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1.0 INTRODUCTION

- 1.1 I am Eamonn Loughrey. I am a chartered Town Planner (MRTPI and MIPI). I have a BSc (Hons) degree from the University of Dundee in Town and Regional Planning. I have been instructed on this proposal since 2011 and was involved in the March 2012 Inquiry. I was instructed at that time by NIE. I have since been instructed to give evidence in this Inquiry by SONI.
- 1.2 I have been acting in private planning practice since 1998 dealing with large-scale development proposals. I have acted as an expert witness in respect of various Area Plan Inquiries, Article 31 Hearings and Planning Appeals throughout Northern Ireland. I also act in the Republic of Ireland and Great Britain.

The Applicant

- 1.3 The planning applications for the proposed Tyrone-Cavan Interconnector and the associated works were originally submitted by Northern Ireland Electricity Networks (NIE). However, NIE was required by the European Commission to transfer its investment planning function to the System Operator for Northern Ireland (SONI), with effect in 2014. The applicant at that point changed from NIE to SONI.

Purpose of Overarching Technical Report

- 1.4 This Overarching Technical Report (OTR) sets out the case for the full planning application (Ref: O/2009/0792/F and 2011/C001) for the proposed Tyrone-Cavan Interconnector, which involves the erection of a single circuit 400 kV overhead line from a new substation at Trewmount Road, Moy, Co. Tyrone to the townlands of Dohat Or Crossreagh and Crossbane, Co Armagh where it would connect with the proposed network in the Republic of Ireland. In this OTR and all Technical Reports (TRs) that accompany the applicant's Statement of Case, this proposal is referred to as the "proposed Tyrone-Cavan Interconnector".
- 1.5 This OTR also considers the issues arising from the subsequent full application (Ref: O/2013/0214/F and 2014/C004) for the works associated with the construction of the proposed Tyrone-Cavan Interconnector¹.
- 1.6 This OTR deals specifically with the policy applicable to the proposed Tyrone-Cavan Interconnector and focuses on key issues of the need for, and acceptability of, the proposed Tyrone-Cavan Interconnector in policy and environmental impact terms. It discusses the issues raised by the proposed Tyrone-Cavan Interconnector where its acceptability requires a balanced planning judgement to be made. It is my judgement that, having regard to this balance, the proposed Tyrone-Cavan Interconnector is clearly acceptable.

¹ The references in this OTR to the proposed Tyrone-Cavan Interconnector also incorporate the works associated with the proposed Tyrone-Cavan Interconnector.

1.7 In making this judgement I rely upon TRs prepared by experts to address various topics which are appended to this OTR. Each of these reports summarises the information contained within the Consolidated Environmental Statement (CES), subsequent CES Addendum, and accompanying Non-Technical Summaries (NTS).

1.8 The Appendices for the OTR are:

- a) Copies of EC Communication /*Com /2000/0001/ final*/;
- b) Appeal Decisions;
- c) Caselaw;
- d) Decision of the Minister for Energy, Enterprise and Tourism (2011) Scottish Parliament Official Report Session 4; and
- e) Summary of Objection Letters, Statutory Consultee Responses and Letters of Support.

1.9 Technical Reports that have informed this OTR and the Statement of Case are:

TR 1	Need
TR 2	Alternatives: Transmission and Technology
TR 3	Alternatives: Routeing and Substation Site Selection
TR 4	Construction
TR 5	EMFs
TR 6	Water Environment
TR 7	Geology and Soils
TR 8	Ecology
TR 9	Noise
TR 10	Cultural Heritage
TR 11	Landscape and Visual
TR 12	Community Amenity
TR 13	Land Use
TR 14	Socio Economics
TR 15	Traffic and Transport
TR 16	Air Quality and Climate Change

Background

1.10 Stage 1 of the Planning Inquiry took place on 21st June 2016. That considered legal and procedural aspects of the two applications. The Commission has issued their Report dated 19th July 2016 on Stage 1 and found that there is no legal or procedural reason that would prevent the Inquiry continuing. The Department for Infrastructure (Dfi) has considered the Commission's report and asked the Commission (by letter dated 9th September 2016) to make the necessary arrangements for Stage 2 of the Inquiry².

1.11 Stage 2 of this Inquiry considers the substantive merits of the proposed Tyrone-Cavan Interconnector.

² It should be noted that the Department of Environment has now changed to the Department for Infrastructure. The roles of each Department remain the same in these applications and as a consequence this OTR simply refers to the "Department".

- 1.12 The background to the applications is already well known and set out in the CES (see Volume 1 NTS and Volume 2 Chapter 1) and the CES Addendum (see Volume 1 NTS and Volume 2 Chapter 1).

2.0 THE PROPOSED TYRONE CAVAN INTERCONNECTOR

- 2.1 The proposed Tyrone-Cavan Interconnector is fully explained in CES Volume 2 Chapter 5, with non-technical description in the CES Volume 1 NTS (Section 5). Minor amendments to Tower 102 are set out in the CES Addendum (Volume 2 Chapter 1 page 10-12) and CES Addendum NTS (page 7). Alternative access tracks to enable the construction of Tower 47 and the stringing area at Tower 72 are set out in the CES Addendum Volume 2 Chapter 1 (page 9 -10) and CES Addendum NTS (page 6 and 7).

Access to Tower 40

- 2.2 It should be noted that chicken sheds have been constructed since submission of the applications, and that this new built form would interrupt the originally proposed construction access route to Tower 40. The proposed access route is a grass path across an open field. As one alternative, the applicant would be prepared to construct Tower 40 taking access from Tower 41 (via access track AT40A). Details of this are set out in TR 4 (Construction), which shows it would not involve an amendment to the redline. A second alternative is to realign the intended construction path around the chicken sheds (via access track AT40B). This necessitates a minor, indeed *de minimis*, change to the redline which defines the application area at this location. In neither case would the changes have any likely significant effect. As set out in TR 4 (Construction), the first option has some impact but this is not significant, whilst the second option has no change in terms of impacts. The applicant proposes that AT40B be the response to this approval, which represents a *de minimis* alteration to the planning application boundary. AT40A would not require a change to the planning application boundary and it remains as a possible option that is available to the applicant. A copy of the amended drawings for each option are included in the Statement of Case at Appendix A along with an updated drawing schedule identifying the drawings that are superseded. The landowners affected by the change were served with the appropriate notice.

Requirement to move Tower 66

- 2.3 This was an issue raised at Stage 1 of the Inquiry and the Commission left the matter to be considered at the substantive hearing. The applicant's evidence is already before the Commission (see Main Submission to Preliminary Inquiry Hearing Annexes K-N). In summary, the objectors suggest that because a hazardous substance consent has been granted in the area around Tower 66, the tower needs to move.
- 2.4 There is no requirement to move Tower 66 as the conductors are a sufficient distance (44m) from the proposed tanks, which is well beyond the separation distance (10m) contained in guidance issued by the trade association for the LPG industry and supported by the Health and Safety Executive Northern Ireland.

The Overhead Line Route of the Proposed Tyrone-Cavan Interconnector

- 2.5 The overhead line route is illustrated in detail in various plans in the CES Volume 4 with minor amendments to Tower 102 set out in the CES Addendum Volume 4. It extends for 34.1km from Turleenan townland to the Republic of Ireland border, crossing at a position in the County Armagh townland of Dohat Or Crossreagh into the Republic of Ireland and back into Northern Ireland at Crossbane. The route selected follows a path around the countryside north and west of Moy, between Benburb and Blackwatertown, west of Armagh, Milford, Keady and Derrynoose and east of Killylea, Caledon and Middletown.
- 2.6 Details of the preferred route and its selection are set out in CES Volume 2 Chapter 4 with details of its construction set out in CES Volume 2 Chapter 5. The route has been selected using a detailed assessment that has balanced the technical requirements of the proposed Tyrone-Cavan Interconnector with steps to minimise and mitigate the environmental effects it would have.

The Substation Site (Turleenan)

- 2.7 A substation is necessary to complete the interconnection facility. Without the overhead line the substation would not be required, hence the two are linked as part of the same application. The substation site is located 4.5km north east of Moy, 6.25km south east of Dungannon and 13.5km north west of Armagh. It is a rural site stretching between Trewmount Road and Derrygawley Road adjacent to an existing 275kV overhead line.
- 2.8 Details of the layout of the substation are shown on CES Volume 4 Figure 5.1, and its construction is set out in CES Volume 2 Chapter 5 Section 5.2 to 5.4.

Associated Works for the Proposed Tyrone-Cavan Interconnector

- 2.9 The works associated with the construction of the proposed Tyrone-Cavan Interconnector are also covered by a planning application. These works consider matters of construction, access to construction areas, transportation of equipment and mitigation works. The associated works necessarily follow the route of the proposed Tyrone-Cavan Interconnector, but include a larger geographical area to incorporate all access routes and construction and stringing areas.
- 2.10 Details of the construction of the proposed Tyrone-Cavan Interconnector are set out in the CES Volume 2 Chapter 5 Section 5, with minor amendments set out in the CES Addendum Volume 2 and (in relation to the access to Tower 40) appended to the Statement of Case. Consistent with the general approach to the proposed Tyrone-Cavan Interconnector application, the construction works involve balancing the technical requirements of the project with steps to minimise and mitigate the environmental effects of the proposed Tyrone-Cavan Interconnector.

