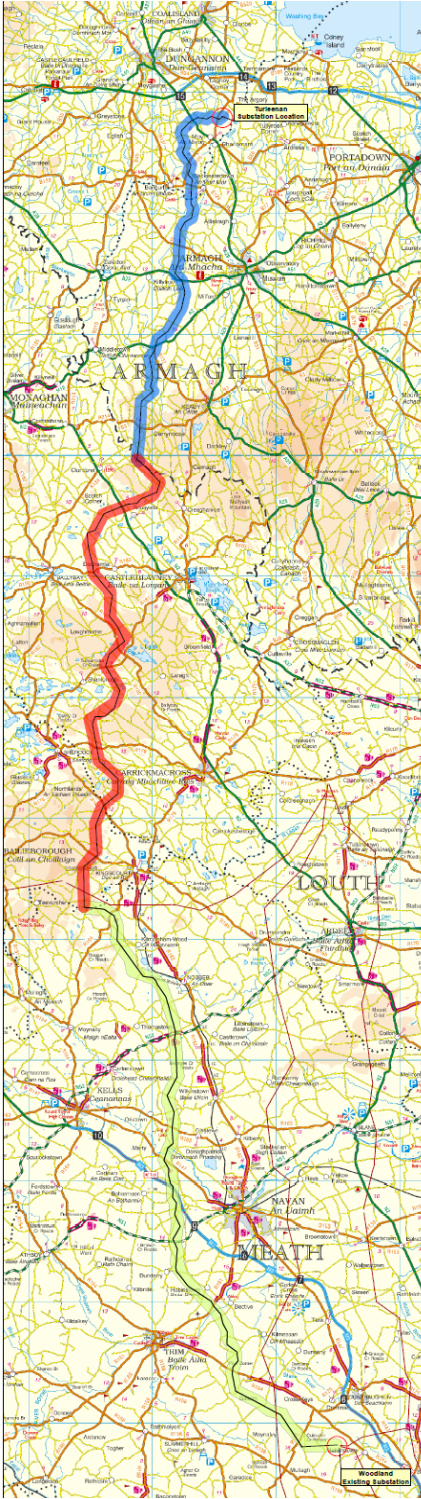
<sup>7</sup> The transmission network essentially refers to the higher voltage grid of 400 kV, 220 kV and 110 kV. The lower voltage distribution network is primarily developed as 38 kV, 20 kV or 10 kV infrastructure.

<sup>8</sup> In accordance with European Commission Decision of 12<sup>th</sup> April 2013 made pursuant to Article 3(1) of Regulation (EC) No 714/2009 and Article 10(6) of Directive 2009/72/EC - United Kingdom (Northern Ireland) - SONI/NIE.

- 12 For the avoidance of doubt in this regard, any reference to NIE in the plans and particulars of this application for approval in relation to the proposed interconnector should now be understood as referring to SONI in the context of its newly acquired functions, which include the pursuance of the planning application in respect of the proposed interconnector within Northern Ireland. However, certain references to NIE within the application particulars refer to matters actually undertaken by NIE prior to the transfer of the Planning Function to SONI. These references include but are not limited to certain documents prepared by NIE in relation to the current application for development consent in respect of that portion of the proposed interconnector within Northern Ireland.

#### **1.4 CONTEXT FOR THE PROPOSED DEVELOPMENT**

- 13 The proposed interconnector is a 400 kV OHL circuit linking the existing 400 kV substation in Woodland, County Meath with a planned substation in Turleenan, County Tyrone; it will provide a second high capacity electricity interconnector between Ireland and Northern Ireland. The existing interconnector, a 275 kV double circuit OHL, connects the existing Tandragee and Louth substations. The proposed interconnector is planned to traverse the counties of Tyrone, Armagh, Monaghan, Cavan and Meath (see **Figure 1.1**).



**Figure 1.1: The Proposed Interconnector**

- 14 Given its location across two jurisdictions, the proposed interconnector consists of two related and complementary developments, as follows:
- 1) The SONI proposal for that portion of the overall interconnection project located in Northern Ireland; and
  - 2) The EirGrid proposal for that portion of the overall interconnection project located in Ireland (i.e. in counties Monaghan, Cavan and Meath), which forms the subject-matter of this application for planning approval submitted to the Board.
- 15 As the proposed interconnector traverses a jurisdictional boundary, the project is required to be separated into its jurisdictional elements for the purposes of seeking development consent. In this respect, separate applications for development consent of those elements of the proposed interconnector within Ireland, and within Northern Ireland, have been submitted, by the respective applicants to the relevant competent authorities within each jurisdiction. The application in each jurisdiction is accompanied by an Environmental Impact Statement (EIS) and Environmental Statement (ES) respectively<sup>9</sup> prepared in accordance with the requirements of the EIA Directive<sup>10</sup> and the respective applicable national legislation and guidelines.
- 16 **Chapter 2** describes the evolution of the relevant planning applications for these two jurisdictional elements of the proposed interconnector.

#### 1.4.1 SONI Proposal

- 17 In December 2009, an application was submitted to the Northern Ireland Planning Service for that portion of the proposed interconnector located in Northern Ireland (Ref. O/2009/0792/F). That application was accompanied by an ES.
- 18 In August 2010, the Northern Ireland Environment Minister referred that proposal to the Planning Appeals Commission (PAC) for a public inquiry. Subsequently, further information was requested in respect of the application. Addenda to the ES were submitted by NIE in January 2011 and October 2011. The public inquiry commenced in March 2012, and as at the date of this application, stands adjourned. At the public inquiry, the PAC made a number of requests for additional information with regard to the application. When adjourning the

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<sup>9</sup> The Environmental Statement that was submitted in Northern Ireland in 2013 was submitted by Northern Ireland Electricity (NIE). For the purposes of this report it will be referred to as the 'Consolidated ES'.

<sup>10</sup> Directive 2011/92/EU of the European Parliament and of the Council of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment (codification).

public inquiry, the PAC requested that a consolidated ES be prepared. In May 2013 a second application was submitted for planning permission for works associated with the construction of the main infrastructure under the 2009 application (Ref. 0/2013/0214/F). Subsequently a consolidated ES was submitted in June 2013. The 2013 consolidated ES assesses the environmental effects of both the main infrastructure works under the 2009 application and the associated works under the 2013 application. SONI submitted an addendum to the consolidated ES in June 2015. The consolidated ES and consolidated ES addendum are included as Appendix C and Appendix D of the *Joint Environmental Report*, which comprises **Volume 4** of the application documentation.

19 The proposal, comprising that portion of the proposed interconnector occurring in counties Tyrone and Armagh, with SONI now as applicant, is detailed below:

- The construction and operation of a new 275 kV / 400 kV (source) substation at Turleenan townland, north-east of Moy, County Tyrone.
- The construction and operation of two 275 kV terminal towers to enable connection of the Turleenan Substation to NIE's existing 275 kV OHL and the removal of one existing 275 kV tower.
- The construction and operation of a single circuit 400 kV overhead transmission line supported by 102 towers for a distance of 34.1km from the source substation (at Turleenan) to the border where it will tie into the future ESB network. The OHL will continue on in the Republic of Ireland with all further towers being promoted by EirGrid for placement within that jurisdiction. Because of the meandering nature of the border, the OHL will oversail a portion of land within the Northern Ireland townland of Crossbane for a short distance of 0.2km.
- Associated works to include site levelling, site preparation works, modification of existing access points, construction of new access points, construction of new access lanes, construction of working areas, stringing areas, guarding, site boundary fencing and related mitigation works. Formation of access tracks and other associated works at the substation and at the tower locations.

## 1.5 THE PROPOSED DEVELOPMENT

- 20 The proposed development comprises that portion of the proposed interconnector occurring within Ireland in counties Monaghan, Cavan and Meath. It is described further in **Section 2.3** of this planning report and Chapters 6 and 7 of **Volume 3B** of the EIS.
- 21 The proposed development is approximately 103.35km long and consists of the following principal elements:
- i. A new single circuit 400 kV overhead transmission line (covering a distance of approximately 100.5km in the counties of Monaghan, Cavan and Meath) extending in a generally southerly alignment from the jurisdictional border with Northern Ireland (between the townland of Doohat or Crossreagh, County Armagh, and the townland of Lemgare, County Monaghan) to the townland of Bogganstown (Electoral District (ED) Culmullin), County Meath. In addition the proposed transmission line crosses the jurisdictional border with Northern Ireland at two points - from the townland of Lemgare, County Monaghan into the townland of Crossbane, County Armagh and back into the townland of Lemgare, County Monaghan. This transmission line comprises 299 No. new lattice steel support structures (ranging in height from approximately 26m to 51m over ground level), with associated conductors, insulators, and other apparatus.
  - ii. Modifications are required to three existing 110 kV overhead lines. The modifications comprise the insertion of additional polesets and / or replacement of existing structures with polesets of shorter height (ranging in height from approximately 11.5m to 19m over ground level) in the following locations:
    - Where the proposed 400 kV overhead transmission line intersects with the Lisdrum–Louth 110 kV transmission line in Drumroosk, County Monaghan.
    - Where the proposed 400 kV overhead transmission line intersects with the Louth-Rathrussan 110 kV transmission line in Corrinenty and Corbane, County Monaghan.
    - Where the proposed 400 kV overhead transmission line intersects with the Arva-Navan 110 kV transmission line in Diméin Bhaile Ghib (Gibstown Demesne and Tailtin (Teltown), County Meath.
  - iii. The addition of a new 400 kV circuit for approximately 2.85km along the currently unused northern side of the existing Oldstreet to Woodland 400 kV transmission line, extending eastwards from the townland of Bogganstown (ED Culmullin) to the existing ESB Woodland 400 kV Substation, in the townland of Woodland, County Meath. The existing double circuit lattice steel support structures along this existing line range in height from approximately 52m to 61m over ground level.

- iv. Associated works on a site of approximately 0.544ha within and immediately adjacent to the existing ESB Woodland 400 kV Substation, in the townland of Woodland, County Meath to include: a western extension of the existing compound (of approximately 0.231ha) including associated modifications to the existing 2.6m high palisade boundary fence; the addition of electrical equipment and apparatus including circuit breaker, current transformers, inductive voltage transformers, disconnectors, pantograph disconnecting switches, surge arresters, support insulators and support insulator bars (all ranging in height from approximately 7.4m to 13.7m); gantry structures (approximately 28m); and a lightning monopole (approximately 28m); and all associated ancillary construction and site development works.
- v. An associated temporary construction material storage yard to be located in the townlands of Monaltyduff and Monaltybane, Carrickmacross, County Monaghan, on a site of approximately 1.4ha, including associated site works, new site entrance onto the L4700 Local Road, associated 2.6m high boundary palisade fencing (with noise barrier affixed) and associated ancillary staff facilities and parking.
- vi. All associated and ancillary development works including permanent and temporary construction and excavation works.

22 It is necessary to evaluate the proposed development within a single EIS but, given the overall geographical extent of this linear development and its project history, it is considered appropriate to present that evaluation in two sections of the single EIS (refer to **Volume 3** of the application documentation). This approach will facilitate review by the public concerned and other parties of that section of the project which is of most importance to them, rather than having to seek this information as part of a much larger study area. The two study areas are:

- **Cavan-Monaghan Study Area (CMSA):** previously termed Cross Border Study Area (CBSA) in the application for planning approval of the Meath-Tyrone 400 kV Interconnection Development (refer to **Section 2.1** for details on the project history and development). The CMSA is primarily situated between the jurisdictional border with Northern Ireland to the north and the area of the existing Flagford-Louth 220 kV overhead transmission line (west of Kingscourt, County Cavan) to the south.
- **Meath Study Area (MSA)** previously termed North East Study Area (NESAs) in the application for approval of the Meath-Tyrone 400 kV Interconnection Development (refer to **Section 2.1** for details on the project history and development). The MSA is situated on a generally north-south axis between the area of the Flagford-Louth 220 kV overhead transmission line (west of Kingscourt, County Cavan) in the north and the existing Woodland 400 kV Substation in County Meath in the south.

23 The proposed development located within these two study areas comprises the following:

- **CMSA – New 400 kV Line:** The proposed development in the CMSA comprises a single circuit 400 kV overhead transmission circuit supported by 134 towers (Tower 103 to Tower 236) extending generally southwards from the jurisdictional border with Northern Ireland (between the townland of Doochat or Crossreagh, County Armagh, and the townland of Lemgare, County Monaghan) to the townland of Clonturkan, County Cavan for a distance of approximately 46km. It includes lands traversed by the conductor from the jurisdictional border to Tower 103, and from Tower 103 to Tower 236 inclusive and lands traversed by the conductor strung from Tower 236 to Tower 237 (the first tower on the MSA section of the proposed development)<sup>11</sup>. It also includes modifications to existing 110 kV transmission overhead lines, and all associated and ancillary development works including permanent and temporary construction and excavation works.

The proposed development also comprises an associated temporary construction material storage yard to be located on a site of approximately 1.4ha in the townlands of Monaltyduff and Monaltybane, Carrickmacross, County Monaghan.

**MSA – New and Existing 400 kV Line:** The proposed development in the MSA comprises a new single circuit 400 kV overhead transmission circuit supported by 165 new towers (Tower 237 to Tower 401) extending for a distance of approximately 54.5km from Tower 237 in the townland of Clonturkan, County Cavan to Tower 402 (an existing double circuit tower on the Oldstreet to Woodland 400 kV transmission line) in the townland of Bogganstown (ED Culmullin), County Meath. It also includes modifications to an existing 110 kV transmission overhead line, and all associated and ancillary development works including permanent and temporary construction and excavation works.

The proposed development also comprises the addition of a new 400 kV circuit for some 2.85km along the currently unused (northern) side of the existing double circuit 400 kV overhead transmission line (the Oldstreet to Woodland 400 kV transmission line) extending eastwards from Tower 402 in the townland of Bogganstown (ED Culmullin), County Meath to Tower 410 and the Woodland Substation in the townland of Woodland, County Meath.

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<sup>11</sup> Between Tower 106 and Tower 107 the proposed transmission line crosses the jurisdictional border with Northern Ireland at two points - from the townland of Lemgare, County Monaghan into the townland of Crossbane, County Armagh and back into the townland of Lemgare, County Monaghan. This results in a section of the span between Tower 106 and Tower 107 oversailing Northern Ireland. The oversail section forms part of the SONI proposal.



It also includes an extension to and works within the existing ESB Woodland Substation, in the townland of Woodland, County Meath.

## 1.6 NEED FOR THE PROPOSED DEVELOPMENT

24 The need for, and benefits of the project are summarised below. They are explained in detail in Chapter 2, **Volume 3B** of the EIS. In addition a report prepared by EirGrid and SONI *The Need for a Second North-South Electricity Interconnector* (2015) is included as Appendix 2.1, **Volume 3B Appendices** of the EIS.

25 It should be noted that the proposed interconnector has been designated as a European Project of Common Interest (PCI). This is separately addressed at **Chapter 3** of this planning report.

26 The respective applicants are obliged to design the transmission systems of the two jurisdictions to be able to withstand, at all times, the sudden and unexpected loss of interconnection. Having regard to the fact that there is only a single existing high capacity interconnector between the two transmission networks on the island of Ireland, there is a risk that a single event – such as a lightning strike, accidental or deliberate damage to a tower structure, a fire at one of the termination points, or a mal-operation of the complex power system protection schemes - could cause a trip of the existing double circuit 275 kV interconnector between Louth and Tandragee. In such a scenario, interconnection between the transmission systems of Ireland and Northern Ireland would be lost entirely. In this situation, the transmission systems in Ireland and Northern Ireland would revert to operating independently of each other – this is known as system separation. This could result in loss of load in either or both systems as power transfer and mutual support cannot occur. System separation, depending on the pre-separation interconnector flows, will result in a generation surplus in one system and a deficit in the other. The system with the deficit may be required to disconnect demand customers; the system with the surplus may have difficulty stabilising the system frequency. If such an imbalance is not corrected quickly enough the system could collapse.

27 Both systems must be capable of dealing with this contingency and this puts a limit on the power transfer which the systems can cater for with the existing interconnector; in short a restriction on the usage of the existing interconnector. The consequence is that the existing interconnector cannot currently be utilised to the full extent of its capacity.

28 The proposed second interconnector will help to resolve this risk, as it will provide a separate power flow independent of the existing interconnector. This second interconnector will significantly reduce the risk of system separation, so that there would be no resulting

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instability in system behaviour, or loss of supply to customers, in the event of loss of one of the interconnectors.

- 29 There are also a number of resulting benefits which arise as a result of the removal of existing constraints on power flow transfers between Ireland and Northern Ireland. These benefits include:
- Improving competition by reducing the constraints restricting efficient performance of the all-island single electricity market;
  - Improving security of supply by providing a reliable high capacity link between the two parts of the all-island transmission system;
  - Supporting the development of renewable power generation by enhancing the flexible exchange of power flows over a large area of the island; and
  - Reinforcement of the north–east area of Ireland.
- 30 This position is endorsed in correspondence to EirGrid from the Single Electricity Market (SEM) Committee (comprising the Irish Commission for Energy Regulation (CER), and the Northern Ireland Authority for Utility Regulation (NIAUR)) dated 30<sup>th</sup> April 2013, included as **Appendix 1** of this planning report. This letter refers to *“the relevance of the second North South interconnector to the successful implementation of the policy objectives of competitiveness, sustainability and security of supply in both Ireland and Northern Ireland and the necessity to advance and deliver this project, and to not only deliver it but deliver it as a matter of urgency”*.
- 31 More recently, the need for the project is outlined in EirGrid’s *Your Grid, Your Views, Your Tomorrow - A Discussion Paper on Ireland’s Grid Development Strategy* published on 27<sup>th</sup> March 2015. This document takes into account the most up-to-date information available, including *inter alia* future economic and demand projections. The need case for the project was also confirmed by external reviewers (i.e. London Power Associates (LPA)). Refer to **Section 4.3.10** of this planning report for further detail.

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## 2 DESCRIPTION OF PROPOSED DEVELOPMENT

### 2.1 PROJECT HISTORY AND DEVELOPMENT

#### 2.1.1 Meath-Tyrone 400 kV Interconnection Development (2009-2010)

1 In December 2009, EirGrid submitted an application to An Bord Pleanála (the Board) for development consent of that portion of the proposed interconnector located within Ireland under An Bord Pleanála Ref. VA0006. That application, known as the Meath-Tyrone 400 kV Interconnection Development, primarily consisted of:

- The continuation of the 400 kV single circuit OHL from the area where the circuit crosses the jurisdictional border in the townland of Lemgare, County Monaghan, to the existing 400 kV substation at Woodland, County Meath, traversing lands in counties Monaghan, Cavan and Meath;
- A new 400 kV substation in the townland of Moyhill, County Meath, in the vicinity of the intersection of the proposed north-south oriented transmission circuit with the existing east-west oriented 220 kV OHL between Flagford and Louth Substations;
- The associated diversion of the existing Flagford-Louth 220 kV OHL into the planned Moyhill Substation, thereby providing a connection between the two transmission circuits; and
- Associated works required in the existing Woodland Substation to accommodate the proposed 400 kV circuit.

2 During the period January-March 2010, An Bord Pleanála invited written submissions from identified prescribed authorities, other stakeholders, members of the public and all other parties. In May 2010, An Bord Pleanála commenced an Oral Hearing in respect of the proposed development. However, in June 2010, the EirGrid application was withdrawn. As such, the application for planning approval was not determined by the Board.

#### 2.1.2 The Re-evaluation Process (2010-2013)

3 During the period since the withdrawal of the previous application for planning approval EirGrid has undertaken a comprehensive re-evaluation of that portion of the proposed interconnector located between the existing substation at Woodland, County Meath, and the border with Northern Ireland. The re-evaluation process included a review of the previous application in order to ascertain whether the identified need, scope, alternatives considered (including technology alternatives), content and conclusions of that previous application

- 
- remained applicable for the purposes of informing and shaping this new application for approval.
- 4 The re-evaluation process comprised a review of all issues and submissions concerning the previous application, and information received and issues arising since June 2010. It also included technical and environmental analysis undertaken by EirGrid and its consultants, including re-evaluating all technology alternatives which could potentially meet the need for, and parameters of, the proposed development.
  - 5 As part of this review process, EirGrid published for public consultation a *Preliminary Re-evaluation Report* in May 2011, which concluded with the identification of an 'Indicative Line Route' within an emerging 'Preferred Route Corridor'. EirGrid also considered documents issued since the publication of the *Preliminary Re-evaluation Report*, which are relevant to the overall re-evaluation process. These documents include the Report of the International Expert Commission (IEC), *Meath - Tyrone Report Review by the International Expert Commission* August – November 2011 (published in January 2012); *Government Policy Statement on the Strategic Importance of Transmission and Other Energy Infrastructure*, July 2012; *Grid25 Implementation Programme (IP) 2011-2016* and accompanying Strategic Environmental Assessment (SEA) both May 2012; and EirGrid's *Project Development and Consultation Roadmap*. The conclusions of these documents, and of feedback received in respect of the *Preliminary Re-evaluation Report*, are addressed in a *Final Re-evaluation Report* published in April 2013. These documents are included as Appendix 1.1 and Appendix 1.2 in **Volume 3B Appendices** of the EIS.
  - 6 As part of this process, EirGrid has given significant consideration to the issue of an overhead line (OHL) or underground cable (UGC) or partial underground solution having regard to the nature and parameters of the proposed development. This included consideration of the findings of the IEC Review "*on a case for, and cost of, undergrounding (all or part of) Meath-Tyrone 400KV power link*" (p.2).
  - 7 The IEC, in addition to consulting with EirGrid, the North East Pylon Pressure (NEPP) Committee and the County Monaghan Anti Pylon Committee (and others), undertook a review of expert literature "*already available both in Ireland and internationally in relation to undergrounding high voltage power lines*". This included the Government commissioned Ecofys *Study on the Comparative Merits of Overhead Electricity Transmission Lines versus Underground Cables* (2008). Both the IEC Review and the previous Ecofys Report were prepared entirely independent of EirGrid.
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8 As noted in the IEC Review, the Ecofys Report sets out a comparative analysis of OHL and UGC technologies based on international practice, both from a technological / techno-economic perspective, and from an environmental perspective. Specifically Chapter 6 of the report titled *Comparison of Environmental Impacts* – examines a number of key environmental issues, as follows:

- Land Use (including disruption to agriculture, land take and effect on field boundaries);
- Geology and Soils (including soil cover and excavated material);
- Water Resources (including disruption to groundwater including wetland);
- Ground Restoration;
- Ecology and Nature Conservation (including bird strike and habitat loss);
- Landscape and Visual (including landscape character and visual effects, and communities);
- Cultural Resources (including language and culture);
- Traffic and Noise;
- Air Quality;
- Communities (including tourism industry, animal breeding, EMFs, property prices, and impact on future developments); and
- Recreation and Tourism.

9 Of particular note in this regard, Table 6-1 of the Ecofys Report compares OHLs and UGCs in terms of “*Environmental Impact and Ease of Potential Mitigation*”. This table identifies that, for the majority of environmental topics, an OHL has an equal or lesser environmental impact to a UGC; clear exceptions to this include bird strike, landscape character, visual impact, and certain community issues. For the most part in these instances, Table 6-1 identifies that the “*ease of mitigation*” might be ‘remedial measures only’, although in respect of topics such as bird strike, landscape and Electric and Magnetic Fields (EMF), mitigation measures ‘likely to reduce the adverse scale of impact’, or ‘likely to avoid adverse discernible impact’ could be employed.

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- 10 The findings of the Ecofys Report, particularly its “*Comparison of Environmental Impacts*”, though published in 2008, clearly remain relevant for the proposed development, and thus were taken into consideration by EirGrid in its consideration of technology alternatives.
- 11 In addition to detailed consideration of the IEC Review and Ecofys Report, EirGrid’s examination of technology alternatives throughout the re-evaluation process, also had regard to specific studies it had commissioned which were carried out by international expert companies. This included a study prepared by Parsons Brinckerhoff (2009) (known as the PB Power study), which was specific to the proposed project, and compared a high-voltage overhead line (OHL) transmission option with a location-specific underground cable (UGC) route corridor, utilising either High Voltage Alternating Current (HVAC) or High Voltage Direct Current (HVDC) technologies. It is noteworthy that the PB Power study was taken into consideration by the IEC when undertaking its independent review. The PB Power study was updated in 2013 to include a review of up-to-date technology and application developments worldwide. The updated report also draws upon information and conclusions published in more recent studies regarding technology alternatives including the IEC Review. Both the 2009 and 2013 studies are provided in **Volume 3B - Reference Material** of the EIS.
- 12 The process of re-evaluation and consideration of technology alternatives also had regard to other third party studies, most notably the Danish Study *Denmark’s strategy for the development of its 400 kV network (2007 / 2008)*, the Askon Report *Study on the comparative merits of overhead lines and underground cables as 400 kV transmission lines for the North-South Interconnector Project (2008)* commissioned by NEPP, Cigré (the International Council for Large Electric Systems) Technical Brochure 379 *Update of service experience of HV underground and submarine cable systems (2009)*, and the UK *Electricity Transmission Costing Study (2012)*.
- 13 Of particular note, EirGrid has had regard to the *Electricity Transmission Costing Study*, prepared by Parsons Brinckerhoff in association with Cable Consulting International Ltd. (January 2012 with errata published in April 2012), as “*an independent report endorsed by the Institution of Engineering & Technology*”. This report is included as **Appendix 2** of this planning report. The stated purpose of the report is “*to provide the best estimate of the relative costs of the various technologies currently available for high voltage network enhancement at significant power levels, such that the debate around the acceptability in planning terms can be based on an accredited view of the relative costs*”.
- 14 In addition, EirGrid reviewed current international practice in the development of transmission networks in its consideration of technology options. This included an examination of partial undergrounding, which has been deemed to be feasible, although subject to certain key constraints.
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- 15 Overall, the consideration of technology alternatives (and other alternatives) in the re-evaluation process has been comprehensive and has had regard to information and feedback received from the public consultation activities. Based on this, EirGrid is proposing that the new North-South 400 kV Interconnection Development (i.e. the proposed development) is entirely comprised of 400 kV OHL, given that this is the best technical solution for the nature and parameters of the proposed development. In addition to its technical merit, it is noted that an OHL solution in this instance is significantly less costly than any UGC alternative.
- 16 The *Final Re-evaluation Report* was published in April 2013. It concluded with the identification of an 'Indicative Line Route' for the transmission circuit within an identified 'Preferred Route Corridor' linking the high voltage networks of Ireland and Northern Ireland, to be located in counties Monaghan, Cavan and Meath. However, no significant detail regarding the specific location and siting of this 'Indicative Line Route' was provided in the report.
- 17 Following on from the *Final Re-evaluation Report*, the *Preferred Project Solution Report* was published in July 2013; which provided detail regarding the 'Preferred Line Design' for the proposed development. The 'Preferred Line Design' is derived from the Indicative Line Route as identified in the *Final Re-evaluation Report*, and also included the identification of feasible locations for, and design of, the planned transmission line infrastructure, such as tower positions, tower types and associated construction related details (e.g. indicative access tracks). The *Preferred Project Solution Report* was subject to public consultation, with a focus on landowner engagement particularly in respect of the specific siting of structures on lands. The ultimate output of this process is the line design of the proposed development.
- 18 The consideration of OHL, UGC and partial undergrounding is addressed in detail in **Volume 3B** of the EIS accompanying this application for planning approval.