Designations and Features of the Site

- 2.11 The main feature relevant to the location of the substation is one recorded heritage asset within the footprint of the substation, which is the site of a former lodge recorded from the early 20th century historic mapping. CES Chapter 12 paragraph 125 notes that it is not anticipated that any remains of the lodge survive as they appear to have been built over or the building extended to such an extent that the original structure is no longer apparent. There is potential that previously unrecorded archaeological sites may be discovered during construction, but the CES assesses this likelihood as relatively low as no previously unrecorded sites were noted during the walkover survey. CES Chapter 12 paragraph 131 (and paragraph 6.52 below) confirms that no impact on the setting of any heritage assets will arise from the operational phase of the substation.
- 2.12 The overhead line and the associated works area pass through a generally rural area. The Environmental Development Constraints plan (CES Volume 4 Figure 1.2) illustrates that the overhead route avoids all designated landscapes, historic parks, gardens and demesnes, sites of local nature importance, special protection areas, special areas of conservation, areas of special scientific interest, conservation areas and forest nature reserves. The route and tower positions have been designed to avoid known archaeological sites, scheduled monuments and listed buildings, avoiding direct physical impact on any of them.
- 2.13 Effects on designations, including statutorily listed buildings, are addressed in the TRs as appropriate (see TR 8 Ecology Section 8.11-8.15; TR 10 Cultural Heritage Section 10.10-10.14; TR 11 Landscape & Visual Section 11.11-11.15) and in Section 6 below.

3.0 POLICY CONTEXT AND APPROACH

- 3.1 CES Volume 2 Chapter 3, updated in CES Addendum Volume 2 Chapter 4, and summarised in their respective NTSs, provides commentary on the broad policy framework for these applications.

Plan-led Approach

- 3.2 The Planning Act (Northern Ireland) 2011 (“the 2011 Act”) sets out the approach for assessing these applications. Section 6 (4) states that “*Where, in making any determination under this Act, regard is to be had to the local development plan, the determination must be in accordance with the plan, unless material considerations indicate otherwise*”. Section 45 (1) states “*the Department, in dealing with the application must have regard to the local development plan, so far as material to the application, and to any other material considerations*”. The 2011 Act also reinforces the need for sustainable development and improving well-being.
- 3.3 The starting point for assessing the applications is to assess the proposed Tyrone-Cavan Interconnector against any relevant policies in the local development plans for Dungannon and South Tyrone and Armagh. This is set out in Section 4.

Background to Strategic Policy

- 3.4 The Department introduced the Strategic Planning Policy Statement (SPPS) in September 2015. This sets out overarching policy on all development plan-making and management functions. It is introduced to facilitate the plan-led system and explains at paragraph 1.9 that existing Planning Policy Statements (PPS) and the remaining provisions of the Planning Strategy for Rural Northern Ireland (PSRNI) will be cancelled when Councils have adopted a new plan strategy for their areas. Transitional arrangements are then set out at paragraphs 1.10-1.16 where policy contained in identified documents, in particular specific PPSs and relevant provisions of PSRNI, is stated to apply together with the SPPS, until a Council adopts its plan strategy. SPPS paragraph 1.12 states that any conflict between the SPPS and any retained policy must be resolved in favour of the SPPS, but where the SPPS is silent or less prescriptive on a particular policy matter this should not be judged to lessen the weight to be afforded to the retained policy.

Other Relevant Policies Supporting Interconnection

- 3.5 The SPPS also recognises that planning policy should not be considered in isolation and that wider Government objectives and policies should be supported if relevant. SPPS paragraph 3.7 states that “Furthering sustainable development also means ensuring the planning system plays its part in supporting the Executive and wider government policy and strategies in efforts to address any existing or potential barriers to sustainable development. This includes strategies, proposals and future investment programmes for key transportation,

water and sewerage, telecommunications and energy infrastructure (including the electricity network) [emphasis added].

- 3.6 In this regard as explained in Section 5, the multitude of policies set out by the European Union³, UK Government and Northern Ireland Executive supports the need for the proposed Tyrone-Cavan Interconnector, and are very significant material factors in assessment of these applications.
- 3.7 Before discussing the compliance with the development plan and key tests of policy, three further matters require to be set out.

Presumption in Favour of Sustainable Development

- 3.8 The SPPS paragraph 3.8 and paragraph 5.72 set out the presumption in favour of sustainable development. Paragraph 3.8 states that *“Under the SPPS, the guiding principle for planning authorities in determining planning applications is that sustainable development should be permitted, having regard to the development plan and all other material considerations, unless the proposed development will cause demonstrable harm to interests of acknowledged importance. In practice this means that development that accords with an up-to-date development plan should be approved and proposed development that conflicts with an up-to-date development plan should be refused, unless material considerations indicate otherwise”*.
- 3.9 SPPS paragraph 3.1 (which repeats Resolution 42/187 of the United Nations Assembly) defines sustainable development as *“meeting the needs of the present without compromising the ability of future generations to meet their own needs”*.
- 3.10 The SPPS recognises the need for a balanced planning judgement at paragraph 3.3 where it advises that *“For the planning system furthering sustainable development in the long term public interest requires the integration and balancing of complex social, economic and environmental factors when plan making and decision taking. Planning authorities should deliver on all three pillars of sustainable development in formulating policies and plans and in determining planning applications”*. Similarly, again at paragraph 3.4 it advises that *“The SPPS does not seek to promote any one of the three pillars of sustainable development over the other. In practice, the relevance of, and weight to be given to social, economic and environmental considerations is a matter of planning judgement in any given case. Therefore, in summary, furthering sustainable development means balancing social, economic and environmental objectives, all of which are considerations in the planning for and management of development”*.

³ It is noted that following the United Kingdom Referendum decision to leave the European Union that the European Communities Act 1972 (which gives direct effect to all EU law) will be repealed and a new Great Repeal Bill will convert existing EU law into domestic law. This would only take place upon the UK leaving the EU, which remains at least 2 years away at the time of writing. In planning terms, the Commission and the Department must assess the proposed Tyrone-Cavan Interconnector based on the policies that are before them at the time of the Inquiry and final decision.

The Precautionary Principle

- 3.11 It is instructive to set out the 'precautionary principle' as there is debate as to when this should be applied. The European Commission ("EC") in Communication /*Com/2000/0001 final*/ (**Appendix A**) sets out the framework of the precautionary principle, factors that trigger it and its implementation. The EC guidance notes that relying on the precautionary principle is no excuse for derogating from the principles of risk management including the examination of the benefits and costs of action.
- 3.12 Consistent with the Rio Declaration of 1992, the SPPS paragraph 3.9 sets out how the precautionary principle operates in the planning system. It states that *"In formulating policies and plans and in determining planning applications planning authorities will also be guided by the precautionary approach that, where there are significant risks of damage to the environment, its protection will generally be paramount unless there are imperative reasons of overriding public interest"*.
- 3.13 It is significant that, although policies PSU 2, PSU 8 and PSU 11 set out in the PSRNI precede publication of the SPPS, policy SP16 in the PSRNI on Environmental Protection (over which PPS 21 Sustainable Development in the Countryside (PPS 21) now takes precedence) incorporates exactly the same wording on the precautionary principle as the SPPS. Thus, in drawing up policies PSU 2, PSU 8 and PSU 11, the Department will already have been guided by that principle.
- 3.14 It is also noted that PPS 2 Natural Heritage (PPS 2) paragraph 1.6 states that *"Under Article 191 of the Lisbon Treaty, environmental policy continues to be based on the precautionary principle which exists in order to protect the environment, where there are threats of serious or irreversible damage. Planning authorities should apply the precautionary principle when considering the impacts of a proposed development on national or international significant landscapes or natural heritage resources"*.
- 3.15 Therefore, a favourable determination of a planning application pursuant to policy PPS 2 can be taken to have been guided by the precautionary principle.

Biodiversity Duty on Government

- 3.16 The SPPS paragraph 6.171 recognises the Wildlife and Natural Environment Act (Northern Ireland) 2011 which places a statutory duty on every public body to further the conservation of biodiversity. The Department and the Commission, in carrying out their statutory functions in considering and determining these applications, will be guided by their duty to further conservation of biodiversity so far as is consistent with the proper exercise of those functions.
- 3.17 PPS 2 paragraph 2.12 recognises the statutory duty set out in the Wildlife and Natural Environment Act (Northern Ireland) 2011. The policies of PPS 2 are therefore up to date with

the statutory duty and PPS 2 paragraph 3.3 advises that *“In taking decisions, the planning authority should ensure that appropriate weight is attached to designated sites of international, national and local importance; priority and protected species; and to biodiversity and geological interests within the wider environment”*. The CES Volume 2 Chapter 10 paragraph 33 acknowledges the Wildlife and Natural Environment Act (Northern Ireland) 2011 and consideration of the proposed Tyrone-Cavan Interconnector’s impact on ecology and biodiversity along with compliance with PPS 2 is set out in Section 6 below and in detail at CES Volume 2 Chapter 10 and TR 8.