### 2.1.3 Independent Expert Panel (IEP)

- 19 In January 2014 the Minister for Communications, Energy and Natural Resources appointed an Independent Expert Panel (IEP) to oversee and facilitate a "*comparative analysis of underground and overhead alternatives for the Grid West and Grid Link projects.*" In addition, the IEP was tasked with providing an opinion to the Minister on "*the compatibility of the methodologies to be employed on the GW and GL projects with what has already been done (i.e. up to 2 May 2014, being the date the Panel decided to examine the N/S project) on the North South Transmission Line project.*"

- 20 In July 2014 the Panel, which is made up of Mrs Justice Catherine McGuinness, Chairperson, Professor Keith Bell, Professor John Fitzgerald, Dr. Karen Foley and Mr. Colm McCarthy provided its opinion on the matter and this has been published by the Department of Communications, Energy and Natural Resources. The IEP is of the opinion that the work completed to date on the North-South 400 kV Interconnection Development is compatible with the Terms of Reference to be employed on the Grid West and Grid Link projects:

*“Having considered and discussed all of the material, the Panel is unanimously of the opinion that, in all material respects, what has already been done on the N/S project is compatible with the methodologies now being employed on the GW and GL projects. While the Panel acknowledges that no two grid infrastructure projects are identical, and that some non-comparabilities are likely to arise when assessing the potential environmental impacts, technical efficacy and cost factors, the Panel is of the opinion that no material differences in the methodologies arise.”*

- 21 With the agreement of the Department of Communications, Energy and Natural Resources (DCENR) EirGrid has published the report which it submitted to the IEP in relation to the proposed North-South 400 kV Interconnection Development. This report entitled *Report to the Independent Expert Panel Date: 29/05/2014 & Addendum Date: 19/06/2014* is included as **Appendix 3** to this planning report.

#### **2.1.4 EirGrid’s Approach to Consultation in Project Development**

- 22 In the roll-out of Grid25, EirGrid has consistently used graphical roadmaps to present the progression of development of a project to the public and other stakeholders in a simplified and accessible manner. These are presented in Section 2.2.2 of **Volume 2B** of the application documentation.
- 23 Building on the various roadmaps for this project, in 2012 EirGrid developed a Project Development and Consultation Roadmap (see **Figure 2.1**) as a general framework for the development of its larger projects. The essential purpose of this Roadmap is that the evolution of a project occurs within a clear and structured process, with public and stakeholder consultation occurring from its earliest stage of ‘Information Gathering’, and focusing upon key deliverables in each stage. This allows transparency in terms of understanding the progress of evolution of the project, and the issues and feedback that has shaped the development, with key decision-making on the detail of a project really only occurring in the latter stages of project development. The Roadmap is outlined in more detail in EirGrid’s document *Approach to the Development of Electricity Transmission Lines* (included as **Appendix 4** of this planning report).



- 24 In a normal scenario of project development, with reference to EirGrid's Roadmap, the following occurs:
- **Stage One** focuses on the process of gathering technical, environmental and other information to inform the shape of the project. It includes identification of a study area to meet the needs of that particular project; the identification of environmental and other constraints within that study area; and the identification of potential route corridors which seek to avoid those identified constraints to the greatest extent practicable or feasible. It also generally includes, what in the opinion of the technical and environmental consultants, comprises the least constrained route corridor option. The progression of Stage One, and its conclusions – an identified emerging preferred project solution, is captured in a Stage One Report. This forms the basis for public consultation and engagement. Earlier consultation in respect of various aspects of Stage One is likely also to have occurred.
  - **Stage Two** involves consideration of feedback arising in respect of the Stage One Report consultation, further review of previous options, further evaluation and endorsement of a preferred (taken to mean 'best fit') route corridor, and identification of a potentially feasible indicative line route within that preferred route corridor. These elements are generally captured in a Stage Two Report, which is subject to another round of public and stakeholder consultation. Stage Two generally includes the commencement of landowner engagement, in particular focussed along the identified preferred indicative line route.
  - The latter stages of the Roadmap (**Stages Three and Four**) are primarily concerned with confirmation of the final line route, and associated preparation of technical and environmental studies. This includes consideration of feedback arising in respect of consultation on the Stage Two Report as well as ongoing engagement with landowners, seeking agreement where possible for the location of structures on landholdings. The final proposal is then submitted to the appropriate authority (generally An Bord Pleanála) for development consent.
- 25 As also discussed in **Section 5.5.3** of this report, EirGrid has recently published a document *Reviewing and Improving our Public Consultation Process*. This included a review of the current Project Development and Consultation Roadmap, looking at how the process could be enhanced to provide more information and further and earlier opportunities for public participation.
- 26 This review concludes with a stated Commitment (No. 2) concerning *Process for Consultation in Project Development*, this is envisaged as updating the current Roadmap, with a focus on enhancing opportunity for community, landowner and stakeholder participation in the

development of new projects, particularly in key areas such as explaining the need for a project, identifying technical options to meet that need, and seeking input as to how local engagement should be carried out.

- 27 It is anticipated that this updated approach to consultation in project development will be developed over the course of 2015. It is envisaged that this approach will retain a structured process for project development, with clearly identified opportunities for stakeholder participation and engagement, as is the fundamental basis of the current Roadmap.



Figure 2.1: EirGrid's Project Development and Consultation Roadmap

### 2.1.5 The Proposed Development and the Project Development and Consultation Roadmap

- 28 The proposed development has somewhat unusual planning circumstances extending over a number of years. As outlined in **Section 2.1.1**, in December 2009 EirGrid submitted an application to An Bord Pleanála for development consent for the Meath-Tyrone 400 kV Interconnection Development, which was subsequently withdrawn in June 2010. As such, that application for planning approval was not determined by the Board.
- 29 Notwithstanding the fact that EirGrid's Roadmap was published in 2012, i.e. after the initial application for development consent, the current development process is consistent with the framework and structured progression of the Roadmap. In this regard, it is the case that the detailed re-evaluation process undertaken between 2010 and 2013 effectively constitute Stages One and Two (in part) of EirGrid's Roadmap (resulting in the *Preliminary Re-evaluation Report* (2011) and *Final Re-evaluation Report* (2013) – included as Appendix 1.1 and Appendix 1.2 in **Volume 3B Appendices** of the EIS). The objectives, structure and details of all consultation and engagement activities during the re-evaluation process, in addition to feedback received and how such feedback was responded to are set out in a separate *Public and Landowner Consultation Report* (refer to **Volume 2B** of the application documentation).
- 30 The *Preferred Project Solution Report*, which was published in July 2013 (included as Appendix 1.3 in **Volume 3B Appendices** of the EIS), was the subject of public and stakeholder consultation. This report provides details regarding the 'Preferred Line Design' for the proposed development. This thereby effectively constitutes the process and key deliverable of 'Stage 2 – Evaluate Options' of the Roadmap.
- 31 The process of landowner engagement as well as environmental survey, design and assessment, in consultation with prescribed authorities and other stakeholders in respect of the preferred project solution, corresponds with 'Stage 3 – Confirm Design' of EirGrid's Roadmap.
- 32 The subject of this application for planning approval of the proposed development is the ultimate output of the line design process and the main deliverable of 'Stage 4 – Prepare Planning Application' of EirGrid's Roadmap.
- 33 In summary, it is evident that the North-South 400 kV Interconnection Development has unusual circumstances; in particular the fact that it has already been the subject of a formal (though incomplete) planning process. However, given the extent of public participation in all aspects of the previous planning process (including the making of written and oral

submissions to the Board), and that which has occurred through the re-evaluation process, and subsequent process leading to this proposed development, it is considered that the principles of the 2012 Roadmap for integration of opportunities for public participation with project development have been achieved in this instance.

## 2.2 PLANNING HISTORY RELEVANT TO THE PROPOSED DEVELOPMENT

### 2.2.1 Tyrone – Cavan Interconnector

34 As set out in **Section 1.4.1**, in December 2009, what is now the SONI proposal was submitted to the Northern Ireland Planning Service for that portion of the proposed cross-border transmission infrastructure development located in Northern Ireland (Ref. O/2009/0792/F). Subsequently, further information was requested in respect of the application including Addenda to the ES (submitted in January 2011 and October 2011) and a consolidated ES (submitted in June 2013). A second application was submitted in May 2013 for planning permission for works associated with the construction of the main infrastructure under the 2009 application (Ref. O/2013/0214/F). SONI submitted an Addendum to the consolidated ES in June 2015. The consolidated ES and consolidated ES addendum are included as Appendix C and Appendix D of the *Joint Environmental Report*, which comprises **Volume 4** of the application documentation.

### 2.2.2 Applications in the Vicinity of the Proposed Development

35 Planning applications in the vicinity of the proposed development are monitored on a regular basis with the aim of ensuring conflicts do not arise. The types of planning applications that typically occur in the vicinity of the proposed development primarily comprise discrete proposals for rural dwellings and agricultural developments. **Table 2.1** identifies extant planning permissions within approximately 200 metres of the proposed development (measured from the centreline).

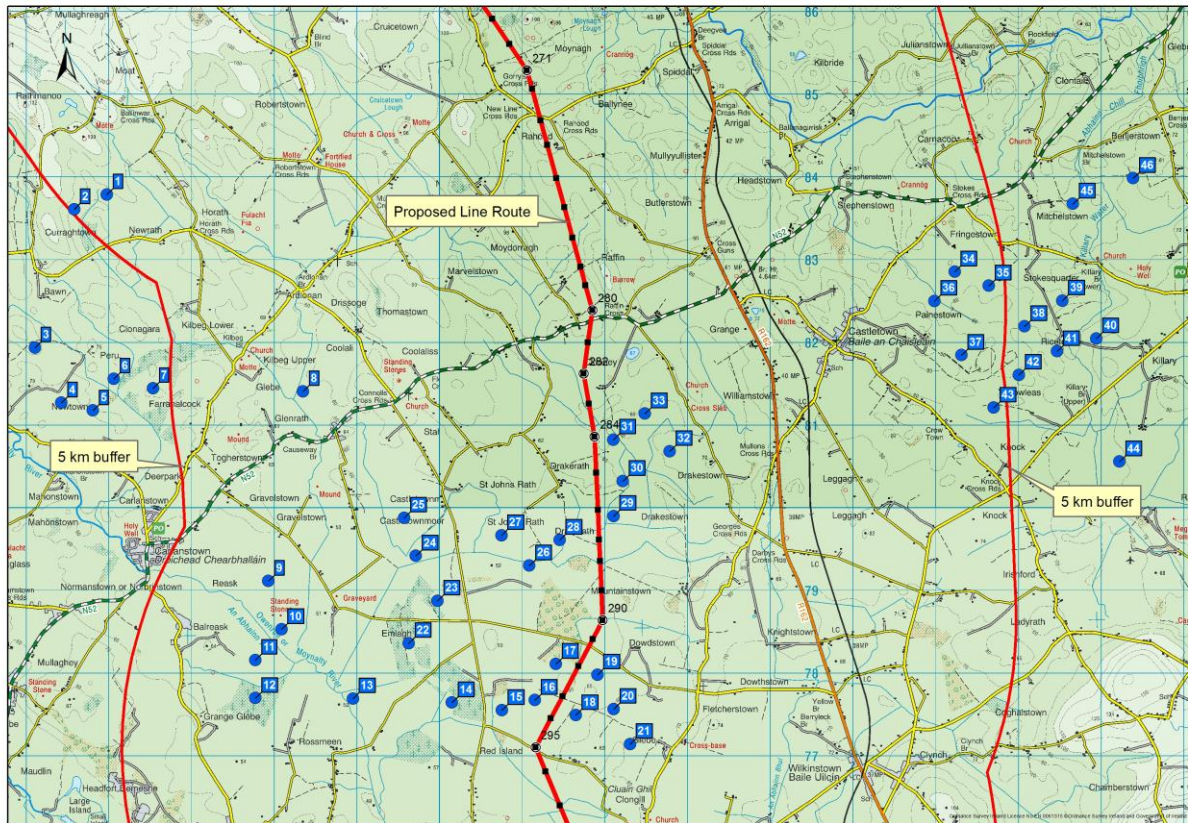
**Table 2.1: Extant Planning Permissions**

County	Townland	Register Reference and Brief Description of Development	Decision Date / Decision due Date	Approx. Distance to North-South 400 kV (measured from the centre line)
Monaghan	Sreenty  Between Towers 185 and 186	Reg. Ref. 09525 - consists of a 2 storey dwelling, detached garage, wastewater treatment system and percolation area and associated site works off new entrance. Significant Further Information: Revised plans consist of change of boundaries.	10.02.10	98.3m (approx.)
Monaghan	Greagh (Cremorne By)  Between Towers 154 and 155	Reg. Ref. 13206 – consists of a 38 kV OHL from a substation in Lisduff, Corderrybane, Greagh, Drumlane, Drumguillew Upper, Shane, Derryisland, Monagar, Muldrumman, Tullyskerry and Killycard, County Monaghan.  Significant Further Information: The final 637m section of the line will be underground from Muldrumman to the substation at Killycard. The proposed locations for the poles are indicative only and a 50m wide corridor is proposed to facilitate micro-siting if required.	13.01.14	0m 38 kV crossing
Monaghan	Tullynamalra Castleblayney  Between Towers 172 and 173	Reg. Ref. 09561 - consists of a planning permission to build a 38 kV overhead line from a point in the townland of Cargahoge and across the townlands of Cargahmore, Ouvry, Sreenty, Corrienty, Lisacullion, Tullyglass, Reduff, and in to the existing Tullynamalra 38 kV station.	14.03.11	0m 38 kV crossing
Meath	Castlemartin  Between Towers 310 and 311	Reg. Ref. KA101277 - consists of a dwelling, domestic garage & horse stables.  This is not constructed as confirmed from planning check Feb 2015.	05.01.2011	160m (approx.)
Meath	Neillstown  Between Towers 327 and 328	Reg. Ref. NA120940 - consists of a storey and half type dwelling & garage.	03.07.2013	110m (approx.)
Meath	Betaghstown (ED Ardraccan)  Between Towers 328 and 329	Reg. Ref. NA900568 / NA130660 - consists of a two storey dwelling & garage.  Extension to planning to 09/2019.	04.07.2013	170m (approx.)

County	Townland	Register Reference and Brief Description of Development	Decision Date / Decision due Date	Approx. Distance to North-South 400 kV (measured from the centre line)
Meath	Balbrigh Between Towers 350 and 351	Reg. Ref. NA101302 - consists of a single storey dwelling & detached garage and demolition of existing cottage.	02.06.2011	60m (approx.)
Meath	Trubley Between Towers 357 and 358	Reg. Ref. TA120157 - consists of 2 no. two-storey houses and associated works.	28.08.2012	60m (approx.)
Meath	Creroge Between Towers 368 and Towers 369	Reg. Ref. TA70570 / TA120768 - consists of demolition of existing and construction of two storey dwelling and garage. This is not constructed as confirmed from planning check Feb 2015.	20.11.2007	80m (approx.)

(NOTE: Planning application data as at end March 2015)

- 36 As at the end of March 2015, no planning applications have been submitted or are currently awaiting decision from Monaghan, Cavan or Meath County Council within approximately 200 metres of the proposed development. This situation will continue to be monitored.
- 37 It is however noted that an application for approval has recently been submitted to the Board (ABP Reference PA0038) for an extensive development comprising three clusters of windfarms, a 110 kV substation and associated works in County Meath. The proposed development (known as the 'Emlagh Windfarm') is located north-east of Kells and to the west and east of the proposed North-South 400 kV Interconnection Development (refer to **Figure 2.2**) – in other words the area of the proposed cluster windfarm development is intersected by the alignment of the proposed development. EirGrid, together with its technical and environmental specialists, have familiarised themselves with the nature, location and extent of the windfarm proposal in preparing the application plans and particulars of this instant application for approval. Refer to the EIS, **Volume 3** of the application documentation.



**Figure 2.2: Proposed Emlagh Windfarm Relative to the Proposed Development**

- 38 Permitted developments in close proximity to the centre line of the OHL, with extant permissions are identified on detailed drawings (Line Route – Detail drawings) contained in **Volume 1B** of the application documentation.
- 39 Planning applications (and subsequent permissions) for residential development along or in the vicinity of proposed OHLs are not uncommon. EirGrid is of the view that any conflicts that may arise in the future in relation to such developments can be resolved, without prejudice to the rights of owners and occupiers of land, by virtue of the ESB policy with respect to loss of development which is contained within the ESB / IFA *Code of Practice for Survey, Construction & Maintenance of Overhead Lines in Relation to the Rights of Landowners (1985)*.
- 40 It is also noted that agricultural buildings (generally exempt for the purposes of the Planning Acts) have also been constructed in proximity to the centre line of the OHL. Such developments are also monitored by the project team.

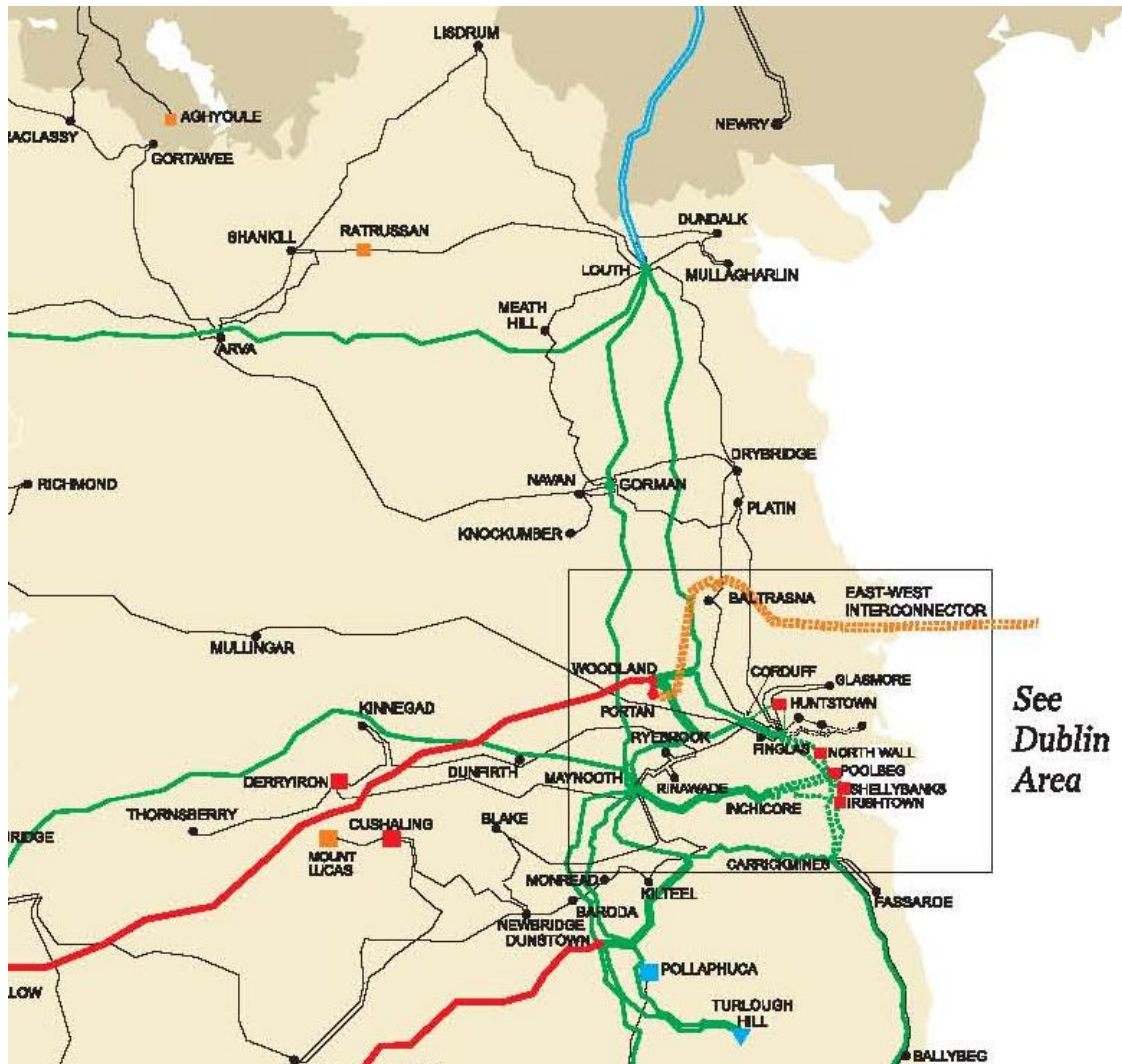


### 2.2.3 Existing Transmission Infrastructure and Relevant Developments

41 There are existing high voltage lines and related substations in the study area (comprising the Cavan-Monaghan Study Area (CMSA) and Meath Study Area (MSA)) of which many have been in existence for 30 years or more. Overall, there is approximately 576km of existing medium and high voltage electricity lines in the area (252km of 38 kV, 184km of 110 kV, 136km of 220 kV and 4km of 400 kV). The main transmission lines are identified below and illustrated in **Figure 2.3**:

- Flagford – Louth 220 kV;
- Arva – Shankill – Lisdrum 110 kV;
- Lisdrum – Louth – Shankill 110 kV;
- Shankill – Louth 110 kV;
- Arva – Shankill (No. 2) 110 kV (completed in 2012);
- Arva – Navan 110 kV;
- Gorman – Navan 110 kV;
- Gorman – Meath Hill 110 kV (completed in 2012); and
- Oldstreet – Woodland 400 kV.

42 In addition, there are many hundreds of kilometres of lower voltage distribution lines, operated by ESB Networks Ltd, the Distribution System Operator (DSO), serving local villages and dwellings which have been developed incrementally over many years. Overhead electricity lines (including those supported on lattice steel structures) are, therefore, not a new feature in the study area.



**Figure 2.3: Existing High Voltage Electricity Lines in the Study Area and Wider Vicinity (2015)**

(an A3 version of the Transmission System Map for the island of Ireland is included in Volume 3B Figures)



43 Furthermore, since 2006, a number of transmission projects have been successfully progressed under the provisions of section 182A and section 182B of the *Planning and Development Act 2000* (as amended) which relate to the provision of electricity transmission infrastructure development.

44 Developers (including EirGrid), prescribed authorities and the competent authority (An Bord Pleanála) have gained invaluable experience in the preparation and assessment of such applications. Similar transmission projects to the subject proposal, which have been successfully promoted in recent years, are detailed in **Table 2.2**.

**Table 2.2: Other Transmission Projects**

Transmission Infrastructure Development	Details	Reference No.	Decision
East-West Interconnector	EirGrid sought consent for a new subsea cable, a transition joint bay at landfall, a land cable with cable joint bays and a converter station with cable bay.	PL17.VA0002	Conditional Grant
Donegal 110 kV Project	EirGrid & ESB Networks Ltd jointly sought consent for a new 68km 110 kV and new 33km OHL linking Binbane to Tievebrack to Ardnagappary and associated new substations. All in County Donegal.	PL05.VA0003	Conditional Grant
Connemara 110 kV Reinforcement Project	ESB Networks Ltd sought planning consent for a 48km 110 kV OHL linking Lenalower to Screeb, County Galway and associated upgrading of the existing Screeb Substation. The OHL element comprised 276 No. primarily pole set structures.	PL07.VA0004	Conditional Grant
Cashla – Galway	EirGrid sought consent for two new 110 kV lines linking the existing Cashla-Galway No.3 110 kV Overhead Line with the 110 kV Substation at the IDA Western Regional Science and Technology Park, Oranmore, County Galway. The development totalled 2.42km.	PL07.VA0005	Conditional Grant
Kilpaddogue, Tarbert, County Kerry	EirGrid sought consent for a new 220 / 110 kV substation with associated works including the removal of 220 / 110 kV OHLs and their replacement by a reduced number of lines plus underground cabling.	PL08.VA0007	Conditional Grant
Millstreet, County Cork	EirGrid sought consent for a new Millstreet 220 / 110 kV substation with associated development of a new 220 kV link to the existing Clashavoon – Tarbert 220 kV circuit.	PL04.VA0008	Conditional Grant
Brickendown, near Cashel, County Tipperary	Bord Gáis Éireann sought consent for a new 110 kV substation and associated site works.	PL23.VA0009	Conditional Grant
Clashavoon - Dunmanway	EirGrid sought consent for a new 110 kV OHL connecting the existing 110 kV substation at Dunmanway, County Cork to the existing 220 / 110 kV substation at Clashavoon, County Cork.	PL04.VA0010	Conditional Grant
Patch, County Kerry	EirGrid sought consent for a new GIS 220 / 110 kV substation, extension of	PL08.VA0011	Conditional Grant

Transmission Infrastructure Development	Details	Reference No.	Decision
	existing AIS substation (Trien substation) and associated 'loop-ins' and new 110 kV OHL circuit between the Trien Substation and planned windfarm at Cloghboola.		
Ballynahulla, County Kerry (known as the East Kerry North West Cork Project)	EirGrid sought consent for a new 220 / 110 kV GIS substation and localised modifications to existing Clashavoon-Tarbert Line. It also included 9km of underground cables.	PL08.VA0012	Conditional Grant
Mullingar Reinforcement	EirGrid sought consent for a new 110 kV circuit from Mullingar Substation (County Westmeath) to Kinnegad Substation (County Meath).	PL25.VA0013	Conditional Grant
Dublin North Fringe	EirGrid sought consent for a new 220 kV substation building and associated works.	PL06F.VA0014	Conditional Grant
West Galway	EirGrid sought consent for a new 110 / 38 kV substation in the townlands of Letter, Doon and Killaguile (north-west of Moycullen) with associated cable and other development.	PL07.VA0016	Conditional Grant
Laois-Kilkenny	EirGrid sought consent for a reinforcement project including <i>inter alia</i> new 400 /110 kV GIS substation, new 400 kV and 110 kV transmission lines.	PL11.VA0015	Conditional Grant

## 2.2.4 Conclusion

45 The proposed development has a planning history extending back nearly 10 years; given the specific circumstances of the evolution of this application, there has been an opportunity to review, as part of the re-evaluation process, all the issues and submissions concerning the previous application and information received and issues arising since the withdrawal of that application in June 2010.

46 Furthermore, in recent years a number of other transmission projects have been successfully progressed under the provisions of section 182A and section 182B of the *Planning and Development Act 2000* (as amended). A number of these have followed the general framework of EirGrid's *Project Development and Consultation Roadmap*.

47 EirGrid has been able to review and take on board issues raised by the Board, other prescribed authorities and interested bodies and the public (including landowners) in respect of all these development projects and proposals. In this regard, the subject matter of this application for approval represents the culmination of an extensive consideration of alternatives and issues of relevance to progressing transmission projects through the statutory planning process.

## 2.3 DESCRIPTION OF DEVELOPMENT – TRANSMISSION CIRCUIT AND SUBSTATION WORKS

### 2.3.1 Elements of the Proposed Development

48 The proposed development is outlined in **Section 1.5** of this report. The elements of the proposed development in terms of the Cavan and Monaghan Study Area (CMSA) and Meath Study Area (MSA) are set out below:

- **CMSA – New 400 kV Line:** The proposed development in the CMSA comprises a single circuit 400 kV overhead transmission circuit supported by 134 towers (Tower 103 to Tower 236) extending generally southwards from the jurisdictional border with Northern Ireland (between the townland of Doohat or Crossreagh, County Armagh, and the townland of Lemgare, County Monaghan) to the townland of Clonturkan, County Cavan for a distance of approximately 46km. It includes lands traversed by the conductor from the jurisdictional border to Tower 103, and from Tower 103 to Tower 236 inclusive and lands traversed by the conductor strung from Tower 236 to Tower 237 (the first tower on the MSA section of the proposed development).<sup>12</sup> It also includes modifications to existing 110 kV transmission overhead lines, and all associated and ancillary development works including permanent and temporary construction and excavation works.

The proposed development also comprises an associated temporary construction material storage yard to be located on a site of approximately 1.4ha in the townlands of Monaltyduff and Monaltybane, Carrickmacross, County Monaghan.

- **MSA – New and Existing 400 kV Line:** The proposed development in the MSA comprises a new single circuit 400 kV overhead transmission circuit supported by 165 new towers (Tower 237 to Tower 401) extending for a distance of approximately 54.5km from Tower 237 in the townland of Clonturkan, County Cavan to Tower 402 (an existing double circuit tower on the Oldstreet to Woodland 400 kV transmission line) in the townland of Bogganstown (ED Culmullin), County Meath. It also includes modifications to an existing 110 kV transmission overhead line, and all associated and ancillary development works including permanent and temporary construction and excavation works.

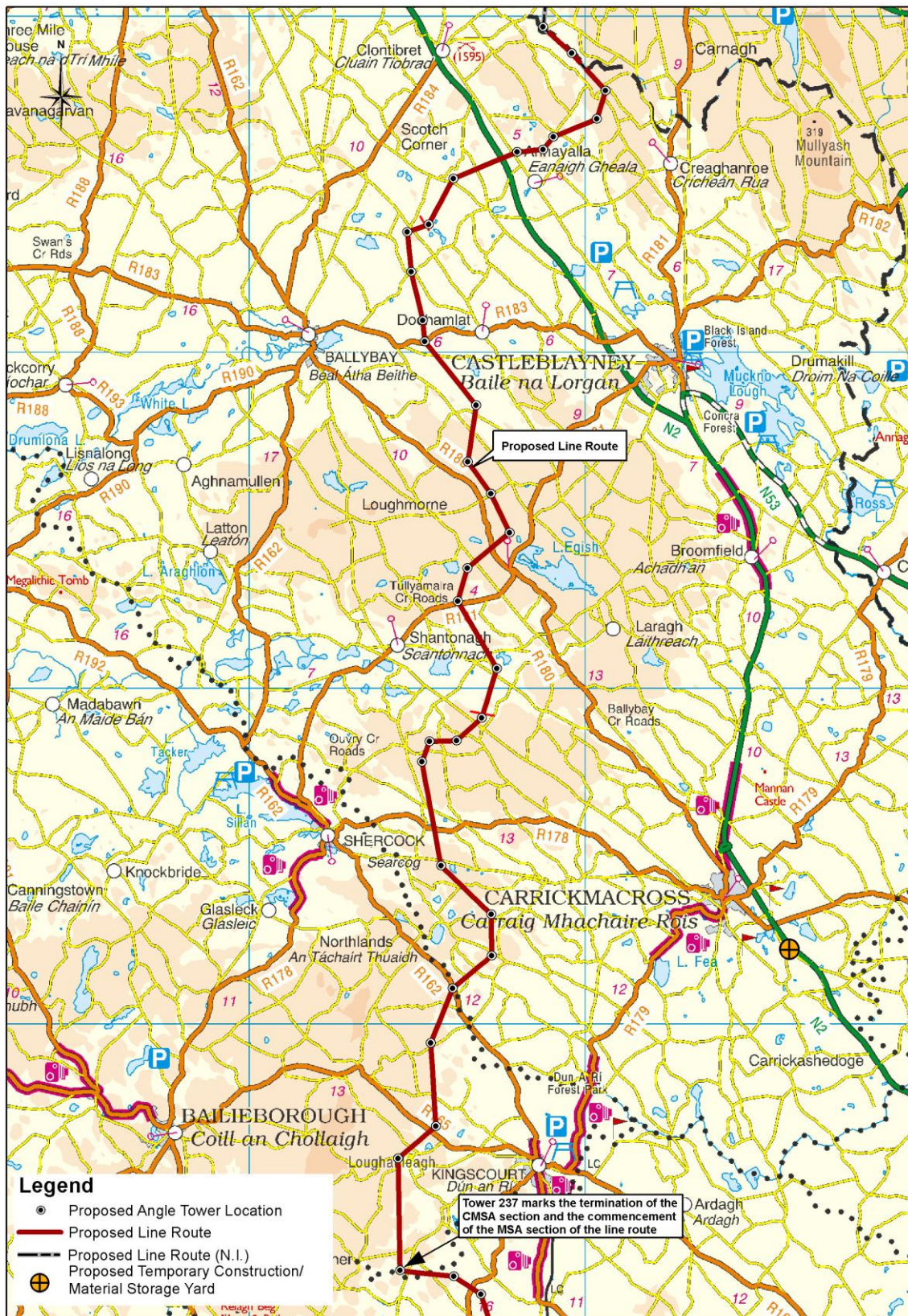
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<sup>12</sup>Between Tower 106 and Tower 107 the proposed transmission line crosses the jurisdictional border with Northern Ireland at two points - from the townland of Lemgare, County Monaghan into the townland of Crossbane, County Armagh and back into the townland of Lemgare, County Monaghan. This results in a section of the span between Tower 106 and Tower 107 oversailing Northern Ireland. The oversail section forms part of the SONI proposal.

The proposed development also comprises the addition of a new 400 kV circuit for some 2.85km along the currently unused (northern) side of the existing double circuit 400 kV overhead transmission line (the Oldstreet to Woodland 400 kV transmission line) extending eastwards from Tower 402 in the townland of Bogganstown (ED Culmullin), County Meath to Tower 410 and the Woodland Substation in the townland of Woodland, County Meath.

It also includes an extension to and works within the existing ESB Woodland Substation, in the townland of Woodland, County Meath.

49 This overall circuit is presented for clarity and convenience in three figures: **Figure 2.4**, **Figure 2.5** and **Figure 2.6** with regard to the CMSA and MSA sections.

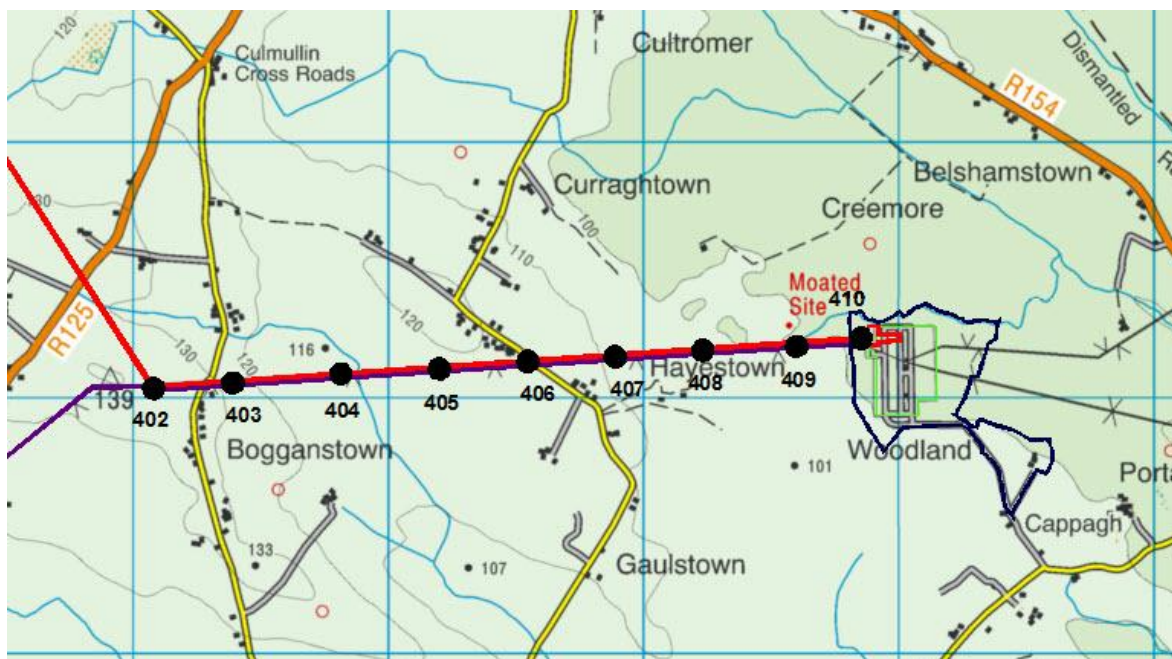


**Figure 2.4: CMSA Section of the Proposed Line Route**



Figure 2.5: MSA Section of the Proposed Line Route





**Figure 2.6: Addition of a New Circuit along Towers 402 to 410 of the existing Oldstreet to Woodland 400 kV OHL in the MSA**

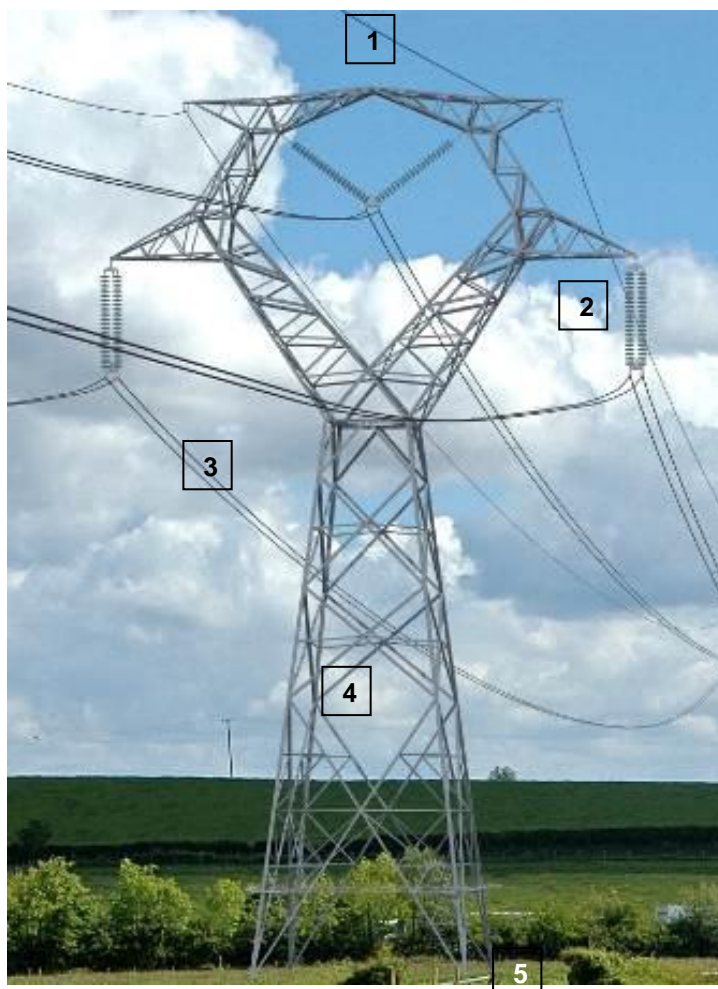
### 2.3.2 Overhead Line Elements

50 An OHL is made up of a number of elements, the design and approach to which is a primary consideration of the line design process. These elements are:

- Towers and associated foundations; and
- Conductors & shieldwires (wires) and associated hardware (including insulators and fittings).

51 Towers are one of the most significant components of OHL. There are three types of tower typically used for OHL transmission developments: intermediate or suspension towers, angle / tension towers and transposition towers. Following consideration of alternative tower designs (refer to Chapter 4, **Volume 3B** of the EIS) the C-IVI-1 ('IVI') hot rolled lattice steel tower design, incorporating the three aforementioned tower types is proposed for the development.

52 The IVI design raises the centre phase to increase the apparent height while reducing the width of the tower thereby ensuring a slender proportion to the structure. The tower's overall shape comprises a diamond located at the top of a relatively narrow body. The general arrangement for the IVI tower design (including conductors and associated infrastructure) is illustrated in **Figure 2.7**.



1. Earthwire / Shield wires (to protect the circuit below from lightning strike)

2. Insulators (to separate the current carrying conductors from the steel tower structure)

3. Conductors (the lines carrying the electrical current)

4. Tower (the structure supporting the conductors and other apparatus)

5. Concrete foundation for each tower footing (to ensure the strength and integrity of the tower)

**Figure 2.7: General Arrangement of an IVI Tower**

### 2.3.3 Modifications to Existing 110 kV Transmission Lines

53 The proposed development also includes modifications to the existing Lisdrum-Louth 110 kV, Louth-Rathrussan 110 kV and Arva-Navan 110 kV transmission OHLs. These advance modifications will be required to ensure that there is sufficient electrical safety clearances maintained between the 110 kV OHL and 400 kV conductor at the point of crossing. The modifications involve lowering the height of the existing 110 kV transmission lines, at the point of the crossing of the proposed 400 kV route. This will be achieved by the insertion of additional wood polesets and / or the replacement of existing structures with wood polesets that are lower in height as follows:

- Where the proposed 400 kV overhead transmission line intersects with the Lisdrum–Louth 110 kV transmission line the insertion of two new polesets (approximately 14m

and 16m high) is proposed. In addition an existing 17.7m high poleset will be replaced by a new poleset approximately 12m high.

- Where the proposed 400 kV overhead transmission line intersects with the Louth-Rathrussan 110 kV transmission line an existing 19.6m high lattice steel tower and an existing 19.7m high poleset will both be replaced by new polesets (both approximately 19m high).
- Where the proposed 400 kV overhead transmission line intersects with the Arva-Navan 110 kV transmission line two existing polesets (14.7m and 15.7m high) will be replaced by two new polesets (both approximately 14m high).

### 2.3.4 Fixing of Tower Positions

54 In the previous application for planning approval which was withdrawn in 2010, approval was sought for flexibility to move tower positions within specified limits during the construction phase; this was referred to as 'micro-siting'. Micro-siting is not being sought as part of this current application. The line design for the proposed development therefore identifies fixed tower structure positions for the new transmission circuit. This provides clarity to landowners and other interested parties on the location of the OHL and associated infrastructure relative to particular landholdings, nearby dwellings, buildings, other structures and considerations such as environmental constraints.

### 2.3.5 Works within the Existing Substation Site

55 An extension of the existing Woodland Substation is necessary to allow the connection of the new 400 kV circuit. The existing substation has a total size of approximately 7.7 hectares (ha), located within ESB's landholding of approximately 27.2ha. The proposed works will take place on a site of approximately 0.544ha within and immediately adjacent to the substation requiring a western extension of the existing substation, of approximately 0.231ha.

56 Associated works include modifications to the existing 2.6m high boundary palisade fence and the addition of electrical equipment and apparatus including circuit breaker, current transformers, inductive voltage transformers, disconnectors, pantograph disconnecting switches, surge arresters, support insulators and support insulator bars, gantry structures and a lightning monopole (all ranging in height from approximately 7.4m to 28m) and all associated construction and site development works.

57 Refer to Section 6.3.4 of **Volume 3B** for further details of the works proposed within the existing Woodland Substation.

## 2.3.6 Construction

### 2.3.6.1 Ancillary works for Construction of Overhead Lines

58 The following associated and ancillary works and land uses are required for the construction of the proposed development:

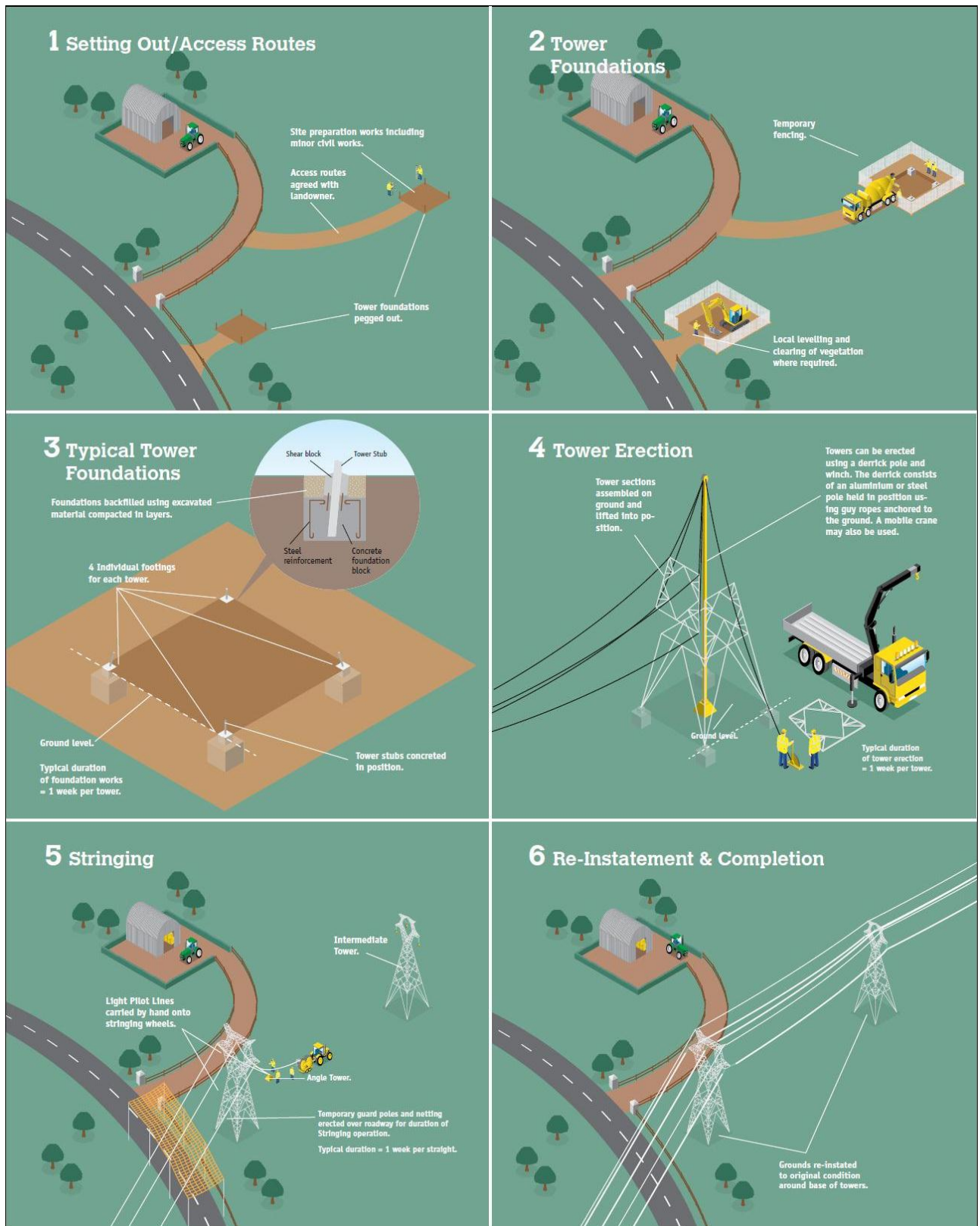
- A temporary construction material storage compound located at Monaltyduff and Monaltybane, Carrickmacross, County Monaghan comprising *inter alia* associated site works, new site entrance onto the L4700 Local Road, 2.6m high boundary palisade fencing (with noise barrier affixed) and associated ancillary staff facilities and parking; and
- All associated and ancillary development works including permanent and temporary construction and excavation works.

### 2.3.6.2 Overhead Line Construction

59 The construction works for the overall project are expected to extend over a period of three years. However construction at any one tower location is of short duration as works at each tower take place in a series of different stages based on the estimated durations outlined below. The following characteristics are relevant to OHL construction:

- All construction works are temporary activities;
- OHL construction is undertaken over a long linear site which means that construction activities take place in a particular sequence and location for a limited period of time;
- This results in isolated areas of construction activities at each structure location which are limited in size (working area is approximately 30m x 30m for the majority of structure locations) for short periods of time; and
- The type of machinery required for OHL construction, which includes excavators, dumpers, concrete trucks, 4 x 4 vehicles, piling rigs, teleporters, water pumps, and smaller tools, is generally similar in size and scale to machinery used for construction of domestic dwellings in a rural area or for normal farming activities.

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- 60 As illustrated in **Figure 2.8** the construction of the OHL will be undertaken in five general stages, according to the following sequence, on a rolling programme of estimated durations:
- Stage 1 – Preparatory Site Work (1 – 7 days);
  - Stage 2 – Tower Foundations; standard installation (3 – 6 days), piling installation (5 – 10 days);
  - Stage 3 – Tower Assembly and Erection and Preliminary Reinstatement (3 – 4 days);
  - Stage 4 – Conductor / Insulator Installation (7 days); and
  - Stage 5 – Final Reinstatement of Land (1 – 5 days).
- 61 Typically, Stages 1, 2 and 3 are carried out as part of one contract, and when completed, lands around the construction site are reinstated. Stages 4 and 5 can only be carried out when Stages 1, 2 and 3 are completed.
- 62 The addition of a new circuit along Towers 402 to 410 of the existing Oldstreet to Woodland 400 kV OHL (refer to **Figure 2.6**) is a Stage 4 activity. Of the five OHL construction stages, only Stage 4 applies in the case of Towers 402 – 410.
- 63 On a project of this linear distance, there is likely to be an interval of up to 12 months between the completion of Stages 1, 2 and 3 and commencement of Stages 4 and 5. Lands will be reinstated so that they can continue to be used for agricultural activities during this interval.
- 64 Having regard to the estimated durations detailed previously for each individual stage, it is estimated that Stages 1, 2 and 3 would cumulatively take 7-17 days for standard installation or 9-21 days for piling installations. Lands will be preliminary reinstated and contractors will return approximately 12 months later for 8-12 days to complete the works and final land reinstatement.
- 65 Therefore, the cumulative time required at any one site over the 3 year construction period of the project is estimated at 15-29 days for standard installation or 17-33 days for piling installation.



**Figure 2.8: Typical Construction Works**

(Source: Landowner Information Brochure (July 2013) for illustrative purposes only)

### 3 LEGISLATIVE CONTEXT

#### 3.1 STRATEGIC INFRASTRUCTURE

- 1 This application for planning approval for the proposed development falls under the provisions of the *Planning and Development Acts 2000 to 2014*. Specifically, the *Planning and Development (Strategic Infrastructure) Act 2006* inserted sections 182A, 182B and 182E into the *Planning and Development Act 2000* (the 2000 Act), which relate to the provision of electricity transmission development.
- 2 Section 182A(9) clarifies that ‘*transmission*’ shall also be construed as meaning the transport of electricity by means of (a) a high voltage line where the voltage would be 110 kV or more, or (b) an interconnector, whether ownership of the interconnector will be vested in the undertaker or not. Having regard to the above, the definition of “*development comprising or for the purposes of electricity transmission*” clearly incorporates all development associated with the proposed development, which is both a high voltage line where the voltage will be 110 kV or more, and part of an overall proposed interconnector. Accordingly, the application under section 182A and the decision making-process under section 182B constitute the consent procedure for the proposed development.
- 3 The original Environmental Impact Assessment (EIA) Directive 85/337 and its three amendments have been codified by the EIA Directive 2011/92/EU of December 2011. Directive 2011/92/EU relates to the assessment of the environmental effects of those public and private projects which are likely to have significant effects on the environment<sup>13</sup>.
- 4 The EIA Directive specifies the developments for which an EIA will be required and the information which must be furnished in an EIS, prepared by a developer in connection with the proposed development. This Directive now requires a mandatory EIA for overhead electrical power lines with a voltage of 220 kV or more and a length of more than 15km
- 5 The proposed development falls within the parameters of Annex I to the EIA Directive (and the equivalent Part 1 of Schedule 5 to the *Planning and Development Regulations 2001* (as

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<sup>13</sup> Directive 2014/52/EU of 16 April 2014 amends Directive 2011/92/EU. Member states have until 16 May 2017 to transpose the Directive into national legislation and apply the new rules.

amended)) and, accordingly, pursuant to the provisions of section 172 of the *Planning and Development Act 2000*, an EIA is required to be carried out by the Board in respect of the application for consent for the proposed development. In this context, an EIS has been prepared by EirGrid and has been submitted with the application (refer to **Volume 3** of the application documentation).