4.0 COMPLIANCE WITH THE LOCAL DEVELOPMENT PLAN

Introduction

4.1 The 2011 Act introduces the plan-led system which means the starting point for the assessment of the proposed Tyrone-Cavan Interconnector is whether it is in accordance with the two plans that cover the area, namely the:

4.1.1 Armagh Area Plan 2004 (AAP) and the Armagh Area Plan Alteration No.1 (AAP Alt 1); and

4.1.2 Dungannon and South Tyrone Area Plan 2010 (DSTAP).
(together hereinafter referred to as the "Plans")

Relevance of the Development Plans

4.2 It is necessary at the outset to place the Plans in context. Both were prepared under the Planning (Northern Ireland) Order 1991, when the statute required that development plans be taken into account as a material consideration. The development plan regime also anticipated that proposals would be tested against regional policies set out elsewhere (see AAP Alt 1 paragraph 3.4 and DSTAP page 12). The Plans are time expired. They were not prepared to perform the detailed function of a plan in a Council-based plan-led system, or to address strategic development requirements.

4.3 Furthermore neither the AAP and the DSTAP were prepared having regard to either the SPPS, the RDS 2035, or the Sustainable Development Strategy (they predate each). SPPS paragraph 5.16 states that "*in preparing LDPs council's must take account of the RDS 2035, the Sustainable Development Strategy for Northern Ireland, the SPPS and any other policies or advice in guidance issued by the Department*". Consequently neither plan is up to date in the context of SPPS paragraph 3.8, albeit it is accepted that they are the Local Development Plans for this Inquiry.⁴

4.4 There are no policies in the Plans which are specific to the provision of overhead power lines. The only policies that require comment relate to the protection of the natural heritage, built heritage, transport and recreation.

4.5 The age of the Plans also means that several of the policies they contain have been superseded by other material considerations, including more recent PPS policies, which now take precedence.

4.6 The policies in the AAP relating to nature conservation, archaeological sites and historic monuments and listed buildings are out of date and superseded by PPS 2 and PPS 6 Built Heritage (PPS 6) which have precedence. The AAP Alt 1 policy on Sites of Local Nature

⁴ See Appendix B for PAC Appeal Decision 2014/A0191 paragraph 7 where Magherafelt Area Plan 2015 was found not to be up to date.

Conservation Importance are out of date and superseded by PPS 2, while policy HP 1 for Historic Parks, Gardens and Demesnes defers to PPS 6 policy BH 6 which has precedence. Only policy LLPA 1 for Local Landscape Policy Areas (LLPA) has been prepared after PPS 6 and is the only policy provision that is up to date.

- 4.7 In the context of the DSTAP, policy CON 1 deals with Sites of Local Conservation Importance which is out of date and superseded by PPS 2. DSTAP policy CON 2 is a LLPA policy which remains a current policy for the same reasons discussed above. DSTAP policy CON 3 for areas of archaeological potential post-dates PPS 6 policy BH 3 and must therefore be an up to date policy albeit the two policies are not materially different. DSTAP policy CON 4 defers to prevailing regional policy, hence PPS 6 policy BH 6 has precedence. DSTAP policy Con 6 is not superseded by any regional policy and is an up to date policy.
- 4.8 The SPPS paragraph 3.8 advises, where a plan is up to date, if a proposal is not in accordance it will be refused, unless material considerations indicate otherwise. As neither the AAP or the DSTAP are up to date, nor are several their policies, any non-compliance with the Plans or policies within them must carry limited weight in this case.

Accordance with the Plan

- 4.9 In having regard to local development plans, it is obviously important to understand the policies to be applied. Text in a plan which sits outside a policy may be relevant to the interpretation of a policy, but ultimately it is not part of the policy. It does not have the force of policy and cannot trump the policy.⁵ It is therefore necessary to assess compliance with the text contained in the relevant policy, which is distinct from any supporting material that is not part of a policy.
- 4.10 Furthermore, the test is whether a proposal complies with the plan as a whole. Policies within a plan can pull in different directions, and in order to reach a conclusion it will be necessary to reach a judgement bearing in mind the importance of the policies which are complied with or infringed and the extent of non-compliance or breach⁶.

Consideration of Relevant Policies

AAP and AAP Alt 1

- 4.11 The AAP does not contain policies with dedicated supporting text as is normally found in other more recent plans; rather it seeks to incorporate policy within the general text of the plan. In this respect Nature Conservation is addressed at AAP Section 6.1-6.2 (page 6 of Adoption Statement). Section 6.1 states *"The conservation and enhancement of the natural*

⁵ See *R(Cherkley Campaign Limited) v Mole Valley District Council, v Longshot Cherkley Court Limited* [2014] EWCA Civ 567). The PAC approach is consistent with this in respect of its approach to Planning Policy Statements. The PAC applies the established principle that where there is a tension between explanatory text and the policy head note greater weight will normally be attached to the latter, as it is the head note that comprises and determines planning policy (see for example paragraph 4 Appeal 2008/A0228). However, where there is no conflict between the head note and the policy the explanatory text can be used to interpret the policy (see for example paragraph 8.4 of Commissioners Report Appeal 2002/A042). Caselaw is at **Appendix C** and Appeal Decisions are at **Appendix B**.

⁶ *R (Cummins) v. London Borough of Camden and Secretary of State for Transport, Local Government and the Regions* [2001] EWHC Admin 1116. Caselaw is at **Appendix C**.

environment will be encouraged and promoted. Development likely to adversely affect existing, proposed or potential Areas of Special Scientific Interest (ASSIs), Areas of Scientific Interest, (ASIs), National Nature Reserves (NNRs) and Nature Reserves (NRs) and national and international designated areas such as Special Protection Areas, Ramsar Sites and Special Areas of Conservation, will not normally be permitted". Section 6.2 states "Many other sites and areas of local significance for their flora, fauna or geographical interest exist but do not qualify for designation. They do, however, form an important resource for wildlife which should be conserved where possible. Developments will not normally be permitted where they would be likely to damage the scientific interest or essential character of such sites and areas". This policy is now out of date and PPS 2 is the relevant consideration. The proposed Tyrone-Cavan Interconnector would have no impact on designated sites during the construction phase of the development (CES Volume 2 Chapter 10 paragraph 244) and in the operational phase (CES Volume 2 Chapter 10 paragraphs 286-291) no adverse effect on designated sites.

- 4.12 The AAP has a general policy with regard to the control of development on the settings of individual archaeological sites (Section 7.0, page 16). This states "*Development will not normally be permitted which would be likely to damage or prejudice the essential character of historic landscapes, archaeological sites and monuments or their settings*". This policy is now out of date and PPS 6 policy BH 1 and BH 2 are the relevant considerations, where policy BH 1 seeks to avoid an adverse effect on the "*integrity*" of the settings of regionally important monuments and archaeological sites, and policy BH 2 seeks to avoid adversely affecting the settings of locally important cultural heritage sites and monuments.
- 4.13 The CES has identified all historic landscapes, archaeological sites and monuments and their settings. There is no direct physical impact on recorded archaeological sites. There are some archaeological sites and built heritage features upon which the proposed Tyrone-Cavan Interconnector impacts their setting. This is explained in TR 10 paragraphs 41-42 and CES Volume 2 Chapter 12 Table 12.5. In the AAP area there are five scheduled monuments which have their settings impacted by the proposal. Three of the impacts are moderate adverse and two are slight adverse, all as a result of views from the assets. Under PPS 6 policy BH 1 the impacts of the proposed Tyrone-Cavan Interconnector are outweighed by the 'exceptional circumstances' of the overriding national and regional need for the proposed Tyrone-Cavan Interconnector.
- 4.14 In the AAP area there is one archaeological remains of local importance, which has its setting impacted by the proposal. This impact is of a moderate adverse impact as a result of views of the proposed Tyrone-Cavan Interconnector from this cultural heritage asset. Curiously, PPS 6 policy BH 2 has a higher test for local archaeological remains than regionally important archaeological remains where the impacts of a proposal on the setting (rather than the

integrity of the setting) can be allowed if the Department consider the proposal or other material considerations to outweigh the value of the remains in question. When inconsistencies between policies such as this occur, the applicant has the right to have the proposal assessed on the basis of policy most favourable towards it. As such, the appropriate test would be to consider a proposal's impact on the integrity of the setting, and if harm is caused consider whether there are exceptional circumstances that outweigh the harm. Again consistent with the BH 1 text the proposed Tyrone-Cavan Interconnector should be allowed given the 'exceptional circumstances' of the overriding national and regional need for it.