### 3.2 REQUIREMENT FOR APPROPRIATE ASSESSMENT

- 6 The Habitats and Birds Directives (Directive 92/43/EEC and Directive 2009/147/EC) are the cornerstones of the European Union's nature conservation policy. These provisions set out various procedures and obligations in relation to nature conservation management in EU member states in general, and habitats and species of European importance, in particular.
- 7 Articles 3 to 9 of the Habitats Directive provide the EU legislative means to protect habitats and species of interest through the establishment and conservation of an EU-wide network of sites known as Natura 2000. These Natura 2000 sites include Special Areas of Conservation (SACs) designated under the Habitats Directive and Special Protection Areas (SPAs) designated under the Birds Directive. In addition, Irish legislation incorporates candidate SACs and proposed SPAs within the definition of 'European sites', thus providing those candidate and proposed areas with the same level of protection as sites which have completed the formal designation process.
- 8 A key protection mechanism is the requirement to consider the possible nature conservation implications of any plan or project on the Natura 2000 site network before any decision is made to allow that plan or project to proceed. The Directive requires, *inter alia*, that any plan or project not directly concerned with or necessary to the management of the protected site but likely to have a significant effect thereon shall be the subject of an appropriate assessment on the implications for the site in view of the site's conservation objectives. In the light of conclusions of the assessment of the implications for the site, the competent authority shall grant development consent only after having ascertained that it will not adversely affect the integrity of the site concerned.
- 9 The proposed development in this instance will require two crossings of the River Boyne and Blackwater Special Protection Area (SPA) and River Boyne and Blackwater candidate Special Area of Conservation (cSAC), in circumstances where the OHL will oversail small portions of the protected areas, although no structures or works will be located within those or any designated sites. European Sites outside of the footprint of the proposed development were also considered, in particular SPAs for which Whooper Swan is a qualifying feature, as small populations of this mobile species also overwinter in the vicinity of the proposed development. In order to comply with the requirements of EU and Irish law,



and to facilitate the Board in carrying out the necessary Appropriate Assessment (AA), the application documentation includes a Natura Impact Statement (NIS) (refer to **Volume 5** of the application documentation).

### 3.3 TRANSBOUNDARY IMPACT

10 Article 7 of the consolidated EIA Directive 2011/92/EU provides the basis for consultation between Member States in relation to the likely significant effects of proposed development in one state on the environment in another Member State. The principal obligation is in respect of information and consultation and is imposed by Article 7(1):

*“Where a Member State is aware that a project is likely to have significant effects on the environment in another Member State or where a Member State likely to be significantly affected so requests, the Member State in whose territory the project is intended to be carried out shall send to the affected Member State as soon as possible and no later than when informing its own public, inter alia:*

*(a) a description of the project, together with any available information on its possible transboundary impact;*

*(b) information on the nature of the decision which may be taken”.*

11 The issue of transboundary considerations to be included within the EIA process is of importance in the context of the proposed interconnection project, as the proposed interconnector (which is a 400 kV OHL linking the existing 400 kV substation in Woodland, County Meath with a planned substation in Turleenan, County Tyrone) is a cross-border interconnector between Ireland and Northern Ireland.

12 Accordingly, in preparing and submitting the EIS (and a *Joint Environmental Report*<sup>14</sup>- refer to **Volume 4** of the application documentation) which accompanies this application for planning approval, cognisance has been taken of the likely significant transboundary and cumulative effects associated with the proposed development, and an overall appraisal covering the whole project and evaluating its effects has been provided.

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<sup>14</sup> A *Joint Environmental Report* has been prepared by the respective applicants that covers the proposed interconnector from Turleenan, County Tyrone to Woodland, County Meath in a manner which assesses its overall effects and, in particular, cumulative and significant adverse transboundary effects, in a manner consistent with the approach suggested in recent European Commission's guidance - *Guidance on the Application of the Environmental Impact Assessment Procedure for Large-scale Transboundary Projects* (May 2013).

- 13 All potential impacts are considered in the EIS which, with the other application particulars, has been made available to the Department of the Environment in Northern Ireland. The results of the transboundary consultation must be taken into consideration by the Board in the development consent procedure.

### 3.4 PLANNING APPLICATION DRAWINGS

- 14 Planning application drawings for the proposed development are included in **Volume 1B** of the application documentation.
- 15 In keeping with the 'General Guidance Note' at the end of the SID application form, the range and format of material required to be submitted with the application and in particular the planning drawings, where practicable, generally accords with the requirements for a planning application as set out in the *Planning and Development Regulations 2001* (as amended).
- 16 Furthermore, the Board's correspondence dated 13<sup>th</sup> October 2014 (see **Section 3.8.3** of this planning report) has also informed the preparation of the planning application drawings.
- 17 A Schedule of Drawings is included with the Planning Application Form (see **Volume 1A** of the planning application documentation).

### 3.5 PRE-APPLICATION CONSULTATION

- 18 Section 182E of the *Planning and Development Act 2000* (as amended) requires that a prospective applicant shall, prior to making an application for approval for electricity transmission development, enter into consultations with the Board in relation to the proposed development. During this process, the Board may give advice regarding the application, including the procedures involved and what considerations related to proper planning and sustainable development and the environment, may, in its opinion, have a bearing on its decision. EirGrid, with its consultants, has engaged in consultation with the Board prior to submitting the application. A list of the dates is set out in **Table 3.1**, together with the applicant's summary of the key issues discussed at those statutory pre-application consultations.
- 19 Additional consultation was held with prescribed bodies (including Monaghan, Cavan and Meath County Councils) - see Schedule 5 of the Planning Application Form (**Volume 1A**) and Chapter 3 of **Volume 3B** of the EIS.

**Table 3.1: Pre-application Consultation with An Bord Pleanála**

Date of Meeting	Key Issues
Previous Application for Statutory Approval	<p>Relevant issues raised during the course of pre-application meetings in respect of the previous application included <i>inter alia</i>:</p> <ul style="list-style-type: none"> <li>• Alternatives (including underground (UGC) versus overhead line (OHL)); route corridor options – including to the east of Navan;</li> <li>• Transboundary impacts; and</li> <li>• The route selection process in relation to houses, archaeology and cultural heritage.</li> </ul>
2 <sup>nd</sup> December 2010	The purpose of this meeting was to outline activities post withdrawal of the previous application (i.e. the Meath-Tyrone 400 kV Interconnection Development).
31 <sup>st</sup> July 2013	<p>The focus of this meeting was to update the Board on activities since the previous meeting including <i>inter alia</i> the findings of the Independent Expert Commission Review (on the case for, and cost of, undergrounding all or part of the Meath-Tyrone 400 kV Interconnection Development), the <i>Government Policy Statement on Strategic Importance of Transmission and Other Energy Infrastructure</i>, <i>The Final Re-evaluation Report</i>, and current activities following publication of the <i>Preferred Project Solution Report</i>.</p> <p>Issues arising of relevance to the EIS included: the implications (if any) of no longer seeking approval for the substation at Moyhill and whether the line could be located further to the east; the route selection process in relation to houses, ecology and historic landscapes; and tower alternatives.</p>
20 <sup>th</sup> August 2013	EirGrid requested a scoping opinion from the Board.
15 <sup>th</sup> October 2013	The focus of this meeting was to update the Board on activities since the publication of the <i>Preferred Project Solution Report</i> , including landowner engagement, modifications to the indicative line design and issues arising. Discussions were also focused on procedures in relation to the potential transboundary environmental impacts of the proposed development on the environment of an area of a Member State.
11 <sup>th</sup> December 2013	The Board issued its scoping opinion on the information to be contained in the EIS.
18 <sup>th</sup> December 2013	The focus of this meeting was to update the Board on the drafting of the EIS and application particulars and to discuss the Board's scoping opinion. Other relevant matters included transboundary issues and procedures, the <i>Joint Environmental Report</i> and difficulties encountered.
23 <sup>rd</sup> December 2013	This was a follow up meeting to clarify particular issues arising from the meeting of 18 <sup>th</sup> December including the level of detail to be included in an outline <i>Construction and Environmental Management Plan</i> to be included as an Appendix to the EIS.

- 20 As discussed in more detail in **Sections 3.6 to 3.8**, EirGrid has separately engaged with An Bord Pleanála as designated competent authority for Projects of Common Interest (PCI), in fulfilment of prescribed obligations pursuant to Article 10 of Regulation (EU) No. 347/2013 of the European Parliament and of the Council of 17<sup>th</sup> April 2013 on guidelines for trans-European energy infrastructure and repealing Decision No. 1364/2006/EC and amending Regulations (EC) No. 713/2009 and (EC) No. 715/2009 (hereinafter referred to as Regulation (EU) No. 347/2013).

### 3.6 PROJECT OF COMMON INTEREST (PCI)

- 21 Under Regulation (EU) No. 347/2013 the European Commission has identified 12 strategic trans-European energy infrastructure priorities. The implementation of these energy infrastructure priorities by 2020 is essential for the achievement of the Union's energy and climate policy objectives. Significantly, one of the four 'Priority Electricity Corridors' identified in Annex I to EU Regulation No. 347/2013 is:

*“(2) North-South electricity interconnections in Western Europe ('NSI West Electricity'): interconnections between Member States of the region and with the Mediterranean area including the Iberian peninsula, notably to integrate electricity from renewable energy sources and reinforce internal grid infrastructures to foster market integration in the region.*

*Member states concerned: Austria, Belgium, France, Germany, Ireland, Italy, Luxemburg, Netherlands, Malta, Portugal, Spain, the United Kingdom.”*

- 22 Article 7 of Regulation 347/2013 references the 'priority status' of 'Projects of Common Interest'<sup>15</sup> (PCIs) in respect of 'Permit Granting and Public Participation'. It sets out:

*“1. The adoption of the Union list shall establish, for the purposes of any decisions issued in the permit granting process, the necessity of these projects from an energy perspective, without prejudice to the exact location, routing or technology of the project.*

*2. For the purpose of ensuring efficient administrative processing of the application files related to projects of common interest, project promoters and all authorities concerned shall ensure that the most rapid treatment legally possible is given to these files.*

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<sup>15</sup> 'Project of Common Interest' means a project necessary to implement the energy infrastructure corridors and areas as set out in Annex 1 and which is part of the Union list of projects of common interest referred to in Article 3 of EU Regulation No. 347/2013.

*3. Where such status exists in national law, projects of common interest shall be allocated the status of the highest national significance possible and be treated as such in permit granting processes – and if national law so provides, in spatial planning – including those relating to environmental assessments, in the manner such treatment is provided for in national law applicable to the corresponding type of energy infrastructure.”*

23 In essence the Regulation aims at implementing priority projects by encouraging member states to streamline permit granting procedures to significantly reduce their duration and increase public participation and acceptance for the implementation of such projects<sup>16</sup>.

24 In July 2012, on foot of an invitation from the European Commission, the respective project promoters submitted a joint proposal for the inclusion of the proposed interconnector project in the first Union list of Projects of Common Interest.

25 European Commission Delegated Regulation 1391/2013, issued on 14 October 2013, identified the projects to be part of the first EU list of PCIs and described the process which led to the identification of such projects. The final list contained some 248 projects, which were listed as stand-alone PCIs or clusters of PCIs because of their interdependent or competing nature. The Annex to Delegated Regulation 1391/2013 under the heading “2. Priority corridor North-South electricity interconnections in Western Europe (“NSI West Electricity”) lists at No. 2.13:

*“Cluster Ireland – United Kingdom (Northern Ireland) interconnections, including one or more of the following PCIs:*

*2.13.1. Ireland – United Kingdom interconnection between Woodland (IE) and Turleenan (UK – Northern Ireland).”*

26 This is the overall interconnector project and requires two separate applications; one application by EirGrid for the part of the project in Ireland and a separate application for that portion of the project in Northern Ireland.

27 The Department of Energy and Climate Change (DECC), in its capacity as competent authority for PCI in the United Kingdom, has confirmed that the SONI application in Northern Ireland can avail of the transitional provisions of Article 19 of Regulation 347/2013 and

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<sup>16</sup> In this respect the European Commission has issued a Guidance Document entitled *Streamlining Environmental Assessment Procedures for Energy Infrastructure ‘Projects of Common Interest (PCIs)’* (24 July 2013).

therefore is not required to comply with Chapter III of the Regulation which includes the submission of a concept for public participation.

- 28 An Bord Pleanála (the 'Board') in its capacity as competent authority for PCIs in Ireland has determined that the transitional provisions (Article 19) of the PCI Regulation (347/2013) do not apply to that portion of the overall interconnector project within Ireland, i.e. the North-South 400 kV Interconnection Development. Therefore, the provisions of Chapter III of Regulation No. 347/2013 Regulation apply in respect of the development within Ireland, specifically Article 9 relating to Transparency and Public Participation and Annex VI '*Guidelines for Transparency and Public Participation*' and Article 10 relating to '*Duration and implementation of the permit granting process*'.

### 3.7 PCI PERMIT GRANTING PROCEDURES

- 29 The Board was designated as PCI competent authority in Ireland for the purposes of the Regulation. Its role is *inter alia* to collate and co-ordinate the issuing of various consents and decisions required in respect of a PCI project from all the consent-giving authorities, to monitor compliance with time limits within which the individual decisions shall be issued, and to issue a comprehensive decision. The Board has established a PCI Unit to administer the PCI process separate from its Strategic Infrastructure or Planning Appeals Units.
- 30 In its role as Competent Authority, the Board published a *Project of Common Interest Manual of Permit Granting Process Procedures* in May 2014, subsequently amended in September 2014. This manual provides clarity on the dual role of An Bord Pleanála in respect of projects that are designated a PCI under Regulation No. 347/2013 and those that are also Strategic Infrastructure Development under the provisions of the *Planning and Development Acts 2000 to 2014*.

*"An Bord Pleanála's role under the Collaborative Scheme is such that An Bord Pleanála as a consent granting body in its own right feeds into the PCI process as do the other authorities concerned. With a PCI project which is also a Strategic Infrastructure project, it may assist in thinking of An Bord Pleanála as having two roles: one role as a decision making body in the planning sphere and another role as Competent Authority in the PCI process. Neither role will impinge on the other and the separate administrative unit will maintain this division of function." (p. 7)*

- 31 The Board's *Project of Common Interest Manual of Permit Granting Process Procedures* also outlines the procedures involved in the permit granting process for PCI projects. These fall under the following headings which are described with reference to the specific

requirements of Regulation No. 347/2013 and the North-South 400 kV Interconnection Development below:

- The Notification Stage;
- The Pre-Application Procedure; and
- The Statutory Permit Granting Procedure.

32 EirGrid has met all of its requirements as the ‘project promoter’ for the North-South 400 kV Interconnection Development in respect of Regulation 347/2013, Annex VI of Regulation 347/2013 and the Board’s *Project of Common Interest Manual of Permit Granting Process Procedures*. These are summarised below.

### 3.7.1 PCI Notification and Acknowledgment

33 EirGrid submitted a notification under Article 10.1(a) of Regulation 347/2013 to the Board on 3<sup>rd</sup> June 2014 in respect of the North-South 400 kV Interconnection Development.

34 An acknowledgement of the notification was received by EirGrid from the Board, on 2<sup>nd</sup> July 2014 which confirmed that the Board considers the project as being “*mature enough to enter the permit granting process*”.

## 3.8 PRE-APPLICATION PROCEDURES

### 3.8.1 Concept for Public Participation

35 On 31<sup>st</sup> July 2014 EirGrid submitted a ‘Concept for Public Participation’ for the North-South 400 kV Interconnection Development. This Concept was submitted to the Board in accordance with Article 9.3 of Regulation 347/2013 following the process outlined in the Board’s *Manual of Procedure for the Permit Granting Process* (May 2014)<sup>17</sup> and in accordance with Annex VI of Regulation 347/2013 which sets out the *Guidelines for Transparency and Public Participation in respect of projects designated as Projects of Common Interest*.

36 Annex VI of Regulation 347/2013 is entitled *Guidelines for Transparency and Public Participation*” and Annex VI(4) stipulates that the concept for public participation shall at least include information about:

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<sup>17</sup> This document was updated in September 2014 (*Projects of Common Interest - Manual of Permit Granting Process Procedure*).

- (a) *“The stakeholders concerned and addressed –*
- (b) *The measures envisaged, including proposed general locations and dates of dedicated meetings*
- (c) *The timeline*
- (d) *The human resources allocated to the respective tasks.”*

37 The Concept for Public Participation includes all the above information. It describes the public consultation and public participation events which were undertaken in respect of the North-South 400 kV Interconnection Development project since 2007 identifying terms of reference, participation methods, stakeholders concerned and addressed and measures adopted / envisaged for each consultation stage.

### **3.8.2 Modification and Publication of the Concept for Public Participation**

38 On 10<sup>th</sup> September 2014 the Board decided to modify the Concept for Public Participation under Article 9.3 of Regulation No. 347/2013.

39 The Concept for Public Participation as modified by the Board (comprising Concept for Public Participation Report and the Board’s correspondence of 10<sup>th</sup> September 2014) was published on the EirGrid Project website in accordance with the Board’s requirements as set out in its Manual (p. 19).

40 The modification of the Concept for Public Participation requested by the Board is set out below:

*“An information leaflet of no more than 15 pages should be published by the project promoter containing, at a minimum, the following factual information:*

- *The history of the project to date;*
- *Information regarding Regulation 347/2013;*
- *The project status as a Project of Common Interest (PCI);*
- *The main implications (benefits and obligations) arising from its status as a PCI;*
- *Future project roadmap including an indicative date for lodgement of an application under Section 182A of the Planning and Development Acts 2000 to 2014 and indicating the opportunities for public participation at this stage; and*



- *An advertisement or advertisements should be placed in two national newspapers (The Irish Times and Irish Independent) notifying the public of the publication of this information leaflet and drawing attention to the scope of the project, the status of the project as a PCI and an indicative date for lodgement of an application under section 182A of the Planning and Development Acts 2000 to 2014.”*

41 In arriving at this decision, the Board had regard to *inter alia* the planning history of the project and the extensive consultation and participation process undertaken by EirGrid before the start of the PCI permit granting process.

42 EirGrid subsequently published a Public Information Leaflet and advertisement relating to this leaflet on the 1<sup>st</sup> May 2015 which includes all the above information.

### **3.8.3 Scope of Material**

43 Article 10.4(a) of Regulation 347/2013 requires the Board to identify the scope of material and level of detail of information to be submitted by the project promoter as part of the application file, to apply for the comprehensive decision. This is to be done in close co-operation with other authorities concerned, and where appropriate, on the basis of a proposal of the project promoter.

44 On the 29<sup>th</sup> September 2014, the Board wrote to EirGrid advising “*An Bord Pleanála, in its role as competent authority, considers it appropriate to invite Eirgrid to submit a proposal for the scope of material and level of detail of information to be submitted as part of the application file*”.

45 On 2<sup>nd</sup> October EirGrid submitted a Proposed Scope of Application to An Bord Pleanála in response to this invitation.

46 On 13<sup>th</sup> October 2014 the Board informed EirGrid that its proposal “*is broadly acceptable and sets out a reasonable structure on which the draft application file can be based*”. The Board advised:

*“The scope of the material submitted must reflect the nature, scale and extent of the proposed development the subject of the strategic infrastructure pre-application consultation discussions on which An Bord Pleanála issued its letter dated 10<sup>th</sup> February, 2014 and also to its scoping opinion issued on 11<sup>th</sup> December, 2013.*

*Having regard to the matters raised in the completed strategic infrastructure pre-application consultation process, the following are key matters in regard to the scope of material and level of information to be included with the application.”*

47 These matters are identified in **Table 3.2**.

**Table 3.2: Key Matters identified by the Board in respect of the Scope of Material and Level of Detail to be included with the Application**

Key Matters identified by the Board in respect of the Scope of Material and Level of Detail to be included with the Application	Where it is addressed in the application documentation
Extent of the prospective applicant's re-evaluation of the project having regard to matters arising from the withdrawal of application 02.VA0006	Public and Landowner input into re-evaluation process – <b>Volume 2B</b> Summary of re-evaluation process in Section 2.1.2, <b>Volume 2A</b> (this report) Chapters 2, 4 and 5 <b>Volume 3B</b> Appendix 1.1 and 1.2, <b>Volume 3B Appendices</b>
Background and continuing need for the proposed development.	Chapter 2, <b>Volume 3B</b>
Support for project in local, national and regional context including Government policy and European context.	Chapter 4, <b>Volume 2A</b> (this report)
Established context of project within Grid 25 Strategy.	Section 4.3.10, <b>Volume 2A</b> (this report)
Status of Grid 25 document.	Section 4.3.10, <b>Volume 2A</b> (this report)
Route re-evaluation and associated environmental assessments carried out to inform the application supporting documents / EIS / NIS including reasoning for omissions of the proposed Kingscourt Substation.	Chapters 2, 4 and 5 (Section 5.2.4.1) <b>Volume 3B</b> Appendix 1.1 and 1.2, <b>Volume 3B Appendices</b>
Identification of the difficulties encountered in regard to access to lands to carry out development and to undertake necessary baseline surveys (any difficulties should be recorded in the EIS and means to address them explained).	Section 1.5, <b>Volume 3B</b>

<b>Key Matters identified by the Board in respect of the Scope of Material and Level of Detail to be included with the Application</b>	<b>Where it is addressed in the application documentation</b>
Updated status of planning application(s) lodged in Northern Ireland.	Section 1.4.1, <b>Volume 2A</b> (this report) and Section 1.1.3.1, <b>Volume 3B</b> and elsewhere in the application documentation
Technological alternatives reviewed.	Chapter 4, <b>Volume 3B</b>
Public and other consultations entered into in regard to the project and how evaluated/ incorporated into development.	<b>Volume 2B</b> and Chapter 3, <b>Volume 3B</b>
Explanation in supporting documents of the justification for the routing of line and siting of structures chosen and the balance and weighting used between avoidance of impacts on different types of sensitive receptors such as landscapes and residential property in the vicinity of the proposed development.	The range of technical, environmental and landowner considerations which guided the line design process are set out in Section 5.4.2.1, Chapter 5, <b>Volume 3B</b> .
Applicant's methodology to ensure adoption of a consistent approach throughout the application and EIS documents having regard to extent of the project and proposed MSA and CMSA analysis subdivisions in the proposed EIS.	Chapter 1, <b>Volume 3B</b> .
Explanation and justification for the approach being taken to remove structures from sensitive ecological receptors and where access to survey not facilitated and given progress of line design to seek permission for fixed tower locations.	Section 1.5 of <b>Volume 3B</b> The range of environmental considerations which guided the line design process are set out in Section 5.4.2.1, <b>Chapter 5, Volume 3B</b> Section 6.3.2.5, <b>Volume 3B</b> addresses the fixing of tower positions
Gaeltacht areas to be identified along with noting associated procedures including for public notices in Irish and translation of parts of supporting application / EIS documentation into Irish as appropriate.	The public notices will be translated into Irish as will supporting application / EIS documentation.
Extent and nature of documents, maps, drawings including aerial photographs and information to be provided with the application and EIS to include up to date baseline data and base maps. This includes showing new M3 road and recently constructed development and that with planning permission.	<b>Volume 1B</b> includes all the planning application drawings for the proposed development.

<b>Key Matters identified by the Board in respect of the Scope of Material and Level of Detail to be included with the Application</b>	<b>Where it is addressed in the application documentation</b>
How applicant will address issues arising from the proposed development likely to have significant effects on the environment of a transboundary state.	Section 3.3 <b>Volume 2A</b> Chapter 9, <b>Volume 3B</b> Transboundary procedures
Entirety of environmental effects of Interconnector project to be assessed and dealt with in the application documentation and need for production of a Joint Environmental Report as proposed in the European Commission document <i>Guidance on the Application of the Environmental Impact Assessment Procedure for Large-Scale Transboundary Projects</i> .	Refer to <b>Volume 4</b>
<b>Plans</b>	
The nature and extent of the proposed development should be fully described in drawing form including provision of: <ul style="list-style-type: none"> <li>• Site location plans;</li> <li>• Scaled site layout plans; and</li> <li>• Plans, elevations and sections (as relevant) of all aspects of the proposed development for which approval is sought including any temporary access arrangements.</li> </ul>	Refer to <b>Volume 1B</b>
Insofar as relevant and having regard to the specific circumstances and linear nature of the proposed development the provisions of article 23 of the <i>Planning and Development Regulations, 2001</i> (as amended) concerning plans, drawings and maps lodged, have also informed the planning application drawings.	Refer to Section 3.4 of this report ( <b>Volume 2A</b> ) and <b>Volume 1B</b>

### 3.8.4 Results of Public Consultation

48 Article 9.4 of Regulation 347/2013 requires the project promoter to prepare a report summarising “*the results of activities related to the participation of the public*”. This report was submitted to the PCI Unit of the Board “*together with the application file*”, however, the

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report does not form part of the application file per se lodged under section 182A of the *Planning and Development Act, 2000* (as amended).

### 3.8.5 Draft Application File

- 49 Article 9.4 of Regulation 347/2013 requires the promoter to submit a draft application file to the Board. A draft application, comprising material in accordance with the scope of material identified, was submitted to the Board on 7th November 2014. On the 16th December 2014, the Board issued a letter confirming it had examined the draft application file under the provisions of Article 10.4(c) of Regulation 347/2013 and identifying missing information which it requested to be submitted. The missing information (addressing subjects identified under Article 10.4(a)) was submitted to the Board on the 13<sup>th</sup> March 2015. A revised Draft Application File (which *inter alia* generally reflected the ongoing process of technical and environmental analysis in confirming the nature and location of the proposed development) was also submitted to the Board on 13<sup>th</sup> March 2015. Other revisions to the Draft Application File made by EirGrid, including the specific siting of certain support structures along the alignment of the proposed development, which reflected the ongoing process of technical and environmental analysis in confirming the nature and location of the proposed development were summarised in schedules submitted to the Board on 13<sup>th</sup> March 2015.
- 50 On 29<sup>th</sup> April, 2015 the Board gave its opinion, as competent authority, as to the completeness and adequate quality of the application file. Subsequently the application file was submitted to the Board for examination under Article 10(4)(c) of Regulation 347/2013 together with a schedule of changes since the revised Draft Application File.

## 4 PLANNING POLICY CONTEXT

### 4.1 INTRODUCTION

- 1 The application for approval for the proposed development will be considered by An Bord Pleanála in the context of relevant European Union (EU), national, regional and local planning policy. This chapter outlines relevant policy which underpins the proposed development at EU, national, regional, and local level.
- 2 The examination of the planning and development policy context in this chapter is restricted to that pertaining to Ireland; the equivalent planning and development policy context for Northern Ireland is addressed in the *Tyrone-Cavan Interconnector Consolidated Environmental Statement (ES)* and *Consolidated ES Addendum* submitted as part of the SONI proposal.
- 3 It is important to note that the consideration of EU Law and policy as set out in **Section 4.2** is not detailed in chronological order but rather it is set out under clear subject headings which describe the relevant EU, national and regional energy policy which explain the strategic need for, and the evolution of, the proposed development. For clarity, the EU Law and policy documents referenced in this chapter are included in chronological order in **Appendix 5** of this report.

### 4.2 STRATEGIC NEED FOR THE PROJECT – EU LAW & POLICY

- 4 Expanding populations, economic growth, a diminishing reserve of fossil fuels and rising energy costs, combined with the impact of climate change, are presenting EU economies with significant long term challenges. In response, the EU has, in recent years, introduced several important legislative provisions which address fundamental energy challenges within Europe. These relate, *inter alia*, to renewable energy sources, competition and trading in the energy market and form the basis for national legislation and national, regional and local policy positions of both Ireland and Northern Ireland.

#### 4.2.1 European Energy Policy

- 5 The EU energy policy objectives of competitiveness, sustainability and security of supply are set out in the 2006 *Green Paper - A European Strategy for Sustainable, Competitive and Secure Energy*. The report identifies the steps needed to develop fully competitive energy markets which should help ensure a supply of energy which is secure and sustainable for the future. In the context of the completion of a European-wide Internal Energy Market

(IEM), Section 2.1(ii) of this strategy paper identifies the need for a *“priority interconnection plan”* and notes there can be *“no truly competitive and single European market without additional physical capacity: this is particularly vital for countries such as Ireland....”*.(p.6)

- 6 On 27 March 2013, the European Commission adopted a Green Paper entitled *A 2030 Framework for Climate and Energy Policies* [COM (2013) 169 final]. This document was put out to a public consultation process which allowed Member States, other EU institutions and stakeholders to express their views. The Framework notes that, while the EU is making good progress towards meeting 2020 targets, creating the internal market for energy and meeting other objectives of energy policy, there is a need now to reflect on a new 2030 framework for climate and energy policies. Accordingly, Section 2.2 of the Framework states:

*“There are key challenges associated with large scale deployment such as the full integration of renewables into the EU’s electricity system....However, massive investments in transmission and distribution grids, including through cross-border infrastructure, to complete the internal energy market will also be needed to accommodate renewable energy.”* (p.5)

- 7 In the context of security of supply and affordability of energy in the internal energy market, Section 2.4 of the Framework states:

*“As none of the energy policy objectives can be reached without adequate grid connections, the Commission has also proposed a Regulation on Trans-European Energy Infrastructure Guidelines on which political agreement has been reached by the European Parliament and by Council. It addresses infrastructure challenges to ensure true interconnection in the internal market, integration of energy from variable renewable sources and enhanced security of supply.”* (p.6)

- 8 As noted in the previous Chapter, the proposed development has been designated a project of common interest (PCI) for the purposes of EU Regulation 347/2013. A key aim of EU Regulation No. 347/2013 is to ensure that strategic priority energy networks in Europe are completed by 2020. Recital 28 of the Regulation states:

*“Projects of common interest should be given ‘priority status’ at national level to ensure rapid administrative treatment. Projects of common interest should be considered by competent authorities as being in the public interest. Authorisation should be given to projects which have an adverse impact on the environment, for reasons of overriding public interest, when all the conditions under Council Directive 92/43/EEC of 21 May 1992 on the*

*conservation of natural habitats and of wild fauna and flora and Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy are met”.*

- 9 Insofar as the proposed development has been designated a PCI for the purposes of the Regulation, it was therefore considered to meet the general criteria for PCI's set out in Article 4(1). These are:

*“(a) the project is necessary for at least one of the energy infrastructure priority corridors and areas;*

*(b) the potential overall benefits of the project, assessed according to the respective specific criteria in paragraph 2, outweigh its costs, including in the longer term; and*

*(c) the project meets any of the following criteria:*

*(i) involves at least two Member States by directly crossing the border of two or more Member States;*

*(ii) is located on the territory of one Member State and has a significant cross-border impact as set out in Annex IV.1;*

*(iii) crosses the border of at least one Member State and a European Economic Area country.”*

- 10 In addition, a number of sub-articles contained in Article 7 (cited in **Section 3.6** of this report) are also of relevance in establishing the need for the project from an energy perspective. In this regard Article 7(1) states:

*“The adoption of the Union list shall establish, for the purposes of any decisions issued in the permit granting process, the necessity of these projects from an energy policy perspective, without prejudice to the exact location, routing or technology of the project.”*

- 11 Article 7(3) further provides that:

*“Where such status exists in national law, projects of common interest shall be allocated the status of the highest national significance possible and be treated as such in permit granting processes — and if national law so provides, in spatial planning — including those relating to environmental assessments in*



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*the manner such treatment is provided for in national law applicable to the corresponding type of energy infrastructure”*

12 Article 7(8) also states that:

*“With regard to the environmental impacts addressed in Article 6(4) of Directive 92/43/EEC and Article 4(7) of Directive 2000/60/EC, projects of common interest shall be considered as being of public interest from an energy policy perspective, and may be considered as being of overriding public interest, provided that all the conditions set out in these Directives are fulfilled”.*

13 Decision 1364/2006/EC of the European Parliament and of the Council (repealed by EU Regulation No. 347/2013) had previously laid down guidelines for trans-European energy networks (TEN-E). Evaluation of the TEN-E framework has clearly shown that while it made positive contributions to some projects there still remains identified infrastructure gaps. The Union recognises that increased efforts are required to meet future challenges and in particular to identify potential future gaps in energy demand and supply. It is noted that the proposed development was previously listed under Annex 3 of the Directive 2006/1364/EC on trans-border European energy network infrastructure as a ‘Priority Project’ of strategic importance.

14 In addition, as noted in **Section 3.6** of this report, EU Regulation No. 347/2013 lays down rules for the timely development and interoperability of trans-European energy networks in order to achieve the energy policy objectives of the European Union.

#### **4.2.2 EU Electricity Directives**

15 Directive 2005/89/EC of the European Parliament and of the Council of 18 January 2006 concerning measures to safeguard security of electricity supply and infrastructure investment acknowledges the benefits of interconnection in terms of the continued development of the internal electricity market within the EU. Directive 2005/89/EC aims to establish measures to safeguard the security of supply; to guarantee an adequate level of generation capacity; to guarantee an adequate balance between supply and demand and to set up an appropriate level of interconnection between EU countries. Member States are obliged to ensure a high level of electricity supply through investment in infrastructure and defined responsibilities for the relevant authorities. In addition, Transmission System Operators (TSOs) must set minimum operational rules and obligations on network security.

16 The role of interconnectors in safeguarding security of electricity supply is also referred to in paragraph 3.1 of the subsequent Communication from the Commission to the European

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Council and the European Parliament of 10 January 2007, entitled *An Energy Policy for Europe* [COM (2007) 1 final].

- 17 Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC requires each Member State to adopt national renewable energy action plans setting out that Member State's target, on a national level, for the share in energy from renewable resources which will be consumed in transport, electricity, heating and cooling in 2020. Directive 2009/28/EC promotes the use of energy from renewable sources and recognises the need to support the integration of electricity from renewable sources into the transmission grid and states:

*“Interconnection among countries facilitates integration of electricity from renewable energy sources. Besides smoothing out variability, interconnection can reduce balancing costs, encourage true competition bringing about lower prices, and support the development of networks.”* (para.59)

- 18 Article 3(1) of 2009/28/EC states, under the heading *“Mandatory national overall targets and measures for the use of energy from renewable sources”*:

*“Each Member State shall ensure that the share of energy from renewable sources, calculated in accordance with Articles 5 to 11, in gross final consumption of energy in 2020 is at least its national overall target for the share of energy from renewable sources in that year, as set out in the third column of the table in part A of Annex I. Such mandatory national overall targets are consistent with a target of at least a 20% share of energy from renewable sources in the Community's gross final consumption of energy in 2020. In order to achieve the targets laid down in this Article more easily, each Member State shall promote and encourage energy efficiency and energy saving.”*

- 19 Article 16(1) of Directive 2009/28/EC requires that:

*“Member states shall take the appropriate steps to develop transmission and distribution grid infrastructure, intelligent networks, storage facilities and the electricity system, in order to allow the secure operation of the electricity system as it operates the further development of electricity production from renewable energy sources, including interconnection between Member States and between Member States and third countries.”*

- 20 The European Commission's energy strategy for the period up to 2020 is set out in the Communication from the Commission to the European Council and the European Parliament of 10 November 2010, entitled *Energy 2020 A Strategy for Competitive, Sustainable and Secure Energy* [COM (2010) 639 final]. The European's Union's 2020 strategy aims to make comprehensive changes to the way in which Europe produces and consumes energy, while building on what has already been achieved in the area of energy policy to date. This latest Communication places renewed focus on the need for energy infrastructure development and increased cross-border interconnection in order to meet the key policy objectives of competitiveness, sustainability and security of supply.
- 21 On 17 November 2010, the European Commission issued the Communication *Energy Infrastructure Priorities for 2020 and beyond – A Blueprint for an integrated European energy network* [COM/2010/1395]. This Communication presents the EU's energy infrastructure priorities for the next two decades and defines EU priority corridors for the transport of electricity, gas and oil. The Communication explains that a fully interconnected European market will also improve security of supply and help stabilise consumer prices. It recognises that permitting and cross-border cooperation must become more efficient and transparent to increase public acceptance and speed up delivery of interconnected transmission networks.
- 22 On 8 March 2011, the European Commission adopted the Communication *Energy Efficiency Plan 2011* [COM (2011) 109 final] which affirms energy efficiency at the heart of the EU's Energy 2020 strategy. The Energy Efficiency Plan notes that energy efficiency is one of the most effective ways to enhance security of energy supply, and to reduce emissions of greenhouse gases and other pollutants. As part of the plan, the Commission recognises in Section 4 Energy Efficiency for Competitive European Industry - Efficient generation of heat and electricity that "*new generation capacity and infrastructure need to be built to replace ageing equipment and meet demand.*" (p.8)
- 23 On 15 December 2011, the European Commission adopted the Communication *Energy Roadmap 2050* [COM (2011) 0885 final]. The EU is committed to reducing greenhouse gas emissions to 80-95% below 1990 levels by 2050. The Energy Roadmap explores the challenges posed by delivering the EU's decarbonisation objective while at the same time ensuring security of energy supply and competitiveness. The Energy Roadmap is the basis for developing a long-term EU framework together with all stakeholders. In particular, with regard to electricity, Section 3.2 (b) of the Energy Roadmap notes:

*"With electricity trade and renewables' penetration growing under almost any scenario up to 2050, and particularly in the High Renewables scenario, adequate infrastructure at distribution, interconnection and long-distance transmission becomes a matter of urgency. By 2020 interconnection*

*capacity needs to expand at least in line with current development plans. An overall increase of interconnection capacity by 40% up to 2020 will be needed, with further integration after this point. For the successful further integration after 2020, the EU needs to fully eliminate energy islands in the EU by 2015; in addition, networks have to be expanded and come over time to synchronised links between continental Europe and the Baltic region.*"  
(p.15)

- 24 The European Commission's report *Connecting Europe – The Energy Infrastructure of Tomorrow* (2012) recognises that, if the European Union is to achieve its energy and climate goals of 20-20-20 by 2020, it needs to invest in the modernisation of its energy infrastructure over the next ten years. The EU's existing energy infrastructure is not adequate to match future demand for energy or to ensure security of supply for its member states. The reports states:

*"...lack of interconnections will reduce opportunities for system optimisation, increase the risk of disruption and trigger additional, much costlier back-up and balancing generation investments. Supplying energy and balancing supply and demand will become more expensive, with the corresponding effects on the competitiveness of European industries, consumers and growth."* (p.3)

- 25 The report also provides an overview of the proposed regulation on trans-European energy (p.10) infrastructure and identifies an "AC land link between Northern and Southern Ireland" as one of a list of 5 projects in the Northern Seas offshore grid category to be considered as a potential PCI. [The Delegated Regulation 1391/2013 referred to in **Section 3.6** of this report issued on 14 October 2013 copper-fastens this position.]

- 26 Thereafter, on 6 June 2012, the European Commission presented a Communication *Renewable Energy: A Major Player in the European Energy Market* [COM/2012/271] on its renewable energy policy, outlining options for the period beyond 2020. The Communication recognises the need for a more coordinated European approach in the establishment and reform of support projects and an increased use of renewable energy trading among Member States.

- 27 On 27 March 2013, the European Commission published its first *Renewable Energy Progress Report* under the framework of the Directive 2009/28/EC. The report assesses *inter alia* Member States' progress in the promotion and use of renewable energy along the trajectory towards the 2020 renewable energy targets. The reports states:

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*“.....an impression is gained of a generally solid initial start at EU level but with slower than expected removal of key barriers to renewable energy growth, with additional efforts by particular member states being necessary... At EU and Member States level, further efforts are needed in terms of administrative simplification and clarity of planning and permitting procedures and for infrastructure development and operation.” (p.2)*

28 Directive 2009/72/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in electricity and repealing Directive 2003/54/EC is aimed at introducing common rules for the generation, transmission, distribution, and supply of electricity, together with consumer protection provisions. Directive 2009/73/EC outlines each Member State’s service obligations and consumer rights and clarifies competition requirements with a view to improving and integrating competitive electricity markets in the EU.

29 Directive 2009/72/EC also recognises that cross-border interconnections should be further developed in order to secure the supply of all energy sources at competitive prices to consumers within the community. In this context, the rules for the organisation of the internal electricity sector are aimed at developing a competitive, secure and environmentally sustainable market in electricity. Chapter 2, Article 6(1) of Directive 2009/72/EC, under the heading “*Promotion of Regional Cooperation*”, states as follows:

*“Member States as well as the regulatory authorities shall cooperate with each other for the purpose of integrating their national markets at one or more regional levels, as a first step towards the creation of a fully liberalised internal market. In particular, the regulatory authorities where Member States have so provided or Member States shall promote and facilitate the cooperation of transmission system operators at a regional level, including on cross-border issues, with the aim of creating a competitive internal market in electricity, foster the consistency of their legal, regulatory and technical framework and facilitate integration of the isolated systems forming electricity islands that persist in the Community.”*

30 On 15 November 2012, the European Commission issued a Communication *Making the Internal Energy Market Work* [COM (2012) 663] assessing the state of the internal energy market between Member States, to be completed by 2014. The Communication encourages Member States to increase efforts to facilitate internal energy markets and highlights the benefits of an integrated European market for citizens and business. The Communication also identifies the need for further action in a number of areas including *inter alia* consumer protection and investing in the modernisation of energy infrastructure.

31 Thereafter, on 28 November 2012, the European Commission published a report on the *State of the Single Market Integration 2013*. The report presents an analysis of the state of single market integration between Member States. The report noted that there is still a lack of integration in the energy market, one cause of which is the limited cross-border interconnection. The report calls for the swift adoption and implementation of the Energy Infrastructure Package and adoption of the first Union-wide list of Projects of Common Interest in energy infrastructure which are of central importance for a secure and affordable energy supply in the future.

#### 4.2.3 Compliance with EU Policy

32 The proposed development complies with EU law and policy and the objectives detailed above, and specifically:

- encouragement, through interconnection and reinforcement of transmission networks, of the effective operation of the internal market;
- reinforcement of the security of energy supply; and
- contribution to sustainable development through improved connection of renewable energy sources (in particular wind power).

33 In conclusion, in respect of compliance with strategic European Union energy law and policy, the proposed second north-south electricity interconnector and associated infrastructure development, will enhance security of supply, facilitate further internal market competition and increase connection of energy generated by renewable sources. Moreover, such proposed additional interconnection of the two transmission systems on the island of Ireland will assist in meeting the European-wide target of 20% share of energy from renewable sources by 2020, as set out in the *National Renewable Energy Action Plans Directive* (2009/28/EC), outlined above.

#### 4.2.4 The Position of the Governments and Regulatory Authorities

34 Policy for a cross-border European energy market has evolved gradually, starting in 1996 with Directive 96/92/EC laying down rules for the internal market in electricity, which was subsequently repealed by the Directives 2003/54/EC and Directive 2009/72/EC. The objective of these early European directives was to set the correct regulatory framework to promote and offer consumers a real freedom of choice at fair, competitive prices, to stimulate clean energy production and to improve security of supply.

35 Following the 2003 EU Directives on common rules for an internal energy market, the Irish and UK governments jointly published an *All-Island Energy Market Framework* in 2004. The All-Island Framework represents a commitment by both Governments to the furthering of regional integration between Ireland and Northern Ireland within the wider context of an EU wide internal market for electricity. The Framework document notes that co-operation on common energy issues has been longstanding, with both Governments having a shared interest in more competitive energy markets, reduced energy costs and improved reliability of supply. It defines an All-Island Energy Market as follows:

*“An All-island Energy Market should provide for competitive, sustainable and reliable markets in electricity and natural gas on the island of Ireland at the minimum cost necessary. It should operate in the context of the EU internal energy market and should deliver long-term economic and social benefits that are mutually advantageous to Northern Ireland and the Republic of Ireland. Customers, irrespective of where they live, should be free to source their energy needs from suppliers and service providers anywhere on the island and generators be able to participate freely regardless of jurisdiction” (p.4)*

36 The Ministerial foreword to the Framework underscores this by stating:-

*“This Development Framework sets out the commitment of our Governments to meeting that challenge through the creation of an All-Island Energy Market. This involves collaboration on issues ranging from improved interconnection, competitive markets and harmonised trading arrangements, through to generation adequacy, security of supply, sustainable energy and energy efficiency measures”.*

37 As noted in this Framework, the initiative is set against the *“European Union’s drive to create a EU-wide Internal Market in electricity and natural gas”* (p.1). Mirroring recognition in EU policy of the role of interconnection in relieving congestion and allowing the efficient trade of energy products across borders, the document identifies the construction of a second electricity interconnector as a *‘key enabler’* for the proposed all island market. Annex A of the document details a development programme for the all island market and identifies north-south interconnection as a *‘strategic goal’*.

38 In November 2004, the Commission for Energy Regulation (CER) of Ireland, and the then Northern Ireland Authority for Energy Regulation (now NIAUR – Northern Ireland Authority for Utility Regulation), as the statutory regulators for the two jurisdictions on the island of Ireland, prepared a *Joint Report on the Case for a Second North-South Interconnector* (2004).

- 39 The Joint Report evaluated technical, economic and stakeholder studies addressing the case for a second interconnector. Consistent with the position of the respective applicants in this matter, the technical studies concluded that, in order to ensure a continued security of supply, system stability, and to overcome potential system separation, a second north-south interconnector is required. In addition, internal system reinforcements on both systems are required to increase and support increased power flows. Specifically, the Executive Summary of the Joint Report concluded:

*“Increased interconnection provides additional system security and stability against a background of growing demand, tight generation reserve margins, increasing need for generation capacity, increasing reliance on generation in one jurisdiction by the other and the current low levels of interconnection between Ireland and the rest of Europe.*

*Given the significance of security of supply to a (virtually) isolated market, the Regulators are of the view that there is a strong case for a second North-South interconnector.” (p.6)*

- 40 In addition, economic studies informing the Joint Report found that there is no strong economic case to oppose construction of a second interconnector. Having regard to the various assessments and considerations, the Regulators were jointly of the view that the strategic benefits gained as a result of increased interconnection support the case for a second north-south interconnector and associated transmission network reinforcement. The Regulators concluded that such interconnection will provide further system security and reliability, will be a positive step toward further developing competition, and will promote the development of the single electricity market.

- 41 Following this 2004 Joint Report, and in the context of the previous acceptance by the Regulators of the arguments in favour of additional interconnection, in March 2006, the Director of Energy Networks at the Commission for Energy Regulation confirmed in writing to the then Head of Grid Development and Commercial at ESB National Grid (now EirGrid) that:

*“The Commission [for Energy Regulation] and the NIAER have considered the option of constructing either a 275 kV or a higher capacity 400 kV line. Both regulators have decided that the additional cost associated with the 400 kV line is justified on the basis of both its higher energy transfer capability and its ability to be upgraded in the long run more practically and economically. Accordingly, the Commission hereby approves a standard of 400 kV for the additional Interconnector line”.*



- 42 This letter of confirmation from the CER thus set the context for developing a higher capacity additional interconnector between Ireland and Northern Ireland.
- 43 More recently, correspondence to EirGrid from the Single Electricity Market (SEM) Committee (comprising the Irish Commission for Energy Regulation, and the Northern Irish Utility Regulator) dated 30<sup>th</sup> April 2013 (included as **Appendix 1** of this planning report) refers to *“the relevance of the second North South interconnector to the successful implementation of the policy objectives of competitiveness, sustainability and security of supply in both Ireland and Northern Ireland and the necessity to advance and deliver this project, and to not only deliver it but deliver it as a matter of urgency”*.
- 44 In March 2015, EirGrid and SONI also produced a report entitled *The Need for a second North-South Electricity Interconnector*, which identifies the proposed development as a *“critical and strategically urgent transmission reinforcement for the island of Ireland”* with benefits of *“increased security of supply and reduced electricity costs”*. See Appendix 2.1 in **Volume 3B Appendices** of the EIS.

### 4.3 STRATEGIC POLICY CONTEXT – NATIONAL LEVEL

- 45 National development plans and policies in Ireland illustrate the stated commitment of the Irish Government for greater interconnection between the respective electricity systems of Ireland and Northern Ireland, and appropriate reinforcement of the existing transmission system. These plans and policies are examined below. In this respect, the obligation of the Board to have regard to such policies is set out in section 143(1) of the *Planning and Development Act 2000*, as amended, must be borne in mind. Section 143(1), as amended, states:

*“The Board shall, in performing its functions, have regard to—*

*(a) the policies and objectives for the time being of the Government, a State authority, the Minister, planning authorities and any other body which is a public authority whose functions have, or may have, a bearing on the proper planning and sustainable development of cities, towns or other areas, whether urban or rural,*

*(b) the national interest and any effect the performance of the Board’s functions may have on issues of strategic economic or social importance to the State, and*

*(c) the National Spatial Strategy and any regional spatial and economic strategy for the time being in force”.*

#### **4.3.1 The National Spatial Strategy for Ireland 2002-2020**

46 The National Spatial Strategy (NSS) 2002-2020, sets out a 20 year strategic vision for the spatial planning and development of Ireland. It outlines how a strengthened network of cities, towns and rural communities and their resources will be mobilised and complemented by social and physical infrastructure, to create balanced national development. This was to be facilitated by designation of gateways and hubs through which employment and investment could be directed.

47 In relation to key infrastructure projects, Section 3.7 of the NSS identifies that *“a feature of the most mature and successful economies is that they possess highly developed, well integrated infrastructure that supports movement, i.e. public and private transport, and energy and communications networks.”* (p.56)

48 The issue of ‘Enhanced Accessibility’ in the NSS is of particular interest to the proposed North-South Interconnection project. In this regard, according to the strategy ‘enhanced accessibility’ can be achieved for *“urban and rural areas, through an interconnected mesh of efficient and integrated road or rail transport systems, energy and communication grids – all designed to converge at nationally strategic locations.”* (p.41)

49 Prime considerations in terms of spatial policies relating to national energy infrastructure development include *“developing energy infrastructure on an all-island basis to the practical and mutual benefit of both the Republic and Northern Ireland”.* (p.64)

50 Whilst models to address balanced regional development are currently being explored, there remains a need for a high quality energy supply in order to achieve a wider and stronger economic base, greater economic competitiveness and associated social progress at a regional level.

#### **4.3.2 The Government White Paper – the Energy Policy Framework 2007-2020: Delivering a Sustainable Energy Future for Ireland 2007**

51 The *White Paper - Delivering a Sustainable Energy Future for Ireland* of March 2007 sets out the Irish Government Energy Policy framework for 2007-2020. The policy seeks to ensure security of energy supply; promote the sustainability of energy supply and use; and enhance competitiveness in energy supply. Ireland’s opportunities in the area of

renewables (and bio-energy) are noted and the potential role in job creation is specifically acknowledged. Challenges identified include our small energy market, peripherality and limited indigenous fuel resources.

52 Relevant extracts from the White Paper are set out below:

*“Security of energy supply is crucial for the economy and society. Security of supply requires that we have reliable access to oil and gas supplies and the infrastructure in place to import, distribute and to store gas and oil. We also need robust gas and electricity networks and electricity generating capacity to ensure consistent supply to consumers and all sectors of the economy”.* (Section 3.1.1, p. 20)

*“We will support the progressive development of a regional electricity market with UK and Northwest Europe over the next five years underpinned by new interconnection”.* (Section 3.2.3, p. 21)

*“We will ensure delivery of the second North-South electricity interconnector by 2011 which will more than double the existing cross-border electricity transfer capacity to over 680 MW.”* (Section 3.2.3, p. 21)

*“Substantial extension and upgrading of the electricity and gas network infrastructure will continue over the medium term in line with economic, social and regional development imperatives.”* (Section 3.5.1, p. 29)

*“We will continue to meet regional development requirements by supporting the major electricity investment program underway and planned by ESB networks in the high-voltage transmission network and distribution network and connections to 2010 and beyond as approved by CER.”* (Section 3.5.2, p. 30)

*“We will ensure through EirGrid’s Grid Development Strategy 2007 to 2025 and in light of the All-Island Grid Study the necessary action to ensure the electricity transmission and distribution networks can accommodate, in an optimally economic and technical way, our targets for renewable generation for the island to 2020 and beyond.”* (Section 3.5.2, p. 30)

53 Strategic Goal 3 (to ‘Ensure Security of Energy Supply’), commits to delivering significant growth in renewable energy as a contribution to fuel diversity in power generation with a 2020 target of 33%. Wind energy will provide the pivotal contribution to achieving this target, which has subsequently been increased to 40%.