- 4.15 The setting of Navan Fort is identified in the AAP as warranting special consideration. It is described at paragraphs 83.1-83.6 (page 86). The AAP identifies the site as an Area of Significant Archaeological Interest (ASAI) and describes the visual zone of influence around the site. The area is said to be "*significantly large to provide for protection not just for individual sites and monuments but for the overall landscape setting within which individual monuments are located*". Paragraph 83.5 states that there would be a presumption against proposals which if developed would alter, damage or destroy individual sites or monuments, or would result in inappropriate change to their setting. This policy is now out of date and PPS 6 policy BH1 (see above) is the relevant consideration for Scheduled Monuments.
- 4.16 The proposed Tyrone-Cavan Interconnector is 1 kilometre from the edge of Navan Fort ASAI and impacts to the setting of the cultural heritage site are found to be of neutral effect (i.e. looking out from the Fort, TR 10 paragraph 51). Visual impacts (i.e. looking towards the Fort) have been determined to be minor adverse (CES Chapter 13 paragraphs 727-737). The overhead line and associated towers will be a new feature within the local landscape setting but from this distance are barely perceptible and the proposed Tyrone-Cavan Interconnector is consequently compliant with the PPS 6 policy BH 1. It is outside the ASAI identified in the AAP and it will not affect the integrity of its setting.
- 4.17 AAP (paragraph 9.2) states "*The Department will ensure that proposals for the development or alteration of a listed building or adjoining buildings are sympathetic to the need to protect the essential architectural or historic character of the listed building*". Again this policy is out of date and PPS 6 policy BH 11 supersedes it in the context of impacts on the setting of listed buildings. PPS 6 policy BH 11 states that permission will not normally be permitted which would adversely affect the setting of a listed building. There are 4 listed buildings in the AAP⁷ area that have slight adverse impacts on their settings as a result on limited views of the proposed Tyrone-Cavan Interconnector from the assets. The inclusion of the word 'normally' in PPS 6 policy BH 11 indicates that other material considerations may outweigh these impacts. The overriding national and regional need for the proposed Tyrone-Cavan Interconnector outweighs these impacts.

⁷ There are 4 listed buildings in Dungannon area identified at CES Chapter 12 table 12.5 which fall outside the AAP area and are not discussed here in terms of compliance with the AAP.

- 4.18 The AAP Alt 1 policy LLPA 1 designates Local Landscape Policy Areas in some small settlements and states that planning permission would not normally be granted for development which would adversely affect the intrinsic environmental value and character of Local Landscape Policy Areas. LLPAs are located adjoining settlements and used to protect natural and man-made environment in and adjoining settlements. The supporting text of the policy advises that there may be scope to accommodate sensitive development proposals provided there is no “*significant detrimental impact on the feature which the designation is intended to protect*”. This policy post-dates PPS 6, which does not have a specific policy for LLPAs and is therefore a relevant policy. The proposal avoids all LLPAs, however the Artasooly LLPA overlaps with the setting of the Mullyloughan House listed building, where impacts are found to be slight adverse given views out of the setting towards the proposed Tyrone-Cavan Interconnector. Whilst the proposed Tyrone-Cavan Interconnector does not cause significant detriment to the LLPA, for the avoidance of doubt, the overriding national and regional need for the proposed Tyrone-Cavan Interconnector outweighs any affects that arise.
- 4.19 The AAP Alt 1 policy SLNCI 1 designates Sites of Local Nature Conservation Importance. The policy states that planning permission will not normally be granted to development proposals that would have a significant detrimental effect on the intrinsic nature conservation interests of these sites. Where a development is permitted which would adversely affect such interests, the Department will endeavour to ensure that effects are kept to a minimum and/or appropriate mitigation measures are agreed. PPS 2 policy NH 4 post dates this policy and is therefore the relevant consideration which allows development that is not likely to have significant adverse impact on local nature reserves or wildlife refuges. As the proposed Tyrone-Cavan Interconnector avoids all such areas and designations as shown on CES Volume 4 Figure 1.2 and the impacts on them are negligible (CES Volume 2 Part 1 Chapter 10 paragraph 309 and TR 8 paragraph 95) the proposed Tyrone-Cavan Interconnector is in accordance with this policy.
- 4.20 AAP Alt 1 HP 1 (Historic Parks, Garden and Demesnes) designates the Argory as a Historic Park, Garden and Demesne and states that it “*will be protected and development proposals assessed in accordance with the provisions of regional planning policy*” (i.e. PPS 6 policy BH 6). The AAP therefore defers to PPS 6 in this instance. The Argory has been considered in CES Volume 2 Chapter 12 paragraphs 145-146 and Appendix 12F (TR 10 paragraph 48). The CES considers that there will be only very limited views of the proposed Tyrone-Cavan Interconnector from the Argory given the amount of extant tree cover at ground level from the house. While upper storeys have some limited views these are unlikely to worsen as the proposed Tyrone-Cavan Interconnector will be less dominant than other features (which includes existing power lines and telegraph poles) already present. Areas of the gardens are designed to have views of the surrounding landscape, however the distance from the grounds to the proposed Tyrone-Cavan Interconnector, along with the topography and surrounding tree

cover/hedge lines, will limit the impact. There will be only occasional views of the proposed Tyrone-Cavan Interconnector and an existing powerline already exists in these views. The proposed Tyrone-Cavan Interconnector will not therefore cause significant harm to the setting of the Argory. Any harm that occurs is outweighed by the overriding national and regional need for the proposed Tyrone-Cavan Interconnector.

- 4.21 The policies of the AAP and AAP Alteration No.1 are of limited relevance to the assessment of the proposed Tyrone-Cavan Interconnector as the majority of policies have now been superseded by up to date policy. Assessment against all up to date policies shows some policies are complied with and for others there is a degree of harm to the setting of some assets, which is outweighed by the overriding national and regional need for the proposed Tyrone-Cavan Interconnector. The strategic need for the proposed Tyrone-Cavan Interconnector clearly outweighs any suggestion of non-compliance with the local development plan, as confirmed by other policy documents to which I refer below.

DSTAP

- 4.22 DSTAP transport policy TRAN 3 (page 52) deals with cycling routes and states that proposals that would prejudice existing use or future provision of these routes will not be permitted. This policy is relevant as the Proposed Tyrone-Cavan Interconnector crosses a cycle route. The proposed Tyrone-Cavan Interconnector complies with the policy as it does not affect the use of the cycle route by cyclists.
- 4.23 DSTAP conservation policies (pages 71-78) deal with:
- CON 1 Sites of Local Nature Conservation Importance. This policy is superseded by PPS 2 Natural Heritage. The proposed Tyrone-Cavan Interconnector does not affect any sites of this nature designated in the DSTAP area;
 - CON 2 Local Landscape Policy Areas – the Benburb LLPA overlaps with the setting of Benburb Historic Park, Garden and Demesne. The proposed Tyrone-Cavan Interconnector does not affect (CES Volume 2 Chapter 12 paragraph 134 and TR 10 paragraph 51) Benburb or any other sites of this nature in the DSTAP area;
 - CON 3 Areas of Archaeological Potential – the proposed Tyrone-Cavan Interconnector does not affect any sites of this nature in the DSTAP area;
 - CON 4 Historic Parks, Gardens and Demesnes – this policy designates specific sites and defers to prevailing regional policy – which is currently PPS 6 policy BH 6. The only site of relevance is Benburb and this is unaffected (CES Volume 2 Chapter 12 paragraph 134 and TR 10 paragraph 51); and,
 - CON 6 Historic Waterways – this policy is directly relevant and prevents proposals that would prejudice the use of the Blackwater River as a navigable link between Ulster Canal

and Lough Neagh. The proposed Tyrone-Cavan Interconnector complies with this policy as it does not affect the use of the river.

- 4.24 Those policies of the DSTAP that are relevant to the proposed Tyrone-Cavan Interconnector are complied with. The proposed Tyrone-Cavan Interconnector is therefore in accordance with the DSTAP.
- 4.25 It is also important to note that the proposed Tyrone-Cavan Interconnector has not been objected to by NIEA on any grounds.

Summary on Plan Compliance

- 4.26 In summary therefore the proposed Tyrone-Cavan Interconnector crosses two plan areas. The Plans are out of date and have only a limited range of policies that are relevant to the determination of the proposed Tyrone-Cavan Interconnector. Many of their policies are out of date and regional policy now takes precedence. In particular they do not address the development of major new infrastructure such as the proposed Tyrone-Cavan Interconnector. The proposed Tyrone-Cavan Interconnector complies with a number of policies contained within both Plans. However some built heritage assets are affected which may be perceived as a non-compliance issue with the AAP. Where this occurs the overriding national and regional need for the proposed Tyrone-Cavan Interconnector outweighs these affects. In so far as there is any implied conflict argued by objectors, and given the limited range of relevant development plan policies, it is necessary to consider other material considerations, including extant policy in particular PSRNI policies PSU 2, PSU 8 and PSU 11 and the SPPS (subject to the transitional provisions set out above), along with other guidance. These policies address wider themes, including need, which is discussed below.