54 Section 3.1 of the Policy Framework states the need for quality energy infrastructure of sufficient capacity. We “*need robust gas and electricity networks and electricity generating capacity to ensure consistent supply*”. (p. 20)

55 Section 3.5.2 sets out the commitment to investing in electricity transmission infrastructure: “*We will ensure through EirGrid’s Grid Development Strategy 2007-2025 and in light of the All-island Grid Study the necessary action to ensure that electricity transmission and distribution networks can accommodate, in an optimally economic and technical way, our targets for renewable generation for the island to 2020 and beyond.*” (p. 30)

### 4.3.3 The Government Green Paper on Energy Policy in Ireland

56 In May 2014 the Minister for Communications, Energy and Natural Resources launched the consultation process on the *Green Paper on Energy Policy in Ireland* to stimulate a broad and informed debate on energy policy. Written views and suggestions from stakeholders and interested parties were invited by 31<sup>st</sup> July 2014; these submissions are currently being reviewed by the Department and a White Paper is anticipated during the 2<sup>nd</sup> half of 2015.

57 The discussion in the Green Paper about Ireland’s future energy path is informed by the three key pillars of security, sustainability and competitiveness. It identifies six policy priority areas in respect of which written views were sought, as follows:

Priority 1: Empowering Energy Citizens;

Priority 2: Markets, Regulation and Prices;

Priority 3: Planning and Implementing Essential Energy Infrastructure;

Priority 4: Ensuring a Balanced and Secure Energy Mix;

Priority 5: Putting the Energy System on a Sustainable Pathway; and

Priority 6: Driving Economic Opportunity.

58 The Green Paper considers the changes in energy policy since the last energy White Paper in 2007 including the economic changes which have influenced the way we use energy and the amount that is used. Relevant considerations are set out below:

- Between 2007 and 2012 Ireland’s economy contracted by 7.3% and energy demand fell by 19%. As a result, associated CO2 emissions fell by 21%.

- Our energy mix has also changed since 2007. In 2012, more than 19% of electricity was produced from renewable energy and was therefore carbon neutral – although we still remain largely dependent on oil and gas.
- As the economy recovers, we need to ensure our demand for energy, and our reliance on fossil fuels, do not rise accordingly. We also need to continue to develop and exploit our natural resources.

59 In addition, there have been structural changes to the energy market since 2007 including the introduction of the all-island Single Electricity Market in 2007 which established a single wholesale electricity market between Ireland and Northern Ireland. Two policy frameworks have also been published which provide comprehensive plans on how we can reach our EU renewable energy and energy efficiency targets: (1) the National Energy Efficiency Action Plan (NEEAP) and (2) the National Renewable Energy Action Plan (NREAP). EU energy policy is now looking beyond 2020; targets for energy efficiency, greenhouse gas emissions and renewable energy are being set for 2030.

60 In section 3.2 specifically in relation to ‘Electrical Infrastructure’ the Green Paper acknowledges that *“In the coming years, the Irish grid will need to meet growing demand for electricity, and incorporate higher penetration of renewable energy sources. This combination of requirements presents new network management challenges.”* It also makes reference to EirGrid’s estimate that to facilitate the expected increase in renewable generation and to adequately meet electricity demand, the capacity of Ireland’s transmission system would need to double by 2025.

61 Of particular relevance to the North-South 400 kV Interconnection Development the following is set out in the Green Paper:

*“As part of the Grid25 strategy, EirGrid and ESB Networks continue to work in partnership with Northern Ireland Electricity (NIE) and the System Operator Northern Ireland (SONI) to strengthen cross-border transmission capability by way of the planned second North-South Interconnector, a high capacity transmission line that will run between Counties Meath and Tyrone. Implementation of this project is necessary to reduce transmission flow constraints between North and South, and improve overall system operating efficiency and market liquidity.” (p. 38)*

#### 4.3.4 The National Development Plan 2007-2013: Transforming Ireland – A Better Quality of Life for All and Infrastructure and Capital Investment 2012 – 2020 (Medium Term Exchequer Framework)

62 The *National Development Plan 2007-2013* ('the NDP') provided support for the Government's Regional Development Strategic Policy Framework including proposals for capital expenditure on strategic infrastructure.

63 In November 2011 The Department of Public Expenditure & Reform published a revised capital programme '*Infrastructure and Capital Investment 2012 – 2016 Medium Term Exchequer Framework*'. The Capital Investment Programme seeks to address the changed fiscal and budgetary situation in the country resulting in reduced capital spending over the medium term. In this regard the 2011 Medium Term Exchequer Framework document has effectively superseded the *2007-2013 National Development Plan*.

64 The Framework identified four main investment strategy components including "*Economic infrastructure – encompassing transport networks, energy provision and telecommunications capacity.*"(p.iii) In particular, energy is identified in Section 3.2 as a "*key input to economic activity and the economy must have a secure and reliable source of energy:*

- *To ensure a fully sustainable, secure and competitive energy market underpinned by diverse energy sources, energy efficiency and robust infrastructure, and*
- *To help address climate change by meeting our binding obligations in the reduction of energy related greenhouse gas emissions."* (p.13)

65 In terms of investment in energy infrastructure, Section 3.2 of the Framework states that, "*the cost effective maintenance and continued development of the national energy infrastructure networks, and the electricity transmission system in particular, is strategically vital for Foreign Direct Investment and indigenous enterprise, for the economy and domestic consumers, and for regional economic development.*" (p.13)

66 Accordingly, the proposed development of an additional north-south electricity interconnector, and the reinforcement of the existing national transmission system, is clearly in accordance with the provisions of the Framework.

67 However, the NDP still has relevance as a guiding reference and it is noted in the 2011 Medium Term Exchequer Framework document that it is anticipated that there will be a return to a more substantial Public Capital Programme beyond the period of its review.

68 In this regard, an objective of the *National Development Plan* (NDP) was to ensure that Ireland remained competitive in the global international marketplace and that the fruits of recent economic success would be shared more equally at regional level and throughout society. It is considered that this vision is equally applicable as a concept for national development in the current economic climate as when the NDP was published.

69 The opening chapters of the NDP addressed ‘*Strategic Framework*’, with Chapter 5 addressing – ‘*All-Ireland Cooperation*’. This chapter included a subsection on Energy, specifically including Electricity Interconnection. This stated as follows:

*“A key enabler for an All-Island Energy Market is the removal of existing gaps and bottlenecks in electricity or gas infrastructure that adversely affect cross-border trade. The planned second North South electricity Interconnector, which will be operational by 2012 at the latest, will underpin the Single Electricity Market. It will enhance security of supply and double the existing cross-border electricity transfer capacity to over 600MW. This will contribute to a more robust electricity network capable of delivering long term benefits to both economies.”* (p.101)

70 The remaining chapters of the NDP set out various Strategic Investment Priorities which were addressed by way of Programmes and Sub-Programmes. Of particular relevance to this project was the Energy Programme set out in Chapter 7, including a Strategic Energy Infrastructure Sub-Programme which supports priority energy investment needs – identified as Interconnection, Market Integration, Network Extension, and Storage for greater security of supply. Of particular note, an identified key strategic project is a “*Second North / South Electricity Interconnector, to underpin the all island electricity market*” (p.139). The East / West Electricity Interconnector (in operation since 2012), including associated reinforcement costs of existing networks, was identified as a separate key strategic project of the Strategic Energy Infrastructure Sub-Programme.

#### **4.3.5 Building Ireland’s Smart Economy - A Framework for Sustainable Economic Renewal, December 2008**

71 *Building Ireland’s Smart Economy - A Framework for Sustainable Economic Renewal*, launched by the Government in December 2008, outlines details of a long-term objective to re-position Ireland as a base for innovation and enterprise. The vision is: “*to build a Smart Economy that exhibits economic security, high quality employment, strong environmental and social performance and secure energy supplies and is in the strongest possible position to benefit from the recovery of the global economy.*” (p.39)

- 72 The Smart Economy Framework notes that it is imperative that Ireland reduces its current dependence of over 90% on imported fossil fuels and diversifies energy sources. The framework states that, “*secure and reliable energy supply at competitive cost is critical for Ireland’s ability to retain and attract foreign direct investment and for the competitiveness of all sectors of Irish enterprise. Ireland’s dependence on fossil fuels in an era of high prices and considerable volatility leads to high energy costs which impact on competitiveness*” (p.84). It further notes that more energy efficiency and the accelerated delivery of renewable energy, together with interconnection with the UK, and over the next decade with Europe, are critical to reducing energy costs.
- 73 More competition and investment in the power generation sector will deliver better performance and operational efficiencies putting downward pressure on wholesale electricity prices and improving security of supply. In addition, the Smart Economy Framework states that the Government is giving priority to creating the conditions to enable enterprise to opt to produce their own electricity (auto-generation) from renewable energy sources.
- 74 This Smart Economy Framework notes the increase in the national target for the production of electricity from renewable resources by 2020 from 33% to 40%. This highlights the increased urgency attached to the implementation of renewable energy generation policies.

#### **4.3.6 Government Policy Statement on the Strategic Importance of Transmission and Other Energy Infrastructure 2012**

- 75 In July 2012, the Department of Communications, Energy and Natural Resources published a *Government Policy Statement on the Strategic Importance of Transmission and Other Energy Infrastructure* (p.1). The Policy Statement notes that “*starting now, over the coming years, Ireland needs to deliver a world class electricity transmission system in all the regions which meets the needs of Ireland into the 21st Century*”. Planning authorities and An Bord Pleanála are among the bodies which are required to have regard to this policy.
- 76 The key strategic policy elements are the affirmation of the need for development and renewal of energy networks to meet both economic and social policy goals. The major investment underway in the high voltage electricity transmission system under the Grid25 programme is stated as being the most important such investment in Ireland’s transmission system for several generations.
- 77 One of the key challenges raised in the policy statement is the need to find a pathway between the fundamental need for improved energy infrastructure (which is recognised as being in the national interest) and delivery of projects whose acceptability by communities can be diminished due to concerns relating to environmental and social impacts. The policy



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statement sets an expectation of informed engagement by those tasked with planning, constructing and operating energy infrastructure in a safe, efficient and economic manner in accordance with their licences from the CER.

78 It is useful to note the concluding paragraph of the Government Policy Statement, which states:

*“While the Government does not seek to direct infrastructure developers to particular sites or routes or technologies, the Government endorses, supports and promotes the strategic programmes of the energy infrastructure providers, particularly EirGrid’s Grid25 investment programme across the regions, and reaffirms that it is Government policy and in the national interest, not least in the current economic circumstances, that these investment programmes are delivered in the most cost efficient and timely way possible, on the basis of the best available knowledge and informed engagement on the impacts and the costs of different engineering solutions.” (p.6)*

79 It is considered that the proposed development, including the consideration of technology and other alternatives, is entirely in accordance with this conclusion, as well as the wider provisions, of the Government Policy Statement.

#### **4.3.7 National Renewable Energy Action Plan 2010**

80 The provisions of *Directive 2009/28/EC* require each Member State to adopt national renewable energy action plans setting out the individual Member States for the share in energy from renewable resources which will be consumed in transport, electricity, heating and cooling in 2020.

81 Ireland submitted its *National Renewable Energy Action Plan (NREAP)* to the European Commission in July 2010. It set out measures which the Government considers necessary to achieve Ireland’s 16% target. The target is to be achieved from a 12% share of renewable energy in heat and cooling, a 10% share in renewable energy in transport, and a 42.5% renewable energy share in electricity.

82 The NREAP notes the 2007 White Paper referred to above, in particular its strategic goal of ‘*delivering electricity and gas over efficient, reliable and secure networks*’. It also refers to the subsequent commitments of Grid25 (see **Section 4.3.9**), the Government approved strategy for the development of the necessary transmission infrastructure to support national targets and a more sustainable long term electricity supply:

*“Grid25<sup>18</sup> provides the framework to build a more cost effective and efficient system to cater for the shift towards the integration of increasing amounts of renewable generation over time. The transmission capacity assumptions informing this grid development strategy are based on the high level principles of ensuring network safety, security of supply and economic transmission development, while delivering on the renewable target in the years ahead. It provides a foundation for more detailed work on specific reinforcements in coming years and will lead to plans for particular projects which will be delivered in consultation with the public and in line with planning legislation.” (p.74)*

#### **4.3.8 Sustainable Energy Authority of Ireland (SEAI) Strategic Plan 2010-2015**

83 The SEAI Strategic Plan seeks to make Ireland a recognised global leader in sustainable energy. The strategic plan envisages a future which includes the following:

- *“Our electricity is generated entirely from indigenous, renewable resources.*
- *Ireland exports electricity across Europe through an interconnected grid system.*
- *Ireland’s transport system is powered by electricity and biofuels.*
- *Irish buildings are ‘energy positive’.*
- *Communities are planned and built from a holistic perspective that integrates energy and resource needs into lifestyles, leisure and work.” (p.5)*

84 With regard to Electricity Supply the vision is for:

*“Electricity supplied entirely by renewable sources, delivered via a smart, active grid. This will be achieved through intelligent deployment of resources and technologies underpinned by the best physical, regulatory and market infrastructure.” (p.11)*

85 Specific policy goals to achieve the Electricity Supply vision include:

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<sup>18</sup> Grid25 – A Strategy for the Development of Ireland’s Electricity Grid for a Sustainable and Competitive Future 2008 is a high level strategy, which provides an outline of how EirGrid plans to develop the transmission network to support long-term sustainable and reliable electricity supply, establishing the future grid requirements and how these will be met. Refer to **Section 4.3.9** of this report

- *“Accelerate the growth of renewable electricity from 15 per cent of demand in 2010 to 40 per cent by 2020.*
- *Fast track ocean energy deployment, taking a leadership position (500 MW ocean energy by 2020).*
- *Support the development of Microgeneration (from domestic, farming and small commercial enterprises).*
- *Enhance fuel diversity in generation.” (p.11)*

86 The proposed development of an interconnected transmission network between Northern Ireland and Ireland will assist in the development of a smart active grid.

#### **4.3.9 Strategy for Renewable Energy 2012-2020**

87 This strategy sets out goals with regard to, inter alia, building robust and efficient networks and expanding wind power. Strategic Goal No. 5 of the Strategy for Renewable Energy is to: *“Develop an intelligent, robust and cost efficient energy networks system”*. This includes the modernisation and expansion of the electricity grid and the cost effective delivery by EirGrid of their investment programmes in electricity transmission.

#### **4.3.10 EirGrid Strategic Plans**

88 *Grid25 – A Strategy for the Development of Ireland’s Electricity Grid for a Sustainable and Competitive Future* was published in 2008 as a high level strategy, to provide an outline of how EirGrid at that time planned to develop the transmission network to support long-term sustainable and reliable electricity supply.

89 The stated goal of Grid25 was *“to develop the network economically to reliably meet anticipated transport needs of users of the Grid. In achieving this goal, Grid25 supports the Government’s priority actions of increasing the penetration of renewable energy technologies and of improving energy efficiency and energy savings” (p.11).*

90 Grid25 specifically referenced the second north-south interconnector and associated reinforcement of the transmission network of the North-East Region of Ireland. It noted the following in this regard:

*“The area shares a border with Northern Ireland, which makes the region and the interconnector that will run through it significantly important to the All-Island Single Electricity Market. The 220 kV and planned 400 kV*

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*transmission network in the region provides a strong power corridor between Dublin and Belfast.” (p.29)*

- 91 Estimated grid requirements included upgrades to the existing network and the provision of new circuits. Approximately 1,150km of new circuits were deemed to be required, equating to an increase of about 20% of the total length of the transmission network. Of this, 800km was anticipated to be configured at 220 kV or 400 kV, with the remaining 350km at 110 kV. Appendix A of the Grid25 Strategy document set out the reasons for building at 400 kV: the lines are more efficient than 220 kV and provide greater power carrying capability with fewer electrical losses.
- 92 EirGrid, under its License publishes an annual Transmission Development Plan (TDP) which provides an outlook of planned grid development over the subsequent decade. EirGrid's *Draft Transmission Development Plan 2013-2023* – the latest published TDP - anticipates the development and construction of the proposed interconnector.
- 93 The *Grid25 Implementation Programme 2011-2016* is a practical overview of how the Grid25 strategy will be implemented over the short and medium terms. The Implementation Programme seeks to ensure that appropriate procedures and resources are put in place for future electricity transmission in accordance with the strategy of Grid25. The proposed development is identified as a network reinforcement project in Table A1 of Appendix A of the Implementation Programme report.
- 94 The *Grid25 Implementation Programme 2011-2016* (IP) was subject to Strategic Environmental Assessment (SEA). Section 1.4 of the SEA sets out the legal framework for the Grid25 Implementation Programme SEA. It sets out *inter alia* that:
- EirGrid sought feedback from relevant environmental authorities on the scope and level of detail to be included in the Environmental Report (ER).
  - The draft IP and accompanying SEA were put on EirGrid's website, and advertised in the National newspapers. There was a stated consultation period of 4 weeks (in accordance with statutory timelines), however submissions received after this date were accepted and considered. Submissions received are summarised, along with EirGrid's response to same, at the back of the IP SEA.
  - A separate SEA Statement details how environmental considerations, including those raised in consultation, have been integrated into the IP.
- 95 As part of EirGrid's on-going assessment of the country's energy needs and the future requirements of the high voltage transmission network, on 27<sup>th</sup> March 2015 it published *Your*

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*Grid, Your Views, Your Tomorrow - A Discussion Paper on Ireland's Grid Development Strategy.* This document, published nearly seven years after the original *Grid25 Strategy*, takes into account the most up-to-date information available, including technical feasibility, future economic and demand projections and environmental impacts.

96 The North-South 400 kV Interconnection Development is addressed in the context of the 'Proposed Strategy for Grid Development' on pages 30 – 31. Key findings are as follows:

- There remained a “*compelling and clear need for the project*” (p. 31); and
- A new 400 kV AC overhead line is still the most effective and appropriate solution for the project (p. 6).

97 Appendix 1 of the Discussion Paper is a Technical Analysis which provides more information on technical matters underpinning this review of the strategy for grid development. The proposed development is identified as the major reinforcement project in the North-East Region:

*“As part of the Grid25 Strategy, EirGrid carried out an assessment of the northeast region. The report highlighted the need for grid reinforcement and identifies costs, benefits and the consequences of non-action. One of the key reinforcements assumed was the North-South Interconnector. In the re-examination of generation assumptions carried out in chapter 2 of this update, the requirement for increased power to flow between Ireland and Northern Ireland in future years was confirmed”.* (p. 34)

98 The benefits of the proposed development are clearly set out on pages 34 – 35 of Appendix 1 and are:

- Improving competition and economic operation of generators by removing constraints on power flows across the border;
- Improving securing of supply by allowing greater sharing of generation across the island;
- Providing the required flexibility for renewable generation; and
- Ensuring the long-term security of supply for the North-East part of the network of Ireland.

99 The combined value of these benefits is identified as being in the order of €20m per annum in 2020 rising to between €40m - €60m per annum from 2030.

100 In respect of the technology solution for the project, Appendix 1 states:

*“Because of the length and capacity of the interconnector circuit, it is not possible to use AC underground cables for the entire length nor, were it possible, would this technology provide an efficient and reliable option for the operation of the infrastructure into the future.*

*In addition, while underground cables using HVDC technology would be feasible, their use on this project would introduce higher costs to the consumer, would not facilitate future grid connections and reinforcements along the route, and does not comply with best utility practice.” (p. 35)*

101 London Power Associates (LPA) undertook a peer review of the document and technical appendix. This LPA report entitled *External Peer Review of Grid 25 Review (2015) for EirGrid*, is included as Appendix 2 of the Discussion Paper. LPA’s view is *inter alia* that “*the need case remains sound and unchanged*” and it concludes that “*there is a strong need case for this project and that significant benefits will accrue*”.

102 The closing date for feedback on the discussion document was May 22<sup>nd</sup> 2015.

103 *Your Grid, Your Views, Your Tomorrow - A Discussion Paper on Ireland’s Grid Development Strategy* and all associated appendices are included as **Appendix 6** to this report.

#### 4.4 STRATEGIC POLICY CONTEXT – REGIONAL LEVEL

104 Regional planning guidelines also support greater interconnection between the respective electricity systems of Ireland and Northern Ireland, including necessary and / or appropriate reinforcement of the existing transmission systems.

105 As of the 1st June 2014, the eight regional authorities in Ireland have been dissolved and are now incorporated into the Regional Assembly structures. The former Border Regional Authority which included Cavan and Monaghan is now part of the Border, Midlands and West Regional Assembly area which was constituted on 1<sup>st</sup> January 2015.

106 The former Greater Dublin Regional Authority which included Meath is now part of the Midland & Eastern Assembly area which was constituted on 1<sup>st</sup> January 2015.

107 In accordance with Section 21(4) of the *Planning and Development Act, 2000* (as amended) by the Local Government Reform Act, 2014, the regional planning guidelines prepared by a dissolved regional authority and published in respect of the period 2010 to 2022 shall

continue to have effect until a regional spatial and economic strategy is prepared and adopted by the regional assembly concerned.

- 108 The 2010 to 2022 regional plans and policies of relevance to the proposed development are examined below.

#### 4.4.1 Border Regional Authority Planning Guidelines 2010–2022

- 109 The *Border Regional Authority Planning Guidelines 2010-2022* (BRPGs) comprise a long-term strategic planning document which aims to direct the future growth of the Border region (which includes counties Cavan and Monaghan), and seeks to implement the planning framework set out in the NSS. These Regional Planning Guidelines were made following the public consultation process set out in section 24 of the *Planning and Development Act 2000*, as amended. The Guidelines have been prepared having regard to a number of new European Directives, National Plans and Strategies. The vision for the BRPGs is:

*“By 2022, the Border Region will be a competitive area recognised as, and prospering from, its unique interface between two economies, where economic success will benefit all, through the implementation of the balanced development model, which will provide an outstanding natural environment, innovative people, which in themselves, will be our most valuable asset.”* (p. xvi)

- 110 The Guidelines recognise that electricity is the main energy demand in the region and *“the development of more sustainable, competitive, diverse and secure supplies of electricity to support economic and social development is a key challenge for the Region”* (p.26). It is envisaged that *“extending the network into Northern Ireland and the UK through interconnectors, will provide the Region, and the Country, with a secure and reliable electricity supply into the 21st Century.”* (p.26)

- 111 One of the key actions of the Guidelines’ Regional Economic Strategy is to:

*“ESP9 - Upgrade electricity transmission network in accordance with priorities identified in Chapter 5 to secure energy supply to existing users; provide sufficient supply to additional users and facilitate connection of renewable energy sources to the grid.”* (p.82)

- 112 EirGrid is identified in the Guidelines as the body responsible for developing the transmission network in Ireland. Its identified role is *“to ensure that there is adequate network capacity to carry power from new generation stations and to ensure a reliable supply to meet growing demand for electricity”* (p.101). It is further stated in the Guidelines

that *“Local Authorities must consider the development of the grid in all development proposals, to ensure that the grid is not compromised in any way by the proposals.”* (p. 101)

113 The Guidelines recognise that despite the introduction of the single electricity market in November 2007 *“until the second large scale North-South transmission link is completed; there is a transmission constraint between the two jurisdictions on this island, which can constrain the electricity market from delivering the most economic generation to the consumer. This constraint will be alleviated following the completion of the second North–South interconnector”*. (p.102-103) It is further stated that:

*“The need for linkage is important for the two jurisdictions but also from the European perspective, where EU Directives indicate the need for higher integration between countries for delivery and security of supply. The Border Region forms this important link between the two jurisdictions; therefore, the importance of the future development of the transmission network in this Region cannot be underestimated, with respect to the future development of the island’s electricity market and the larger European market.”* (p.102-103)

114 Key issues that need to be addressed for the long-term strategic development of the electricity infrastructure in the Border Regional Authority area include:

- *“The advent of significant amounts of new generation, in particular, generation from renewable sources, that is expected to materialise throughout both the Border Region itself and the West Region;*
- *The requirement to provide enhanced electrical connections between the Republic of Ireland and Northern Ireland; and*
- *Security of supply throughout the Region.”* (p.103)

115 The Energy Policy in relation to infrastructural projects in the Border Region states:

*“INFP23 - Development Plans should facilitate the provision of energy networks in principle, provided that it can be demonstrated that -*

- *the development is required in order to facilitate the provision or retention of significant economic or social infrastructure;*
- *the route proposed has been identified with due consideration for social, cultural and environmental impacts including Habitats Directive Assessment; where required;*



- *the design and type of infrastructure being considered will minimise environmental impacts (including impact upon human beings);*
- *the proposed development is consistent with international best practice with regard to materials and technologies that will ensure a safe, secure, reliable, economic, efficient and high quality network;*
- *in the case of electricity transmission, the undergrounding of lines is considered in the first instance, as part of a detailed consideration and evaluation of all options available in delivering and providing this type of infrastructure; and*
- *where impacts are inevitable mitigation features have been included.” (p.105)*

116 The Guidelines further state that *“in the case of strategic infrastructure development under the Planning and Development Act 2000 (as amended), it is important that Planning Authorities engage in early consultation and discussion with the TSO, on planned bulk transmission infrastructure projects as part of their roles as either competent authority or prescribed body.” (p.106)*

#### **4.4.2 Regional Planning Guidelines for the Greater Dublin Area 2010-2022**

117 The *Regional Planning Guidelines for the Greater Dublin Area 2010-2022* (RPGs) provide a long term strategic planning framework for development having regard not only to the recommendations of the NSS for the Dublin and Mid-East Regions (the Greater Dublin Area (GDA), which includes County Meath), but also, importantly, for the regions surrounding the GDA. Again these Regional Planning Guidelines were made following the public consultation process set out in section 24 of the *Planning and Development Act 2000* as amended.

118 The NSS acknowledges the *“continued strong growth in the Greater Dublin Area but with significant improvement in the regions outside the capital and more particularly in the nine gateway cities and nine hub towns.” (p.13)* The NSS recognises the importance of balanced regional development which is defined in the Strategy as *“developing the full potential of each area to contribute to the optimal performance of the state as a whole - economically, socially and environmentally.” (p.11)*

119 The Regional Strategy Vision anticipates that:

*“The GDA by 2022 is an economical vibrant, active and sustainable international Gateway Region, with strong connectivity across the GDA*

*Region, nationally and worldwide; a region which fosters communities living in attractive, accessible places well supported by community infrastructure and enjoying high quality leisure facilities; and promotes and protects across the GDA green corridors, active agricultural lands and protected natural areas.” (p.32)*

- 120 The RPGs recognise that economic development within the GDA is dependent on the availability and quality of services and utilities including electricity supply. The RPGs state that *“the demand for electricity in the GDA region is expected to increase by over 80% by 2025 and will then be 30% of the demand of the island.”*(p.61) The RPGs identify the key infrastructure needs of the GDA to support the increased demands on the region. Specifically in relation to energy, the guidelines recognise that Ireland’s continued economic growth has resulted in a marked increase in the consumption of electricity since the late 1990s.
- 121 The Guidelines refer to Grid25 and its planned investments within and extending beyond the GDA, specifically stating that *“the North-South interconnector and the Woodland (Meath)-Kingscourt (Cavan) 400 kV line are expected to provide long term capacity between the Republic of Ireland and Northern Ireland (NI) systems and security of supply to the North East and provide essential reinforcement to the transmission grid in the North East.”* (p.133)
- 122 Strategic Policies (PIP) and Recommendations (PIR) in relation to Energy include:
- **Strategic Policy PIP4:** *“That the ICT and energy needs of the GDA shall be delivered through the lifespan of the RPGs by way of investment in new projects and corridors to allow economic and community needs to be met, and to facilitate sustainable development and growth to achieve a strong and successful international GDA Gateway.”* (p.35)
  - **Strategic Recommendation PIR25:** *“That reinforcements and new infrastructure are put in place by the key agencies, and their provision is supported in Local Authority policies, to ensure the energy needs of future population and economic expansion within designated growth areas and across the GDA can be delivered in a sustainable and timely manner and that capacity is available at local and regional scale to meet future needs.”* (p.136)
  - **Strategic Recommendation PIR31:** *“Future corridors for energy transmission or pipelines should avoid creating sterile lands proximate to key public transport corridors, particularly rail routes.”* (p.137)

- **Strategic Recommendation PIR32:** *“Seek the delivery of the necessary integration of transmission network requirements to facilitate linkages of renewable energy proposals to the electricity transmission grid in a sustainable and timely manner; and continued support by all key stakeholders of energy conservation measures.”*(p.137)
- **Strategic Recommendation PIR33:** *“Plans and projects associated with the generation or supply of energy or telecommunication networks that have the potential to negatively impact on Natura 2000 sites will be subject to a Habitats Directive Assessment (HDA) according to Article 6 of the habitats directive and in accordance with best practice and guidance.”* (p.137)

123 The RPGs state that development plans should facilitate the provision of energy networks in principle, provided that it can be demonstrated that:

- *“the development is required in order to facilitate the provision or retention of significant economic or social infrastructure;*
- *the route proposed has been identified with due consideration for social, environmental and cultural impacts;*
- *the design is such that will achieve least environmental impact consistent with not incurring excessive cost;*
- *where impacts are inevitable mitigation features have been included; and*
- *where it can be shown the proposed development is consistent with international best practice with regard to materials and technologies that will ensure a safe, secure, reliable, economic and efficient and high quality network.”* (p.137)

124 The RPG’s further set out *“In the case of strategic infrastructure development under the PDA Act 2000, as amended it is important that planning authorities engage in early consultation and discussion with the Transmission System Operator (TSO - EirGrid) or relevant other planned bulk transmission, or relevant other, infrastructure projects as part of their roles as either the competent authority or prescribed body.”* (p.137)

#### **4.5 STRATEGIC POLICY CONTEXT – LOCAL LEVEL**

125 Development plans and policies of local authorities also reinforce the planning policy commitment to greater interconnection between the electricity systems of the two jurisdictions, and / or support reinforcement of the existing transmission systems in order to promote growth and investment in the respective counties.

126 The county development plans for Monaghan, Cavan and Meath have been reviewed. This section focuses on key policies for energy infrastructure and environmental protection. In addition a list of other potentially relevant polices and provisions of the three county development plans are contained in **Appendix 7** of this planning report.

127 The proposed development does not cross lands included within a Local Area Plan (LAP).

#### 4.5.1 Monaghan County Development Plan 2013-2019

128 The *Monaghan County Development Plan 2013-2019* (the Monaghan CDP) sets out the overall strategy for the proper planning and sustainable development of the entire county of Monaghan. Sections relevant to the subject proposal are set out below.

##### **Energy Provision**

129 In relation to Energy Provision, Section 5.7.4 of the Monaghan CDP states that “*The development of secure and reliable energy infrastructure is recognised as a key factor for maintaining and promoting growth together with attracting investment to the County.*” (p.108)

130 Section 5.7.5 of the Monaghan CDP notes, in relation to energy provision, that “*the ESB and EirGrid have a statutory responsibility to maintain and enhance electricity supply networks and both continue to improve the network of supply around the country.*” (p.108)

131 Objectives for energy and renewable resources (ERO) are set out on pages 109-110 of the Monaghan CDP. Relevant objectives are:

- **“ERO 1** *Ensure that all plans and projects relating to energy and renewable resources development are subject to policies AAP1-AAP5 contained within Chapter 4, Environment and Heritage, of the Monaghan County Development Plan 2013-2019.*
- **ERO 2** *Promote and support an optimal mix of renewable energy generation within the county to assist in meeting the targets set out in the National Renewable Energy Action Plan.*
- **ERO 3** *Promote and encourage the use of renewable energy sources in appropriate locations, where this can be done in an environmentally sensitive manner.*
- **ERO 8** *Encourage efforts to reduce energy usage across all sectors in support of the implementation of the National Energy Efficiency Action Plan 2007-2020.*
- **ERO 10** *Facilitate electricity and gas infrastructure improvements/installations which will not result in adverse impacts on the natural or built heritage of the county.*

- **ERO 12** Consider the identification of a strategic corridor in the county for major energy infrastructure”.

### Protection of the Environment

132 Policies in respect of landscape are set out on page 58 of the Monaghan CDP and support *inter alia* Landscape Policy Objective LPO1, to “Sustain, conserve, manage and enhance the landscape diversity, character and quality of the County for the benefits of current and future generations.” The landscape policies (LPP) are:

- **LPP 1** Ensure the preservation and uniqueness of the county’s landscape by having regard to the character, value and sensitivity of landscape as identified in the County Monaghan Landscape Character Assessment, August 2008 (or any subsequent versions) when determining a planning application.
- **LPP 2** Protect the landscapes and natural environments of the county by ensuring that any new developments in designated sensitive rural landscapes do not detrimentally impact on the character, integrity, distinctiveness or scenic value of the area.
- **LPP 3** Development which fails to appropriately integrate into the landscape with due regard to visual impact, landscape amenity, the protection of skylines, amenities such as lakes, designated walkways, heritage sites and recreational and tourist facilities shall be resisted.” (p. 58)

133 The Monaghan CDP also identifies two principal areas of outstanding landscape quality which are designated as ‘Areas of Primary Amenity Value’. These areas are Lough Muckno and its Environs, Sliabh Beagh and Bragan Mountain Areas. The Monaghan CDP (on pages 59 to 60) states: “Development will only be permitted in these areas in exceptional circumstances where the integrity of the landscape is not threatened. Any intrusive development, where such development would normally be exempt, is removed from the category of exempted development”. Section 4.5.1 of the Monaghan CDP contains policies for Areas of Primary Amenity Value (PAP) which include the following :

**PAP 1** Limit development in Areas of Primary Amenity Value to those where the applicant has proven to the satisfaction of the Planning Authority that the proposed development would not threaten the integrity of these areas.”

134 The Monaghan CDP includes a number of other objectives and policies. These are considered under the relevant environmental topic in the EIS (refer to **Volumes 3C** and **3D** of the EIS). Other potentially relevant policies and provisions of the Monaghan CDP plan are also contained in **Appendix 7** of this report.

#### 4.5.2 Cavan County Development Plan 2014-2020

135 The *Cavan County Development Plan 2014-2020* (the Cavan CDP) sets out the overall strategy for the proper planning and sustainable development of the entire County. Sections relevant to the subject proposal are set out below.

##### **Energy Infrastructure**

136 Section 4.7.1 of the Cavan CDP makes provision for new high voltage electrical infrastructure, including high voltage transformer stations and new overhead transmission power lines:

*“Cavan County Council supports the provision of new high voltage electrical infrastructure, including high voltage transformer stations and new overhead transmission power lines. This infrastructure will be required for reinforcement of the transmission network, related to growing electricity demand from existing customers, as well as, the connection of new generation and large demand customers e.g. industry.” (p. 134)*

137 Section 4.7.1 of the Cavan CDP recognises that overhead power lines are faster and easier to repair and not subject to excavating activities; however, the CDP indicates that underground cable will be encouraged in heavily populated areas.

138 The CDP acknowledges that *“The development of secure and reliable electricity transmission infrastructure is recognised as a factor for supporting economic development and attracting investment to the area”* and also advises that *“Cavan County Council takes cognisance of the ‘Government Policy Statement on the Strategic Importance of Transmission and Other Energy Infrastructure’ issued by the Department of communications, Energy and Natural resources”* (p. 134-135).

- 139 The following Electrical Objectives (PI – Physical Infrastructure) are set out in Section 4.7.1 of the Cavan CDP:

**“PIO106** *Where development is of a scale that requires approval under the Strategic Infrastructure Act, 2006, the applicants / promoters shall include as an integral part of their planning approval / planning application documentation, a study by a suitably qualified independent person / body demonstrating whether the proposal is incorporating the most appropriate technology available and method of construction including a comprehensive examination (in the case of transmission lines) of the under-grounding of such services. The applicant shall also ensure that planning applications involving the siting of electricity power lines and other overhead cables, consider in full, the impacts of such development on the landscape, nature conservation, archaeology, residential and visual amenity.*

**PIO107** *In routing new overhead power lines, on the grounds of general amenity, and where possible. EirGrid and ESB Network shall seek to achieve the maximum separation distance to residential and other property generally occupied by human beings while also seeking to avoid, or minimise impact upon, other identified technical and environmental constraints. All proposals for new residential and other development in proximity to existing overhead power lines shall be assessed in reference to the provisions of the Electricity (Supply) (Amendment) (No. 2) Act, 1934 regarding separation distance. Construction works occurring in proximity to power lines shall have regard to relevant published Electricity Supply Board Guidelines such as the “Code of Practice for Avoiding Danger from Overhead Electricity Lines” and other nationally accepted standards or guidelines.*

**PIO108** *To support the infrastructural renewal and development of electricity networks in the County and recognise the development of secure and reliable electricity transmission infrastructure as a key factor for supporting economic development and attracting investment to the area and to support the infrastructural renewal and development.*

**PIO109** *Cognisance will be taken of the ‘Code of Practice’ between the DECLG and EirGrid (2009).*

**PIO110** *To ensure that High Voltage electrical lines must be constructed and monitored in accordance with current ‘Guidelines of the International Commission on Non-Ionising Radiation Protection’ (ICNIRP) and Commission for Energy Regulation (CER).*

***PIO111** To support the undergrounding of HV powerlines, where technically feasible, economically viable and environmentally appropriate.” (p.135-136).*

- 140 Chapter 4 of **Volume 3B** of the EIS outlines the transmission and technology alternatives considered for the proposed development, including a comprehensive and up-to-date examination of the potential undergrounding of electricity transmission infrastructure generally, and in respect of the proposed development. The examination includes consideration of EirGrid commissioned reports and other independent technical studies of relevance (including *inter alia* the Ecofys Report<sup>19</sup>, the International Expert Commission (IEC) Meath-Tyrone Report (on a review of the case for, and cost of undergrounding all or part of the Meath Tyrone 400 kV Interconnection Development).

### **Renewable Energy**

- 141 It is stated on p. 137 *“It is an objective of the Planning Authority to encourage and facilitate renewable forms of energy production”*. The Plan also contains 20 core strategy policies which will inform and link together the differing sections of the plan. Core Strategy Policy CSP15 pertains to the generation of energy from renewable sources, this policy states:

*“**CSP15** Proposals for the generation of energy from renewable sources will be supported, provided that the wider environmental benefits are not outweighed by any detrimental impacts of the proposed development, (including any electricity transmission facilities needed, on the landscape, public safety, and the local environment.” (p.68)*

- 142 The Cavan CDP includes a number of other objectives and policies. These are considered under the relevant environmental topic in the EIS (refer to **Volumes 3C** and **3D** of the EIS). Other potentially relevant policies and provisions of the Cavan CDP are also contained in **Appendix 7** of this planning report.

### **4.5.3 Meath County Development Plan 2013-2019**

- 143 The *Meath County Development Plan 2013–2019* (the Meath CDP) sets out the overall strategy for the proper planning and sustainable development of the entire county of Meath. Sections relevant to the subject proposal are set out below.

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<sup>19</sup> Ecofys (2008) on behalf of DCENR. *Study on the Comparative Merits of Overhead Electricity Transmission Lines versus Underground Cables*. Available at [www.dcenr.gov.ie](http://www.dcenr.gov.ie)



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**Energy**

- 144 Chapter 8 of the Meath CDP outlines the policies and objectives in relation to Energy and communications. Meath County Council states in the CDP that the availability of energy is of critical importance to the continued development and expansion of employment in County Meath (Section 8.1.1). It continues: *“Meath County Council recognises the essential requirement for energy production and distribution. The two main energy networks serving County Meath are electricity and gas. With increased residential development in the county and a drive for more industrial, commercial and employment generating uses, it will be important to ensure that the capacity of the energy networks is sufficient to meet these demands”* (p.194).
- 145 Section 8.1.2 of the Meath CDP outlines the *“Electricity and Gas Networks: Achievements and Opportunities”* and notes that EirGrid and ESB have a number of *“major electrical infrastructure projects planned for the coming years to cater for normal domestic and commercial supply”* (p.194). The Meath CDP further states *“future projects earmarked by EirGrid in County Meath include the North-South 400kV interconnector and the construction of a 2<sup>nd</sup> transformer in the Woodland Station.”* (p.195)
- 146 Policies in relation to energy and communications (EC POL) are set out on pages 199-201. Relevant policies are:
- **“EC POL 1** - *To facilitate energy infrastructure provision, including the development of renewable energy sources at suitable locations, so as to provide for the further physical and economic development of Meath.*
  - **EC POL 2** - *To support international, national and county initiatives for limiting emissions of greenhouse gases through energy efficiency and the development of renewable energy sources which makes use of the natural resources of the county in an environmentally acceptable manner, where it is consistent with proper planning and sustainable development of the area.*
  - **EC POL 3** - *To encourage the production of energy from renewable sources, such as from biomass, waste material, solar, wave, hydro, geothermal and wind energy, subject to normal proper planning considerations, including in particular, the potential impact on areas of environmental or landscape sensitivity and Natura 2000 sites.*
  - **EC POL 4** - *To support the National Climate Change Strategy and, in general, to facilitate measures which seek to reduce emissions of greenhouse gases.*
  - **EC POL 11** - *To support and facilitate the development of enhanced electricity and gas supplies, and associated networks, to serve the existing and future needs of the County.*

- **EC POL 12** - *To co-operate and liaise with statutory and other energy providers in relation to power generation in order to ensure adequate power capacity for the existing and future needs of the County.*
- **EC POL 13** - *To ensure that energy transmission infrastructure follows best practice with regard to siting and design particularly to ensure the protection of all important recognised landscapes.*
- **EC POL 16** - *To require that the location of local energy services such as electricity, be underground, where appropriate.*
- **EC POL 18** - *To generally avoid the location of overhead lines in Natura 2000 sites unless it can be proven that they will not affect the integrity of the site in view of its conservation objectives i.e. by carrying out an appropriate assessment in accordance with Article 6(3) of the E.U. Habitats Directive.*
- **EC POL 19** - *To promote the undergrounding of existing overhead cables and associated equipment where appropriate.”*

147 Objectives in relation to energy and communications (EC OBJ) are set out on page 202. Relevant objectives are:

- **“EC OBJ 1** - *To ensure that all plans and projects associated with the generation or supply of energy or telecommunication networks will be subject to an Appropriate Assessment Screening and those plans or projects which could, either individually or in-combination with other plans and projects, have a significant effect on a Natura 2000 site (or sites) undergo a full Appropriate Assessment.*
- **EC OBJ 2** - *To support the review and implementation of the actions of the Meath County Council Climate Change Strategy and Energy Management Action Plan 2011-2012, ‘Think Globally Act Locally’.*
- **EC OBJ 3** - *To investigate the preparation of a renewable energy strategy promoting technologies which are most viable in County Meath.*
- **EC OBJ 4** - *To seek the delivery of the necessary integration of transmission network requirements to facilitate linkages of renewable energy proposals to the electricity transmission grid in a sustainable and timely manner.”*

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**Protection of the Environment**

- 148 Section 9.6 of the Meath CDP outlines the policies and objectives in relation to Cultural Heritage (CH). Objectives and policies in respect of designed landscapes, historic parks, gardens and demesnes are set out in Section 9.6.13 of the Meath CDP (p. 224):

*“CH OBJ 22 To discourage development that would lead to a loss of, or cause damage to, the character, the principal components of, or the setting of historic parks, gardens and demesnes of heritage significance.*

*CH OBJ 23 To require that proposals for development in designed landscapes and demesnes include an appraisal of the landscape, designed views and vistas, and an assessment of significant trees or groups of trees, as appropriate.”*

- 149 Section 9.7 of the Meath CDP outlines objectives and policies in respect of the natural heritage (NH) which include *inter alia*:

*“NH POL 5 To permit development on or adjacent to designated Special Areas of Conservation, Special Protection Areas, National Heritage Area or those proposed to be designated over the period of the plan, only where an assessment carried out to the satisfaction of the Meath County Council, in consultation with National Parks and Wildlife Service, indicates that it will have no significant adverse effect on the integrity of the site.” (p.228)*

- 150 A strategic policy in respect of landscape character (LC SP) assessment seeks *“To protect the landscape character, quality and local distinctiveness of County Meath in accordance with relevant government policy and guidelines and the recommendations included in Meath Landscape Character Assessment (2007) in Appendix 7.” (LC SP 1 on p. 239)*. Supporting landscape character objectives (LC OBJ) include *inter alia*:

*“LC OBJ 1 To seek to ensure the preservation of the uniqueness of all landscape character types, and to maintain the visual integrity of areas of exceptional value and high sensitivity. (p. 239)*

*LC OBJ 2 To assess development proposals having regard to the recommendations contained in the Meath Landscape Character Assessment 2007. (p. 239)*

*LC OBJ 3 To work in partnership with key stakeholders to promote County Meath as a centre for cultural heritage education and learning.” (p. 239)*

***LC OBJ 5** To preserve the views and prospects and the amenity of places and features of natural beauty or interest listed in Appendix 12 and shown on Map 9.5.1 from development that would interfere with the character and visual amenity of the landscape.” (p. 240)*

- 151 The Meath CDP includes a number of other objectives and policies. These are considered under the relevant environmental topic in the EIS (refer to **Volumes 3C** and **3D** of the EIS). Relevant policies and provisions of the Meath CDP plan are also contained in **Appendix 7** of this planning report.

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## 5 PLANNING APPRAISAL

### 5.1 INTRODUCTION

- 1 This section provides the applicant's appraisal of the proposed development in relation to EU, national, regional and local planning policies and objectives, in order to assist consideration of whether the proposed development is consistent with proper planning and sustainable development.
- 2 This section of the report also addresses other issues of potential relevance for the wider decision-making process to be undertaken by An Bord Pleanála (the Board) in its consideration of the application for planning approval of the proposed development.
- 3 Other key areas of the consideration of the proposed development from the perspective of proper planning and sustainable development include those related to visual and landscape impacts, impacts on population, ecology and cultural heritage, all of which are addressed in detail in the relevant chapters of the Environmental Impact Statement (EIS) submitted with this application (refer to **Volume 3** of the application documentation).

### 5.2 NEED FOR THE PROPOSED DEVELOPMENT

- 4 The need for the project has been outlined in **Section 1.6** of this report, and in Chapter 2 of **Volume 3B** of the EIS. In summary, the proposed interconnector will effectively overcome the risk of system separation and, together with associated system reinforcement, will increase the transfer capacity between the transmission systems of Northern Ireland and Ireland. Moreover, the development of a second interconnector will have the strategic benefits of improving market competition in the context of the Single Electricity Market (SEM), improving security of supply, supporting the development of renewable power generation, and re-enforcement of the north-east area.
- 5 Strategic development policy is a practical interpretation of obligations under the various European Union (EU) statements of law and policy referred to in **Chapter 4** of this report. The fact that a second north-south interconnector is listed as a priority project (Project of Common Interest (PCI)) in Delegated Regulation 1391/2013 to be given 'priority status' is a clear endorsement at EC level, of the strategic importance of the proposed development.
- 6 The relevant provisions of the *National Development Plan 2007–2013*, *National Spatial Strategy 2002–2020*, the Government White Paper *Delivering a Sustainable Energy Future for Ireland* and EirGrid's own grid development strategies (in particular its recently published Discussion Paper – *Your Grid, Your Views, Your Tomorrow* – which includes a Technical Analysis) have been outlined in **Chapter 4** of this report. The provisions of national policy

also provide support for the development of, and investment in, the electricity transmission network in general as it is recognised as a key element of infrastructure necessary for economic growth. Furthermore, there is specific national strategic policy support for the development of a second north-south electricity interconnector.

7 In particular, the *Government Policy Statement on the Strategic Importance of Transmission and Other Energy Infrastructure* (July 2012) explicitly endorses the planned development of a second north-south electricity interconnector. It is also noted that public acceptability in the delivery of grid infrastructure will be a major challenge.

8 The Statement sets out:

*“The Government endorses the major investment underway in the high voltage electricity transmission system under EirGrid’s Grid 25 Programme. Grid 25 is the most important investment in Ireland’s transmission system for several generations and will position our energy system for decades to come. The Grid 25 projects, including Grid West in Mayo, the Meath-Tyrone transmission line and GridLink in the South and East are vital developments for the regions and for the economy and society as a whole. The benefits include:*

- *Securing future electricity supply for homes, businesses, farms, factories and communities.*
- *Underpinning sustainable economic growth and new jobs in the regions.*
- *Enabling Ireland to meet its renewable energy targets and reducing the country’s dependence on imported gas and oil and reduce CO<sub>2</sub> emissions”.*

9 The proposed development is therefore supported by national policy and objectives with which the Board is obliged to have regard.

10 In addition, the relevant sections of the *Regional Planning Guidelines for the Border Region 2010–2020* and the *Regional Planning Guidelines for the Greater Dublin area 2010–2020* have been outlined in **Chapter 4** of this report. It is clear that the proposed development is supported at the regional policy level as an element of the necessary and appropriate strategic upgrading of the transmission network to facilitate long-term development.

11 Finally, the county development plans (CDPs) are relevant in terms of assessing whether the proposed development is consistent with the proper planning and sustainable development of the areas in which it is proposed to be located.

- 12 The key strategic policies and objectives of the Monaghan, Cavan and Meath CDPs considered relevant to this proposed development relate to energy networks, energy transmission and power lines. All three CDPs contain policies and / or objectives which endorse improvement of infrastructure, including energy infrastructure in order to facilitate economic growth; they also contain policies relating to the protection of the natural and built environment.

### 5.3 CONSIDERATION OF ALTERNATIVES

- 13 Alternative project solutions have been examined in detail at both a strategic level and local level in Chapters 4 and 5 of **Volume 3B** of the EIS. Of particular note in this regard, Section 3 of the Scoping Opinion of An Bord Pleanála in respect of the EIS (refer to Appendix 1.4, **Volume 3B Appendices**) which refers to *Alternatives* states:

*“An outline of the alternatives considered prior to the selection of the preferred development option. This should extend to each aspect of development, ranging from alternatives considered at national and regional levels, to design details at a local level, and should include -*

***Item 3: “Alternative technologies, including the use of underground cables or partial undergrounding of the route”.*** [emphasis added]

- 14 The consideration of technology alternatives has been carried out by EirGrid in accordance with, and in reference to, governing National and European legislation and having regard to its exclusive function as Transmission System Owner (TSO) i.e. *“to operate and ensure the maintenance of and, if necessary, develop a safe, secure, reliable, economical and efficient electricity transmission system”*. This consideration had regard to the formal scoping opinion of the Board as the competent authority.
- 15 As set out in some detail at **Section 2.1.2** of this report, EirGrid has undertaken a comprehensive review process which considered a number of technology options having regard to the nature and parameters of the proposed development, and its obligation, within the terms of its licence as TSO (as set out above). These include the use of AC or DC technologies and overhead and underground options, including partial undergrounding of the circuit. This is addressed in some significant detail in **Volume 3B** of the EIS. Following the review of a number of international studies (including the Government IEC Review and Ecofys Report), as well as other third party studies, together with other studies commissioned by EirGrid (carried out by international experts), EirGrid has concluded that the proposed development be entirely comprised of 400 kV AC overhead line (OHL). Furthermore, after consideration of alternative support structures, the IVI tower is the preferred support structure for the proposed 400 kV OHL, with the exception of the approach

to the southern terminus of the circuit at Woodland substation, where the circuit will be carried on the free side of existing (and long established) double-circuit structures.

- 16 EirGrid has also undertaken a comprehensive route selection process for the proposed development based on the preferred technology solution. In this regard, the proposed alignment has been subject to an extensive examination of locational alternatives. The mitigation of environmental and other impacts by design has been a fundamental aspect of EirGrid's route selection and line design process, and the proposed line design is considered to represent the best overall option amongst the main alternatives considered through the route development process.

#### 5.4 ENVIRONMENTAL IMPACT STATEMENT (EIS)

- 17 This application for approval includes an EIS prepared in accordance with the requirements of EU and Irish national law, policy and practice, including Annex IV of the codified EIA Directive, and Schedule 6 of the *Planning and Development Regulations 2001* (as amended).