5.0 THE NEED FOR THE PROPOSED TYRONE-CAVAN INTERCONNECTOR

Introduction

- 5.1 Planning policy for major infrastructure generally seeks to balance the need for new infrastructure with environmental considerations.
- 5.2 SPPS paragraph 6.236 advises that *“The importance of other strategic infrastructure to the region such as transport (including air and sea ports), energy and water is recognised by Government”* [emphasis added]. Paragraph 6.238 sets out the aim of the SPPS in relation to utilities which is to *“facilitate the development of such infrastructure in an efficient and effective manner whilst keeping the environmental impact to a minimum”*.
- 5.3 PSRNI policy PSU 2 states *“Major projects will be subject to the most rigorous examination of potential environmental impacts”*. PSU 8 states that the *“need for new infrastructure including extensions to existing facilities will be balanced against the objective to conserve the environment and protect amenity”*.
- 5.4 While the supporting text of Policy PSU 2 states that *“In considering the balance between the development proposed and its potential effects some proposals may be approved because there are imperative reasons of overriding public interest”* [emphasis added], there is no requirement that proposals must demonstrate imperative reasons of overriding public interest. However, PSU 2 (PSU 8 states broadly the same) sets a requirement that all proposals must meet in stating that *“A developer will need to demonstrate that there is an overriding national or regional reason for the development”* [emphasis added], that is, that the national and/or regional reason for the proposed development overrides any otherwise unacceptable adverse impacts. In addition, as set out in Section 6 below, policies PSU 2 and PSU 8 require developers to undertake a *“thorough exploration of alternatives”*. Such a thorough exploration of alternatives is set out in TR 2 and TR 3 and in CES Volume 2 Chapter 4 (summarised in CES NTS Section 4) and the CES Addendum Volume 2 Chapter 10 (summarised in the CES Addendum NTS paragraphs 169-198).
- 5.5 PPS 21 policy CTY 1 deals with development in the countryside and confirms (penultimate sentence of policy on page 12) that certain utilities are acceptable in principle in the countryside. PPS 21 advises that *“Proposals for such development will continue to be considered in accordance with existing published planning policies”*. This is the overarching policy that sets out the acceptance in principle of the proposed Tyrone-Cavan Interconnector in general⁸.

⁸ The PAC has continued to apply PPS 21 policies alongside the SPPS. SPPS pages 51-55 do not provide any commentary on utilities. The PAC continues to apply PPS 21 policy CTY 1 as the retained policy for non-residential development in the countryside. See for example Appeal 2013/A0219 paragraph 7 where the PAC accepts renewable energy development to be acceptable under PPS 21 policy CTY 1. **Appendix B.**

Need for the Proposed Tyrone-Cavan Interconnector

General

- 5.6 Establishing need for the proposed Tyrone-Cavan Interconnector is a key part of the process and that need must be assessed against planning policy and wider Government policy generally. In terms of need it is not the purpose of this Statement to rehearse the extensive European, National and Regional policy support for the proposed Tyrone-Cavan Interconnector and the technical limitations of the transmission network across the island of Ireland which sets out clearly the need for the proposed Tyrone-Cavan Interconnector (this is fully set out by Mr Mark Norton, Mr Philip O'Donnell and Mr Raymond Smyth in TR 1 on Need and in the CES Volume 2 Chapter 2 and CES Addendum Volume 2 Chapter 3). However it is helpful to briefly summarise the case below.
- 5.7 The CES and CES Addendum and TR 1 explain why the current existing single interconnector is inadequate in the context of the Single Electricity Market. It demonstrates that a single fault in the existing interconnector could result in the loss in the operation of the interconnector which would result in the electrical separation of the transmission systems in Northern Ireland and Republic of Ireland. The separation causes an imbalance between the levels of generation and demand on both parts of the island. If the imbalance exceeds a certain limit then it can lead to instability, the cascading⁹ loss of generation and potentially widespread loss of supply. To manage such risks the transmission systems operators have to restrict the flow on the interconnector. Such restrictions prevent the full operation of the Single Electricity Market (SEM), restrict the extent to which generation in each system can contribute to security of generation supply in either jurisdiction and will act as an impediment to the full operation of renewable energy.

Operational Need

- 5.8 In response to these risks the need for the proposed Tyrone-Cavan Interconnector in operational terms can be summarised as follows:
- *Improving competition by reducing constraints restricting efficient performance of the All-Island Single Electricity Market (SEM)*
- 5.9 For Northern Ireland to remain competitive and to generate growth, it will be important for energy prices, including electricity prices, to be competitive. The primary mechanism for achieving this objective is to facilitate and encourage competition through market forces.
- 5.10 Competition has been the major driver behind the development and implementation of the SEM on the island of Ireland. The SEM was introduced to enable generators and electricity suppliers to compete freely across the island. It aims to keep prices at the lowest possible level by operating a competitive system that chooses the lowest priced sources of power

⁹ Cascading in electricity transmission terms relates to the loss of one critical circuit leading to the loss of others in succession until there is a major blackout effect. A broad analogy would be a domino effect.

generation at any point in time. However, since the present interconnection arrangements do not provide sufficient capacity, this results in constraints that limit the benefits that would otherwise be available.

- 5.11 By reducing the existing infrastructure constraint between both jurisdictions, the second interconnector would remove this constraint and would allow the all-island single electricity market to operate more efficiently, in line with its design objectives.
- 5.12 The energy regulators and government departments in both Northern Ireland and the Republic of Ireland have explicitly identified the need for improved electricity infrastructure, and especially a second North-South interconnector, as a “key enabler” for the future success of the SEM. Details of this are set out in the CES Volume 2 Chapter 2 paragraph 65 which identifies the Development Framework for an All-Island Energy Market. Page 5 of the Framework states “*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. Key elements will be the construction of a second electricity interconnector and network reinforcements as recommended by the regulatory authorities and announced by the Ministers in November 2004*”.
- *Improving security of supply by providing a reliable high capacity link between the two parts of the All-Island Transmission System*
- 5.13 Northern Ireland has a relatively small electricity network with a limited number of power stations. It is therefore exposed to a greater risk of loss of supply than would be the case in a large and highly interconnected system with a large number of power stations that can depend upon each other for support in the event of unforeseen disturbances.
- 5.14 Due to the restrictions in the available transfer capacity of the existing interconnector, the level of security of supply support that can be provided by each system to the other is significantly limited. Previous Generation Capacity Statements published jointly by EirGrid and the applicant have highlighted how, for Northern Ireland, with this limited support, the availability of generation to meet forecast demand would be subject to significant risk from 2016.
- 5.15 The applicant has taken action to address the risk to Northern Ireland security of supply for a limited period, post 2016 through a contract between the applicant and AES Ballylumford for the provision of 250 MW of local reserve services for a three-year time period commencing 1st January 2016, with an option to extend for a further 2 years. This contract has secured the operation of two of the steam units at Ballylumford at a slightly reduced capacity until 2018.
- 5.16 With the addition of this local reserve services contract in 2016 and the restoration of the Moyle Interconnector to full capacity in 2016 the capacity situation in Northern Ireland is adequate up to the end of 2020. Emissions restrictions on the generating station at Kilroot will however have a severe impact on system adequacy from 2021 onwards, resulting in significant risk to the security of supply in Northern Ireland if the second interconnector is not

in place. Shortfalls in available sources of electricity supply would require the introduction of arrangements to prevent power system failure by switching off the electricity supply (using a rota system for selected areas) during times of peak electricity demand. This outcome is not acceptable, and underlines the increasingly critical nature of the need for additional interconnection as a matter of urgency.

5.17 The risk of loss of supply is highly relevant in the context of industrial or commercial investment decisions, and a secure energy environment will ensure the best possible economic advantage for everyone in Northern Ireland.

- *Supporting the development, and the safe and secure operation, of renewable power generation by enhancing the flexible exchange of power flows over a large area of the Island*

5.18 Northern Ireland and the Republic of Ireland are both particularly well suited to the development of substantial wind energy generation. The wider use of wind energy would bring significant benefits to both economies, whilst improving the overall diversity of supply and reducing dependence on imported energy. The development of further renewable generation is encouraged by both Governments.

5.19 In September 2010 DETI (now the Department for Economy) published the “Energy A Strategic Framework for Northern Ireland” (SEF) document. In this document the (then) DETI Minister Arlene Foster MLA set a target for 40% of electricity consumption within Northern Ireland to be generated from renewable sources by 2020. Wind powered generation on this scale would deliver a significant benefit to the Northern Ireland economy. However, a key constraint to the full development of wind powered generation is the ability of the existing electricity network to absorb and manage this form of power generation. The proposed Tyrone-Cavan Interconnector will be a significant step towards addressing this issue by allowing power sourced from renewable generation to access demand and other interconnectors on both parts of the all island network.

Policy Recognition of Need

5.20 The proposed Tyrone-Cavan Interconnector is also necessary given the policy-driven strategic need for interconnection which is set out in the Regional Development Strategy 2035 (RDS) as explained in the CES Volume 2 Chapter 3 Section 3.3. In summary the RDS supports the delivery of a sustainable and secure energy supply (policy RG 5), through increasing the contribution that renewable energy can make to the overall energy mix, strengthening the grid, and working with neighbours to secure energy supply from competitive regional electricity markets. RDS policy RG 9 seeks to reduce our carbon foot print and facilitate mitigation and adaptation to climate change whilst improving air quality, and it seeks to do this through

increased use of renewable energies. The RDS also identifies regionally significant economic infrastructure and states (RDS paragraphs 4.16-4.17) that to facilitate the provision of additional renewable power generation, and a need to address current areas of weakness in the grid, it will be necessary to strengthen the electricity grid in many parts of Northern Ireland. It advises that this will involve a significant programme of investment in grid strengthening in the north and west of the region. Further it states *“Increased electricity interconnection capacity, allowing for export and import of power will help to ensure security and stability of electricity supply. It will provide increased opportunities for competitive trading in wholesale electricity, encourage new investment in generation and supply and enhance Northern Ireland’s security of supply. It is also important to facilitate the growth in power generation from renewable sources, while managing the challenging network management issues that increasing amounts of renewable integration onto the grid brings”*.

- 5.21 It is not Government’s role to identify the exact technical solution or route to deliver increased connectivity in the electricity grid. That is in the remit of the applicant working with the Regulator and NIE. The proposed Tyrone-Cavan Interconnector that is the subject of this Inquiry is the outworking of the requirement for greater interconnection and grid strengthening. It is supported by DETI as a project that satisfies wider Government policy.
- 5.22 As explained above, the SPPS paragraph 3.7 requires the planning system to support wider Government policies and strategies to address any existing or potential barriers to sustainable development, which includes proposals for key energy infrastructure including the electricity network.
- 5.23 It is entirely appropriate to have regard to the support of national policy and strategies in this case. This is consistent with the PAC recommendation on the Moyle Interconnector (PAC Ref: C3/1994, PAC letter dated 18 January 1996 page 2 **Appendix B**) where the Commission accepted that *“on the basis of the Government’s energy strategies for Northern Ireland, an overriding national and regional need has been established for this proposal. This is a very significant factor as far as the general principle of the acceptability in land use planning terms of interconnection with Great Britain is concerned”* [emphasis added].
- 5.24 Specific recognition and support for the proposed Tyrone-Cavan Interconnector is found in the SEF (page 21) which states that *“The second N-S electricity interconnector that is currently seeking planning approval will bring greater security and resilience of energy supply, will increase transmission capacity and encourage competitiveness in the Single Electricity Market for the benefit of all consumers. Importantly, it will also facilitate growth in renewable energy generation. This new transmission line is only the first part of the strategic overhaul of the NI electricity grid network – a system that has been in place since its last major development in the 1960’s and which needs significant new investment if it is to be fit for purpose to support*

- economic growth over the coming decades. This cannot be delivered without visual impact*. [emphasis added].
- 5.25 Repeated DETI Ministerial Statements and Committee for Enterprise, Trade and Investment statements provide unequivocal support for the proposed Tyrone-Cavan Interconnector. The DETI Minister in 2013 (Minister Foster) stated: *"The North/South Interconnector is a necessity. We have a single electricity market in the Republic of Ireland and Northern Ireland, and if we are to benefit from that we need good interconnection between both parts of this island... Therefore, it is not a luxury; it is an absolute necessity and it is costing consumers in Northern Ireland a large amount of money. Therefore, it is imperative that it is progressed very soon"* [emphasis added].
- 5.26 The Committee for Enterprise, Trade and Investment Committee Report dated January 2011 (see CES Volume 2 Chapter 2 paragraph 84) summarises evidence presented to it relating to grid infrastructure - *"The Department considers the proposed North-South Interconnector to be an essential requirement to meet its 40% target for renewable electricity as well as being important for the Single Electricity Market (SEM). The Utility Regulator informed the Committee that not having the North-South Interconnector is costing the Northern Ireland economy approximately £20 million per year... Evidence to the Committee has demonstrated that the North-South Interconnector is a vitally important element of infrastructure both from an energy perspective and from an economic perspective. It is essential that a decision on the Interconnector is made with the utmost urgency"* [emphasis added].
- 5.27 In their letter dated 30th April 2013 (CES Volume 3 Part 1, Appendix 2A) the Committee was provided with an update of the progress of the proposed Tyrone-Cavan Interconnector and informed of the details of the Generation Capacity Statement 2013-2022. They stated that *"All of the above point 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. The SEM Committee is charged with protecting the interests of electricity customers on the island of Ireland. To that end the Committee is concerned that the absence of vital infrastructure is costing customers"* [emphasis added].
- 5.28 The need for the proposed Tyrone-Cavan Interconnector has also been confirmed in the DETI consultee reply (undated but issued in August 2015):
- "DETI's strategic aim is for a more secure and sustainable energy system where energy is as competitively priced as possible, alongside robust security of supply. As such, it is supportive of this proposal to further interconnect the all island electricity market. Delivery of this important project, which has EU Project of Common Interest designation in recognition of its strategic importance to achievement of EU energy policy, will deliver long-term security of*

electricity supply to Northern Ireland, increase efficiency of wholesale electricity market, apply downward pressure on pricing and facilitate transmission of higher levels of renewable electricity generation in the market”.

- 5.29 As noted by DETI the proposed Tyrone-Cavan Interconnector has been designated a Project of Common Interest (PCI) for the purposes of EU Regulation 347/2013. A key aim of this regulation is to ensure that strategic priority networks in Europe are completed by 2020.
- 5.30 The evidence before the Inquiry therefore demonstrates that the need for the proposed Tyrone-Cavan Interconnector on grounds of competition, development and use of renewable energy and security of supply is driven by significant EU, National and Regional policy as well as technical limitations of the existing transmission systems. The policy-driven case for the need for the proposed Tyrone-Cavan Interconnector is compelling and the use of words such as “*imperative*”, “*vital*” and “*essential*” all point to the need to provide the proposed Tyrone-Cavan Interconnector as quickly as possible.
- 5.31 This clearly established need is considered, in the language of policies PSU 2 and PSU 8 to be “*an overriding national or regional reason for the development*”. Furthermore and in any event the need also demonstrates an “*imperative reason of overriding public interest*” (although that is not a policy test for acceptability of the proposal).

Other Policy Support for the proposed Tyrone-Cavan Interconnector

- 5.32 PPS 18 Renewable Energy (PPS 18) supports the proposed Tyrone-Cavan Interconnector. It confirms that Northern Ireland will play its full part in helping the UK to meet its EU targets for renewable energy (paragraph 2.1). It also reiterates the UK Renewable Energy Strategy in recognising that achievement of the targets for renewable energy “*will only be possible with strong, co-ordinated efforts from a dynamic combination of central, regional and local Government and the Devolved Administrations, including Northern Ireland, as well as other public groups, the private sector and dedicated communities*” (paragraph 2.8). The proposed Tyrone-Cavan Interconnector is critical to achieving the full benefits of renewable energy as it is necessary to enable the network to accommodate additional wind powered energy, to make it actually useable. It is an infrastructural delivery mechanism that is critical to achieving the strategic aim of PPS18.
- 5.33 The SPPS paragraph 6.214 recognises that “*Northern Ireland has significant renewable energy resources and a vibrant renewable energy industry that makes an important contribution towards achieving sustainable development, and is a significant provider of jobs and investment in the region*”. Paragraph 6.215 states “*Making appropriate use of renewable energy sources is supported by wider government policy, including the Regional Development Strategy 2035 (RDS) which emphasises the need to increase the contribution that renewable energy can make to overall energy mix. This commitment is affirmed by the Department of*

Enterprise, Trade and Investment's strategic aim for a more secure and sustainable energy system, as contained within the Strategic Energy Framework for Northern Ireland 2010".

- 5.34 PSU 2 makes reference to the principles underpinning sustainable development, and it is clear that the proposed Tyrone-Cavan Interconnector is sustainable development given that the proposed Tyrone-Cavan Interconnector is required for reasons of meeting policy needs relating to competition and competitive pricing in the electricity market; ensuring security of supply; reducing greenhouse gas emissions and society's long term reliance on fossil fuels and thereby facilitating this and future generations' ability to generate their own renewable sustainable energy.
- 5.35 PSU 2 also allows account to be taken of the contribution of a proposal to the regional economy. The proposed Tyrone-Cavan Interconnector will create wider economic benefit and sustain jobs in the construction of the proposed Tyrone-Cavan Interconnector itself (CES Volume 2 Chapter 15 Section 15.4.3 and TR 14 paragraphs 54-55). It will also sustain and boost employment in the renewables sector and give confidence to investors seeking to invest in the sector, who view the ability of the existing transmission systems to absorb and manage wind powered generation as a key constraint (CES Volume 2 Chapter 2 Section 2.5.5 paragraph 156). TR 1 Section 1.10 advises there will be savings from production costs and security of supply. In respect of reduced production costs, these were estimated all island at €20m per annum in 2020 rising to between €40m and €60m per annum in 2030. This cost can be split pro-rata between the jurisdictions, based on energy consumed, with approximately 25% to Northern Ireland customers and 75% to Republic of Ireland customers. In respect of the security of supply costs, in the short term, prior to the commissioning of the proposed Tyrone-Cavan Interconnector customers in Northern Ireland are directly bearing a cost of approximately £8.9m per annum to ensure their security of supply. It is estimated that the all island cost will grow to approximately €19m per annum by 2030. In the absence of the proposed Tyrone-Cavan Interconnector Northern Ireland customers will continue to fund increased security of supply costs.