- 18 The EIS has also been undertaken having regard to *inter alia* the following documents:

- A Scoping Opinion on the information to be contained in the EIS, prepared by An Bord Pleanála (see Appendix 1.4, Volume **3B Appendices**, of the EIS);
- European Commission, *Guidelines for the Assessment of Indirect and Cumulative Impacts as well as Impact Interactions* (May 1999);
- European Commission, *Guidance on EIA Screening* (June 2001);
- European Commission, *Guidance on EIA Scoping* (June 2001);
- European Commission *Guidance on EIA – EIS Review* (2001);
- Environmental Protection Agency (EPA), *Guidelines on the information to be contained in Environmental Impact Statements* (March 2002);
- EPA, *Advice Notes on Current Practice (in preparation of Environmental Impact Statements)* (September 2003) and, in particular, guidelines given for Type 20 projects outlined in that document;
- European Commission, *Guidance on the Application of the Environmental Impact Assessment Procedure for Large-scale Transboundary Projects* (May 2013); and



- European Commission, *Guidance on Integrating Climate Change and Biodiversity into Environmental Impact Assessment* (April 2013).

#### 5.4.1 Conclusions of the EIS

19 The conclusions of the EIS are briefly summarised below. Full details and a Non-Technical Summary are provided in **Volume 3** of the application documentation):

##### **Human Beings (Population, Land Use, Tourism and Amenity, EMF)**

20 There will be wider economic benefits arising from the improvements to the electricity grid on the island of Ireland. It is also considered that the landscape and visual resources of the study area will not deteriorate to a significant degree and the overall impact on population and residential amenity is therefore restricted to those receptors / areas within close proximity to the towers and OHL.

21 The proposed development will have an imperceptible impact on land use arising from the construction of towers; the residual impacts are either imperceptible or slight adverse on the majority of land parcels along the alignment. Moderate adverse impacts will arise on certain land parcels due to potential restrictions on farm yard development, at the construction storage compound due to damage to soil, and on forestry land parcels where the trees will have to be cleared within a maximum 74m corridor. Major adverse impacts will arise on a very limited number of land parcels due to potential restrictions on the operation of an intensive horticultural enterprise and on two forestry land parcels where the trees will have to be cleared within a maximum 74m corridor.

22 Impacts to tourism and amenity will not be direct as no tourist sites will be physically impacted by the proposed development. Negative impacts on tourism and amenity are anticipated to be limited to indirect localised visual impacts on the landscape in close proximity to the OHL. The Boyne Valley Driving Route, Bective Abbey and a localised short section of the Monaghan Way are the tourism assets with the potential to experience such visual impacts.

23 Notwithstanding conservative assumptions about the operating conditions assumed for the EMF calculations (that would tend to overestimate field levels), the EMF from the proposed 400 kV line are still below EMF guidelines of Ireland and the EU. A survey of scientific research on topics relating EMF to health of humans and other species did not show that EMF at these levels would have adverse effects on these populations. This evaluation is consistent with reviews by national and international health and scientific agencies.

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**Flora and Fauna**

- 24 The study area is a highly managed landscape dominated by habitats of low ecological value. The key ecology receptors are rivers (including the River Blackwater and Boyne – European sites), boundary hedgerows / treelines, wetlands (in County Monaghan) and Whooper Swans. The project design has sought to minimise ecology impacts insofar as possible by locating towers off key ecological receptors such as wetlands and hedgerows of potentially high ecological value, and away from rivers / streams (and associated riparian habitats). This is a key approach and best practice for minimising impacts to relevant ecology receptors. It is concluded that impacts to key ecological receptors including key groups identified will be minor or imperceptible once construction, reinstatement and management follow best practice procedures and the recommended mitigation measures are implemented.

**Noise**

- 25 It is predicted that the development as designed, inclusive of recommended mitigation will not have a significant noise and vibration impact on sensitive receptors.

**Soils, Geology and Hydrogeology**

- 26 The construction phase of the proposed development will impact on the ground and geological conditions (including soil, subsoil and bedrock) through the use of temporary access routes and excavations required for the tower bases, the temporary construction material storage yard, and the substation. Potential impacts include accidental spillages of fuels, which could impact on soil, bedrock and groundwater quality, if allowed to infiltrate to ground. However, with the implementation of the mitigation measures proposed, the predicted impact is considered to be short term and imperceptible.
- 27 The tower locations have been selected to avoid known areas of lacustrine deposits, intact peat and cutover peat where possible. Intact peat was not identified at any tower location along the line route. Accordingly, it is considered that the excavations required for the construction of the principal elements of the proposed development will have no adverse impacts on the more sensitive peat ecosystem.
- 28 With regard to the operational phase of the development, no significant impacts are predicted on the local geological or hydrogeological environment with the implementation of mitigation measures. The overall predicted impact on the soils and geology is therefore considered to be short term and imperceptible.

**Water**

- 29 The construction phase of the proposed development may impact on the water conditions through the use of temporary access routes and excavations required for the tower bases.

Potential impacts to the underlying water environment could derive from accidental spillages of fuels. However, with the implementation of the mitigation measures proposed no significant adverse effects are predicted on the water environment as a result of the construction phase of the proposed OHL. With regard to the operational phase of the development, no significant impacts on the local water environment are predicted. The predicted impact on the water environment is therefore considered to be short term and negligible.

### **Air – Quality and Climate**

30 The development will have positive long term residual impacts on greenhouse gas emissions as it will facilitate further development and connection of renewable energy sources thereby reducing the dependence on fossil fuels with consequent reduction in greenhouse emissions. In terms of dust no significant impacts are predicted following the implementation of good construction practice and appropriate mitigation measures. Traffic emissions themselves will not give rise to significant air quality effects from vehicular emissions.

31 With the implementation of mitigation measures no significant local air quality effects are predicted.

### **Landscape**

32 Over the full length of the proposed development, the residual unavoidable impacts will include adverse effects on landscape character and on unscreened views within 600-800m of the alignment. These effects will be particularly noticeable where the transmission line crosses roads, where hedgerows are low and / or panoramic views are available. Some areas that are particularly flat or elevated in relation to the line will experience visual effects at distances up to 1km.

33 Specific identified sensitive locations along the alignment which will experience residual unavoidable impact include: a plateau and valley close to the jurisdictional border with Northern Ireland (including a section of the Monaghan Way), the setting of the Fair of Muff, a scenic view east of Shantonagh, the vicinity of a number of small lakes, the locations where towers need to cross drumlins to avoid other constraints, the Kilmainhamwood River valley west of Kilmainhamwood, Brittas Estate, the Blackwater River Valley at Teltown and the Boyne River Valley at Bective.

### **Material Assets - General**

34 The construction and operation of the proposed development will have no significant impacts on material assets; adherence to mitigation measures during construction will ensure there are no residual impacts associated with the proposed development.

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**Material Assets - Traffic**

- 35 Due to the length of the proposed line, traffic will be dispersed over a large area during the construction phase. Access to the individual sites will generally be achieved via existing field accesses and existing internal tracks where available. It is proposed that a material storage yard, located in the townlands of Monaltyduff and Monaltybane, Carrickmacross, County Monaghan will be used to store materials for distribution to the individual sites. Higher volumes of traffic are anticipated at this location as vehicles will be concentrated in this location prior to dispersing to individual sites.
- 36 Heavy vehicles will be used to construct the transmission line. Local and minor roads are particularly sensitive to the increase in heavy vehicles as these roads are typically not designed to accommodate large numbers of these types of vehicles. The potential for impacts to the pavement structure, verges, boundary treatments etc. are all increased as is disturbance caused to the local community in relation to noise, vibration, dust and air quality impacts.
- 37 The operational phase of the proposed development will generate minimal volumes of traffic. The construction phase of the proposed development will generate significant, albeit temporary, volumes of traffic because the primary means of transporting materials and labour to / from site will be via the existing public road network. Despite the scale of the proposed development, the volumes of vehicles required to attend each individual construction location along the length of the linear development will be relatively low and this traffic will be spread out over several weeks.

**Cultural Heritage**

- 38 The appraisal found that there will be no direct, physical impacts on the upstanding remains of previously recorded archaeological monuments. It was noted that there is the potential that subsurface archaeological remains associated with a number of sites could be impacted on by the proposed development during the construction stage (including those arising from construction traffic passing in close proximity). Recommendations to prevent or mitigate impacts include demarcating appropriate buffers around sites, supervision of vegetation clearance, archaeological testing and / or archaeological monitoring of groundworks. In the event of archaeological features being located in the course of the archaeological monitoring / testing the relevant authorities shall be contacted immediately to determine the further archaeological resolution of the site, including if necessary archaeological excavation or the preservation in situ of archaeological remains. These mitigation measures will be implemented at the construction phase to minimise and / or eliminate impacts.
- 39 The proposed development traverses an area of high archaeological potential in the vicinity of Taitin (Teltown), the Teltown Zone of Archaeological Amenity (ZAA). Although there are

no archaeological features noted in closed proximity to the proposed development, specific mitigation measures are recommended for construction work in this region. With regard to architectural heritage, potential direct impacts may occur at four sites. These impacts are all related to construction traffic and appropriate mitigation will ensure there are no direct, physical impacts. Similarly construction work and access will be required within eight demesnes that are listed in the NIAH (National Inventory of Architectural Heritage) garden survey. There will be an impact on some demesne woodland, demesne boundaries and field boundaries within demesne landscapes to achieve clearances required for the overhead line.

- 40 Given the upstanding linear form of the proposed development it is acknowledged that the greatest potential for impacts constitutes impacts on the setting of cultural heritage sites during the operational phase. Sites where it was considered that the significance of the impact on their setting would be moderate or greater include 40 SMR's (Sites and Monuments Record), six demesnes listed on the NIAH garden survey and 3 protected structures. It is also noted that there will be an impact on the setting of the Teltown ZAA of moderate significance throughout the operational phase.

## **5.5 OTHER MATTERS**

### **5.5.1 Separation Distance to Dwellings**

- 41 Throughout the consultation process in respect of the proposed development, queries have been made regarding the proximity of transmission infrastructure to dwellings. The existence and potential proximity of dwellings to a planned circuit is always a significant issue taken into consideration by line routeing specialists during the line design (or detailed route alignment) process. In this respect the existence and potential proximity of dwellings was a significant consideration taken into account by EirGrid and its expert advisors in the line design and alignment for the proposed development, the subject matter of this application for planning approval.
- 42 There are no established route planning and design guidelines for transmission infrastructure in Ireland. On the grounds of general amenity, where possible EirGrid will avoid routing OHL transmission infrastructure close to residential areas. With respect to individual houses, the aim is always to achieve the maximum separation distance between dwellings and the planned transmission line, while also seeking to avoid, or minimise impact upon, other identified technical and environmental constraints. In this context, EirGrid will seek, where possible, to achieve a lateral clearance of at least 50 metres from the centre of a proposed alignment (i.e. the central conductor) to the nearest point of a dwelling. It should be noted that the 50 metre distance is only a routing aim associated with matters of general amenity, and is not associated with distances that are required for electrical clearance.

43 **Table 5.1** summarises the dispersion of houses within 200 metres of the centre line of the proposed development (specifically the 400 kV element of the proposed development). By avoiding urban areas and residential clusters in the route selection process, 71 No. dwellings are located within 100m of the proposed development along the approximately 103.35km length of the proposed circuit; of these, two dwellings are located within 50 metres, although it should be noted that these two properties are located along the long established existing Oldstreet to Woodland 400 kV circuit.

44 This achieved separation distance along the approximately 100.5km of new OHL in Monaghan, Cavan and Meath must be considered in the context of a receiving environment where the rural population is relatively dispersed (living in residential clusters, ribbon development along roads, or one-off housing), and in the context of a route selection strategy which seeks to avoid, or minimise impact upon, other identified technical and environmental constraints.

**Table 5.1: Distance from Centreline of Line Route to Residential Dwellings**

Distance	Total No. of Residential Dwellings	Breakdown by Study Area
0-50m (Source: 1:2,500 Planning Drawings)	2	0 - CMSA 2 - MSA* (*both properties are located along the existing Oldstreet to Woodland OHL)
50m-100m (Source: 1:2,500 Planning Drawings)	69	approx. 39 - CMSA approx. 30 MSA* (*this includes 7 No. dwellings along the existing Oldstreet to Woodland OHL)
100m-150m (Source: 1:2,500 Planning Drawings)	103	approx. 47 CMSA approx. 56 – MSA* (*this includes 6 No. dwellings along the existing Oldstreet to Woodland OHL)
150m-200m (Source: 1:2,500 Planning Drawings)	124	approx. 50 CMSA approx. 74 - MSA* (*this includes 8 No. dwellings along existing Oldstreet to Woodland OHL)

**Source:** GeoDirectory, 1:2,500 Planning Drawings and planning permissions information

45 **Table 5.2** summarises the dispersion of houses within 200 metres of the proposed modifications to the existing Louth-Rathrussan 110 kV, Lisdrum–Louth 110 kV and Arva-Navan 110 kV overhead transmission lines.

**Table 5.2: Distance from Centreline of Modifications to the Existing 110 kV OHLs to Residential Dwellings**

Distance	Total No. of Residential Dwellings	Breakdown by Study Area
0-50m (Source: 1:2,500 Planning Drawings)	1	0 - Louth-Rathrussan (CMSA) 1 - Lisdrum–Louth (CMSA) 0 - Arva-Navan (MSA)
50m-100m (Source: 1:2,500 Planning Drawings)	7	4 - Louth-Rathrussan (CMSA) 0 - Lisdrum–Louth (CMSA) 3 - Arva-Navan (MSA)
100m-150m (Source: 1:2,500 Planning Drawings)	5	1 - Louth-Rathrussan (CMSA) 1 - Lisdrum–Louth (CMSA) 3 - Arva-Navan (MSA)
150m-200m (Source: 1:2,500 Planning Drawings)	11	3 - Louth-Rathrussan (CMSA) 3 - Lisdrum–Louth (CMSA) 5 - Arva-Navan (MSA)

Source: GeoDirectory, 1:2,500 Planning Drawings and planning permissions information

## 5.5.2 Potential Impact on Property Values

46 Another issue raised during the public consultation process in respect of the proposed development is the concern that the proposed OHL will cause a significant negative impact on property values (see *Public and Landowner Consultation Report, Volume 2B* of the application documentation). In relation to this matter, regard is had to the provisions of the Environmental Protection Agency (EPA) *Advice Notes on Current Practice (in the preparation of Environmental Impact Statements)* (2003), wherein it is stated in respect of Common Problems (Section 5) that the topic of Human Beings can “rapidly expand to include many topics (such as property prices, employment creation or commercial competition) outside the scope of an Environmental Impact Statement” (p. 131).

47 Reference is also made to Section 2.2.3 – Maintain Focus and Scope – of the EPA *Guidelines on the information to be contained in Environmental Impact Statements* (2002) which notes:

*“Effectiveness and efficiency in EIA are most easily achieved where all parties ensure that documentation and analysis is confined to those topics and issues which are explicitly described in the relevant legislation. It is important for all parties to maintain vigilance against the use of EIA to evaluate a wide range of related, but not directly, environmental topics – no matter how well-intentioned or seemingly convenient”.*

- 48 The EIS therefore does not address the issue of property value or potential devaluation per se. However, certain environmental pathways, for example visual impact and noise, are considered and evaluated in the EIS and may be identified as having potential influence on the amenity of property (having regard to the specific nature of the transmission infrastructure development and its receiving environment).
- 49 It is for the Board to assess whether any potential devaluation of property may be relevant to the decision-making process to be undertaken by the Board in its consideration of the proposed development. The purpose of this section of the planning report therefore is to consider the relationship in Ireland between existing OHL infrastructure and property values and potential implications arising in respect of the proposed North-South 400 kV Interconnection Development. In considering this, regard is also had to the large body of international research in this area<sup>20</sup>.
- 50 There has been a considerable extent of residential and other property development in relatively close proximity to existing high voltage OHL infrastructure in the area of the proposed development (and indeed throughout Ireland) subsequent to the construction of that existing infrastructure over many decades. It can be concluded therefore that the presence of OHL infrastructure in the area does not of itself result in effective sterilisation of wide corridors along the lines. If the general effect of high voltage OHL infrastructure was to cause a strong reduction in property values then one would expect to see little or no development along OHL corridors over the many decades since the construction of transmission lines in the country and this has not been the case. Nor is EirGrid aware of any evidence of property devaluation along these OHL corridors that is at variance with general local, regional, or national patterns.
- 51 Furthermore, EirGrid is aware of a significant body of international research in relation to high voltage OHL infrastructure and property values which is not supportive of consistent significant negative impacts on residential property values. Where any negative impacts

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<sup>20</sup> Much of the research in this area has been carried out in the US and Canada and includes *inter alia* Kroll, C.A. & Priestley, T. (1992), Chalmers, J.A. and Voorvaart, F.A. (2009), Pitts, J. & Jackson, T.O. (2007), Jackson, T. O. (2010) etc.



were found they were generally low in the case of residential property and many of these results were not statistically significant. Any such impacts where found, were generally associated with the consenting and construction phases, but tended to diminish over the ten year period post construction and were restricted to generally narrow bands in the immediate vicinity of the lines.

52 Other relevant observations from the research include:

- Where negative impacts were found, the impact of towers was larger than the impact from the transmission lines, thus emphasising the visual component;
- Where an impact was found the effect diminished rapidly with distance from the high voltage OHL infrastructure. In this regard, the impact from the high voltage OHL infrastructure disappears in the region of 150-200 metres with the maximum impact at even closer distances;
- Greatly increased media coverage of health issues from 1992 onwards does not appear to have had any major impact on research findings post 1992 compared to pre 1992;
- Proximity to high voltage OHL infrastructure is just one of a complex mix of variables all of which are always assessed and weighted by purchasers, such as quality of land, proximity to family, proximity to community facilities etc. It is also clear from the results of the international research that the presence of high voltage OHL infrastructure in close proximity is not a high priority consideration for purchasers in many cases relative to the other factors;
- Where negative impacts were found they generally decrease with the passage of time and in some cases had faded away after ten years. Growth of trees and shrubs would be a factor in this. An additional factor quoted for the reduction in impacts over time has been diminished sensitivity to the proximity of high voltage OHL infrastructure in the absence of adverse media coverage and publicity; and
- Properties close to high voltage OHL infrastructure appreciate at the same rate as properties located away from high voltage OHL infrastructure.

53 In addition, there is practically no evidence in international research to suggest that the value of typical Irish farms would be affected by the presence of high voltage OHL infrastructure. The wide variation between farms and the very low volume of land coming to the market each year are important considerations in this regard.

54 Overall, it is concluded that in some specific situations there may be possible low level negative impacts on property prices for residential properties in immediate proximity to this new high voltage OHL infrastructure but, these impacts will likely diminish greatly or disappear completely over time after the construction period. Farmland prices are not expected to be affected at all.

55 The research referred to above is listed in **Appendix 8**.

### 5.5.3 The Grid25 Initiatives

56 In January 2014, EirGrid published a number of initiatives which were being put in place to address various themes emerging from feedback received in respect of its major projects. These are available on [www.eirgrid.com](http://www.eirgrid.com) and comprise the following:-

**Conduct a comprehensive underground analysis for the Grid Link and Grid West projects. We will work with the Government-appointed Independent Expert Panel to review underground and overhead options before we proceed to the next stages of project development.**

57 This work is ongoing. As noted in **Section 2.1.3** of this report, the Independent Expert Panel (IEP) considered the North-South 400 kV Interconnection Development as part of the review and concluded that the work completed to date on the project is compatible with the terms of reference that it had specified for the Grid West and Grid Link projects. This opinion was published by the Department of Communications, Energy, and Natural Resources (DCENR).

**Introduce a Community Gain Fund encompassing a fund for localities and residences located close to new pylons and stations.**

58 The *Government Policy Statement on the Strategic Importance of Transmission and Other Energy Infrastructure* published in July 2012 underlined the appropriateness of incorporating community gain considerations into major infrastructure projects. It notes that while transmission projects under Grid25 and other essential infrastructure will have positive benefits for local communities in underpinning regional economic development and jobs, potential negative impacts can arise, resulting from concerns regarding environmental impact such as visual amenity and health and safety.

59 The Policy Statement concludes that:

*“The Government considers that greater focus needs to be given to co-operative work with local communities and local authorities on landscape, biodiversity and civic amenity benefits bringing long lasting benefits for communities. The Government therefore underlines the appropriateness for the State Companies and energy project developers to examine appropriate*

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*means of building community gain considerations into their project budgeting and planning. The Government is therefore fully supportive of a community gain approach in the delivery of energy infrastructure". (p.5)*

60 EirGrid is equally supportive of a community gain approach in the delivery of its major transmission infrastructure projects. In recognition of the visual impact of transmission infrastructure, EirGrid is proposing a community gain mechanism with two elements:

**(1) Community Payment**

61 A once-off fund to which EirGrid will contribute €40,000 per kilometre for communities in proximity to new 400 kV overhead lines and substations. The specific details for administration of this fund have yet to be finalised; however it is currently envisaged that this fund will be administered with direct input from the relevant local authorities of the area of a planned line or substation, as well as any other relevant bodies or organisations.

**(2) Proximity Payment**

62 A once-off *ex-gratia* payment be made to the owners of occupied residential properties (or sites with planning permission for residential units) within a 200 metre corridor of new pylons or substations. For 400 kV there would be a payment of €30,000 for residences at 50 metres from the centre of the line and this would decrease (on a sliding scale) to €5,000 for residences at 200 metres from the centre of the line. The specific details of this payment, and its administration by EirGrid have yet to be finalised at the time of making this application to An Bord Pleanála.

63 As noted in **Section 5.5.1**, EirGrid seeks to locate new lines at least 50m from homes. In exceptional cases where this is not achievable, EirGrid will engage with the affected property owners on an individual basis.

64 It is intended that this pro-active approach to community gain in the development of its major transmission projects will assist in delivering long-lasting benefits to those communities within which such national-scale strategic infrastructure development is located.

**Continue to monitor research developments and provide information on health and power lines.**

64 EirGrid designs and operates the transmission network to the highest safety standards and complies with the most up-to-date national and international guidelines. EirGrid will continue to monitor the latest research and developments in the area of Electric and Magnetic Fields and public health, and will continually review and improve communication around this issue. In addition, EirGrid will co-operate fully with any recommendations arising from an

independent review on EMF safety currently being undertaken by the Department of the Environment, Community and Local Government.

**Comprehensively address major issues arising such as tourism, agriculture and equine concerns.**

65 These reviews conclude with a number of commitments relating both to the development phase of a project, and to the construction of that project, including:

- Develop a landowner charter which will clearly outline the level of professionalism and the response time by which landowners can expect to have their queries answered;
- Appointing agricultural liaison officers, located regionally, to liaise with landowners on all agricultural and equine matters during all stages of the project;
- Develop a landowner's handbook providing information and addressing issues; and
- Develop a package of measures to address the practical concerns of landowners and equine enterprises resulting from the construction of electricity transmission infrastructure on their land. These include measures to minimise impact on the land and the enterprise and will include clarity around compensation.

**Review of our consultation process to enhance future public engagement.**

66 As also referred to at **Section 2.1.4** of this report, EirGrid has recently published a document "*Reviewing and Improving our Public Consultation Process*". This review examined EirGrid's approach to consultation, and compared it against international best practice for consultation on strategic infrastructure projects. It also summarised feedback received from the public, elected representatives and the media in respect of consultation undertaken primarily on the larger projects. The review included an external review of EirGrid's approach to consultation, undertaken both by the Chartered Institute of Arbitrators, and by SLR Consulting Limited.

67 The review identified three main themes, set out below:

- Theme 1: Develop a Participative Approach – "*we will move to a more community-focused approach when developing electricity projects – to enable greater stakeholder participation from the outset*".
- Theme 2: Change our Culture and Process – "*we will change the culture in our organisation – to develop stronger relationships with stakeholders and communities*".

- Theme 3: Encourage Leadership and Advocacy – *“we will seek support from the political system and state bodies – to better explain energy issues and make the benefits of a stronger system clearer to all”.*

68 Each theme underpins a number of commitments, all with the intent of ensuring an approach to make the project development process collaborative rather than confrontational. This enhanced approach is envisaged to apply both to the project development phase, and on an ongoing basis. The review acknowledges that each commitment will require time to be specifically scoped and developed.

## 6 CONCLUSIONS

- 1 Having regard to the material considerations relied upon by An Bord Pleanála in coming to a decision, and in particular:
- a) the requirements of EU energy law and EU energy policy and in particular the designation of the proposed interconnector as a 'Project of Common Interest' pursuant to EC Regulation No. 347/2013;
  - b) the provisions of the *National Spatial Strategy for Ireland 2002-2020*, which seeks to strengthen electricity networks in the region;
  - c) the provisions of the "Government Policy Statement on the Strategic Importance of Transmission and Other Energy Infrastructure" issued by the Department of Communications, Energy and Natural Resources;
  - d) the provisions of the Government White Paper *Delivering a Sustainable Energy future for Ireland - The Energy Policy Framework 2007-2020*;
  - e) the provisions of Grid25, EirGrid's transmission network development policy, as well as the Grid25 Implementation Programme and accompanying SEA;
  - f) the *Border Regional Authority Planning Guidelines 2010-2022*;
  - g) the *Regional Planning Guidelines for the Greater Dublin Area 2010-2022*;
  - h) the *Monaghan County Development Plan 2013-2019*;
  - i) the *Cavan County Development Plan 2014 - 2020*;
  - j) the *Meath County Development Plan 2013-2019*;
  - k) the demonstrated need for, and benefits of, the proposed development, namely:
    - i. Improving competition by reducing the constraints restricting efficient performance of the all-island single electricity market.
    - ii. Improving security of supply by providing a reliable high capacity link between the two parts of the all-island transmission system.
    - iii. Supporting the development of renewable power generation by enhancing the flexible exchange of power flows over a large area of the island.
    - iv. Reinforce the north–east area of Ireland.
  - l) the nature and location of the proposed development (including the process of consideration of alternatives that has informed the proposal).

- 2 While also having regard to the nature, scale and location of the proposed development, the demonstrated need for the development as set out in European, national, regional and local policies and guidance documents, and the considerations of ABP in its decisions relating to other SID transmission infrastructure it is considered that the proposed development would be in accordance with the proper planning and sustainable development of the area in which it is proposed to be located.