Summary

- 5.36 It is clear that the proposed Tyrone-Cavan Interconnector is in compliance with PPS 21, PSU 2 and PSU 8 of PSRNI and the SPPS insofar as the issue of need is concerned. A full extensive CES and CES Addendum have been submitted that cover the likely significant environmental impacts of the proposed Tyrone-Cavan Interconnector as well as assessing alternatives. These documents demonstrate that the applicant has thoroughly explored and assessed the options for transmission alternatives ((see TR 2 and TR 3 and in CES Volume 2 Chapter 4 (summarised in CES Volume 1 NTS Section 4) and the CES Addendum Volume 2 Chapter 10)) and found this to support the construction of the proposed Tyrone-Cavan

Interconnector by means of an overhead transmission line using AC technology and that following the assessment of the routes, the selected route presents the best achievable balance between environmental impacts, technical requirements, and economic limitations. It will be seen from the environmental considerations assessed under a series of topics in Section 6 that there are no considerations derived from planning policy which are considered to outweigh the need for the proposed Tyrone-Cavan Interconnector, which is required for overriding national or regional reasons.

6.0 ENVIRONMENTAL ISSUES

Introduction

- 6.1 The need for the proposed Tyrone-Cavan Interconnector and the extensive policy support for it is an important material consideration to which very significant weight should be accorded. It substantially outweighs any perceived non-compliance with out of date development plans and policies they contain. For the reasons set out below, these factors also considerably outweigh the environmental impacts of the proposed Tyrone-Cavan Interconnector. The following can be considered to be the main planning issues that need to be considered.

Alternatives and Undergrounding (TR 2 & TR 3)

General

- 6.2 The requirement to consider alternatives is set out in PSRNI policy PSU 2 and PSU 8. Alternatives have been considered in the CES Volume 2 Chapter 4 (summarised in CES Volume 1 NTS Section 4) and the CES Addendum Volume 2 Chapter 10 (summarised in the CES Addendum Volume 1 NTS paragraphs 169-198). The main alternatives assessed are grouped under the headings 'Transmission and Technology' (TR 2) and 'Routeing and Substation Site Selection' (TR 3). These are dealt with by Mr Mark Norton, Mr Aidan Geoghegan and Dr Norman McLeod in TR 2 and Mr Michael Hewitt, Mr Fay Lagan, Mr Jarlath Doyle and Mr Robert Arthur in TR 3. The CES Volume 2 Chapter 4 (paragraph 201) advises *"that an HVAC overhead line is the most appropriate technology choice for the proposed Interconnector"* and (paragraph 392) advises that *"the location of the proposed substation and the routeing of the proposed overhead line are both considered to represent the best overall options among the many alternatives considered throughout the development process"*.

Undergrounding

- 6.3 Objectors have proposed the use of an underground cable as an alternative to overcome the visual impact of overhead power lines.
- 6.4 Policy PSU 11 advises when undergrounding should be considered from a visual impact perspective. This relates to mitigating wirescape in urban locations and even then it is only expressed as a preference, not a requirement. There is no policy requirement or even preference for undergrounding cables in rural areas.
- 6.5 In fact, PSU 11 seeks to control overhead power lines in terms of their visual impact, particularly on areas of landscape sensitivity. The SPPS echoes the PSU 11 tests wherein it seeks to keep visual impact to a minimum and to ensure new power line proposals avoid areas of landscape sensitivity, including AONBs (SPPS paragraph 6.250). The substation site and the overhead line route of the proposed Tyrone-Cavan Interconnector avoid direct impacts to designated landscapes such as AONBs which are those of the highest sensitivity.

- 6.6 It is worth reiterating that Government in the form of DETI recognise that *“upgrading the grid will involve more overhead power lines and power installations”* (SEF page 23) and that the Interconnector *“cannot be delivered without visual impact”* (SEF page 21). This is acknowledged in policy PSU 11, which seeks not to prohibit their delivery in rural areas but to minimise the visual impact of power lines through careful route selection. Significantly, having considered the landscape and visual impact NIEA Landscape Architects Branch (August 2015) does not oppose the proposed Tyrone-Cavan Interconnector.
- 6.7 Undergrounding has also been considered by Mr Mark Norton, Mr Aidan Geoghegan and Dr Norman MacLeod in the TR 2 on Alternatives: Transmission and Technology. It is also set out in detail in the CES Volume 2 Chapter 4 where a number of studies are considered including the PB Power Study which found that while a number of countries have been considering the use of underground cables in their transmissions systems, the rate at which they are being installed is very low. The longest AC cable is circa 40km (which is in Tokyo) and since most circuits are less than 20km long, a 140km installation would be a *“world first”* (CES Volume 2 Chapter 4 page 73 paragraph 84 and TR 2 paragraph 46).
- 6.8 An assessment of the comparative merits of overhead transmission lines versus underground cables is carried out in the ECOFYS Study. This found that globally, the vast majority (over 99%) of 315kV-500kV transmission grid is provided by means of overhead lines (CES Volume 2 Chapter 4 page 80 paragraph 126). It advises that in terms of capital cost, *“overhead lines are the most attractive option. This does not change significantly when operating costs are included to give a whole life cycle analysis”*. It also states that *“The expected Forced Outage Rate of underground cables are estimated by a variety of sources to be at least one order of magnitude higher than that of overhead lines. From a transmission adequacy perspective both technologies do not yet offer the same performance and, hence, are not equivalent”* (CES Volume 2 Chapter 4 page 81 paragraph 132).
- 6.9 The level of the Forced Outage Rate would undermine one of the main reasons for the proposed Tyrone-Cavan Interconnector, namely enhancing security of supply.
- 6.10 In environmental impact terms ECOFYS (CES Volume 2 Chapter 4 page 81 paragraph 134) found underground cables to *“have a greater environmental impact than overhead lines in terms of Land Use, Geology and Soils, Water Resources, Ground Restoration, Ecology and Nature Conservation, Traffic and Noise and Air Quality. The impact of the technologies in terms of Cultural Resources are found to be similar in significance, while overhead lines are found to have a greater environmental impact than underground cables in terms of Landscape and Visual, Communities and Recreation and Tourism”*.

- 6.11 National Policy Statement for Electricity Networks Infrastructure (NPS EN-5)¹⁰ (paragraph 2.8.9 bullet 3, page 15), confirms this conclusion and states that *“the environmental and archaeological consequences (undergrounding a 400kV line may mean disturbing a swathe of ground up to 40 metres across, which can disturb sensitive habitats, have an impact on soils and geology, and damage heritage assets, in many cases more than an overhead line would)”*.
- 6.12 In addition, NIEA Protecting Historic Monuments have previously stated in advance of the 2012 Inquiry for the proposed Tyrone-Cavan Interconnector that, while it recognised that the potential adverse effects of an overhead line would be reduced by an underground cable, *“underground cabling would have the potential to damage/destroy previously unrecorded below ground archaeological remains, which are a limited and non-renewable resource. An underground scheme on such a scale would require extensive and costly archaeological mitigation”*.
- 6.13 The Utility Regulator has confirmed (letter dated 16th April 2008) that *“Current indications are that the cost of putting the interconnector underground would be greater than the cost of building an overhead line ... the Authority considers that the interests of all electricity consumers in Northern Ireland are unlikely to be protected if additional unnecessary cost is incurred through placing the line underground”* (CES Volume 3 Part 2).
- 6.14 That position was reinforced in a letter dated 30th April 2013 (see CES Volume 3 Part 1 Appendix 2A) where the SEM Committee note *“the project must not only be progressed quickly but also cost effectively. The Committee understands from the Irish government review that the cost for the undergrounding of the project would be significantly higher than the AC overhead line construction employed elsewhere in Europe. The regulatory authorities would therefore be of the view that customers should not be expected to pay for any unnecessary costs associated with undergrounding of the cables given there would be no enhancement in service”*.
- 6.15 The SEM committee restated its position in a letter to EirGrid dated 18th May 2015 (CES Addendum Appendix 3.2). It states that the Committee *“remain concerned by the call of some stakeholders for the undergrounding of all, or sections of, the interconnector, given the sub-optimal and novel technical solution this represents. We are also concerned by the estimated increased construction costs by a factor of at least five, not to mention higher ongoing maintenance costs which will be carried by consumers. It remains important for you, as experts, to continue to emphasise the risks and costs associated with any proposal to underground”*.

¹⁰ Whilst not adopted policy in NI, it is a relevant consideration in the absence of NI specific guidance on this issue.

- 6.16 An AC underground cable would cost over 5.7 times as much as an AC overhead line to construct and would cost significantly (€35 million) more than an overhead line to run over its lifetime (see PB Power Report CES Volume 3 Part 1 Appendix 4B page 4).
- 6.17 NPS EN-5 advises that permission should only be refused for overhead line proposals in favour of undergrounding if the suggested benefits of the latter “*clearly outweigh any extra economic, social and environmental impacts*” (emphasis added) (2.8.9, page14). Adopting undergrounding as an alternative in this case does not clearly outweigh such extra impacts.

Partial Undergrounding

- 6.18 CES Addendum Volume 2 Chapter 10 (and TR 2 Section 2.7.3) sets out the Key Findings of a Partial Undergrounding report (the full report is at Appendix 10.2 of the CES Addendum). The applicant has assessed partial undergrounding of the AC overhead line and concluded that it is feasible in specific circumstances (i.e. less than 10km and if the cost can be proven to be an environmental advantageous way of overcoming an otherwise unavoidable environmental or technical constraint to the preferred overhead line).
- 6.19 Partial undergrounding as a landscaping mitigation has been assessed in the context of the Benburb Area (see CES Addendum Volume 2 Chapter 10 page 164-165 and CES Addendum NTS paragraphs 196-198) and it has been determined that while partial undergrounding would have reduced impacts in terms of landscape and cultural heritage, “*it was considered there was no justification for, or greater benefit of, partial undergrounding at this location in the Benburb Area over the proposed overhead line for this location at Benburb. The partial undergrounding option at Benburb would create greater adverse impacts (agronomy, ecology, soils, geology, hydrology and traffic) than the overhead line*” (CES Addendum Volume 1 NTS paragraph 197). It was concluded that “*there is no overriding justification for, or benefit of the provision of partial undergrounding when compared to the proposed interconnector, i.e. the overhead line design*” (CES Addendum Volume 1 NTS paragraph 198).
- 6.20 Consistent with this assessment, I also note that the Minister for Energy, Enterprise and Tourism in Scotland decided (7 December 2011) that, as part of the development of a 400kV line from Beaully to Denny, undergrounding the line at Stirling is unnecessary. The Minister concluded that “*the net reduction in impacts that would be realised from undergrounding would be relatively modest in most locations, especially once the potential impacts of sealing end compounds are taken into account*”. Such compounds are needed where the line was undergrounded and where it resurfaced, and those compounds “*would have a significant impact in their own right*” as they would be “*almost as big as a football pitch*” and “*would have to be accommodated in the landscape instead of pylons*”. The Minister advised “*undergrounding is normally considered as a mitigation intervention only to address extraordinary circumstances; where when major adverse impacts are predicted, and where it would*

be effective when other mitigation options have been ruled out as ineffective". A copy of this decision is at **Appendix D**.

- 6.21 In conclusion, in accordance with the test in policy PSU2 there is an overriding national and regional need for this proposed Tyrone-Cavan Interconnector. Additionally, there are imperative reasons of overriding public interest, though there is no need in policy terms to demonstrate such. It has been demonstrated that alternatives have been thoroughly explored and are "unsuitable". The proposed Tyrone-Cavan Interconnector clearly meets the terms of other policy (PSU11) which does not require the undergrounding of electricity cables but rather careful route selection and minimisation of intrusion as has been carried out in this case. I consider environmental effects further below.

EMFs (TR 5)

- 6.22 UK policies for the protection of the public include various Codes of Practice, in particular "*Power Lines: Demonstrating compliance with EMF public exposure guidelines. A Voluntary Code of Practice*" (Department of Energy & Climate Change, March 2012), remain in force in Northern Ireland.
- 6.23 The SPPS paragraph 6.249 advises that "*In relation to power lines current Government policy is that exposures to power-line Electro Magnet Fields (EMFs) should comply with the 1998 International Commission on Non-Ionizing Radiation Protection (ICNIRP) Guidelines. A voluntary Code of Practice Power Lines: Control of Microshocks and other indirect effects of public exposure to electric fields A Voluntary Code of Practice (DECC, July 2013) has been agreed by the Department of Energy and Climate Change, the Department of Health, the Energy Networks Association, the Welsh Government, the Scottish Government, and the Northern Ireland Executive. It sets out what is regarded as compliance with those aspects of the EMF exposure guidelines that relate to indirect effects as far as the electricity system is concerned. Further Government policies relating to EMFs from overhead power lines, advise that as a precautionary measure they should, where reasonable, have optimum phasing. This is the subject of a companion Code of Practice "Optimum phasing of high voltage double-circuit power lines". This Code of Practice applies in England, Wales, Scotland, and Northern Ireland*".
- 6.24 SPPS paragraph 6.250 states "*Any proposal for the development of new power lines should comply with the 1998 International Commission on Non-Ionizing Radiation Protection (ICNIRP)*".
- 6.25 The applicant's policy is that the proposed Tyrone-Cavan Interconnector must comply with Government policy on EMFs and in particular stay within the Government's EMF exposure guidelines. That policy is consistent with the approach taken in government policy relating to EMFs, as confirmed by the SPPS. The applicant considers that compliance with Government

- policy on EMF exposure levels ensures the appropriate level of protection for the public from these fields.
- 6.26 As Dr John Swanson explains (CES Volume 2 Chapter 7 and TR 5 paragraph 38-41), the overhead line and the substation are compliant with UK policy, and that there is no significant impacts on farming, plants, animals or other wildlife. There is evidence that beehives can be affected by strong electric fields. However simple mitigation methods (such as earthing of the hive) eliminate the impact. In addition, there is expected to be no impact to medical devices, such as pacemakers and hearing aids, as a result of the proposed Tyrone-Cavan Interconnector. This has been confirmed by the Medicines and Healthcare Products Regulatory Agency, who are part of the Department of Health and are responsible for ensuring that medical devices in the UK work and are safe.
- 6.27 Dr Swanson confirms in TR 5 paragraph 35 that all residential properties including, specifically, the closest residential property, will be well within EMF exposure limits. A person standing directly under the overhead line would be within the exposure limits, so that plainly any persons living in dwellings near the overhead line would also be within those limits. The CES Addendum Volume 2 Section 1.8.3.2 gives updated details of the closest properties, both already constructed and with planning consent, and confirms that they are compliant with the relevant exposure limits.
- 6.28 On the basis of the evidence at this Inquiry it is clear that the ICNIRP guidelines are met and that is sufficient to conclude that the proposed Tyrone-Cavan Interconnector is acceptable in EMF terms.
- 6.29 Objectors have argued that because of the EMF issue, the alternative of underground cables should be adopted. Dr Swanson explains that the EMFs from both overhead lines and from underground cables are compliant with the ICNIRP guidelines. Therefore, both would be acceptable in policy terms. It is notable that while the opportunity arose in publishing the SPPS to require undergrounding, the Government clearly considered this was not necessary. Moreover, NPS EN-5 states that undergrounding is unlikely to be justified on the basis of EMF exposure alone (paragraph 2.10.12, pages 21-22).
- 6.30 Objectors raise the issue of perception of fears from exposure to EMFs and make reference to appeal decisions (APP/T5720/A/09/2099306 & APP/T5720/A/09/2098386 see **Appendix B**) relating to a single case in England that was refused due to fears of exposure to EMFs. That case was determined prior to the Written Ministerial Statement of 2009 and the introduction of the Codes of Practice as detailed in CES Volume 2 Chapter 7, so should not be considered as reflecting the current planning policy position. Perception of harm is a material consideration, but the decision-maker is entitled to have regard to the extent to which any perceived risks have any objective justification in deciding the weight to be accorded to them. Notably in that case there was no quantified evidence on increased levels of exposure to EMFs, and no

consideration of the exposure limits. It is unclear if the Inspector was even aware of the exposure limits. The circumstances are therefore not comparable, in that the applicant has provided specific scientific evidence in this case, through Dr Swanson, that the proposed Tyrone-Cavan Interconnector will be compliant with the relevant exposure limits. In this case, therefore, perceived concerns should not be given significant relative weight.

Landscape and Visual (TR 11)

- 6.31 Policy is provided in PSU 11 regarding controlling overhead power lines in terms of their visual impact particularly on areas of landscape sensitivity. This is a policy echoed in SPPS paragraph 6.250.
- 6.32 The visual impact of the proposed Tyrone-Cavan Interconnector is addressed in the CES Volume 2 Chapter 13, (summarised in the NTS Section 6.10) and a separate TR 11, by Ms Karen Clifford and Mr Joerg Schulze. It is acknowledged that the proposed Tyrone-Cavan Interconnector will inevitably have landscape and visual impacts, but in accordance with policy PSU 11 and SPPS paragraph 6.250, sensitive landscapes such as AONBs have been avoided.
- 6.33 TR 11 paragraph 142 advises that an in-built and robust degree of mitigation of the landscape and visual impacts of the proposed Tyrone-Cavan Interconnector has been achieved through the process of consideration of alternatives, route selection and tower type. Adherence to the Holford Rules and other line routeing environmental guidance has influenced the development of the proposed Tyrone-Cavan Interconnector. The process of Landscape and Visual Impact Assessment has found that there would be significant adverse impacts upon the landscape of some parts of the study area; but these impacts are not on designated landscapes. There would also be significant adverse effects on the visual amenity afforded from various locations from within the immediate area adjacent to the line route. However, the landscape and visual resource of the wider study area would not deteriorate to a significant degree and the overall impact upon landscape and visual amenity in general is therefore restricted to those receptors within close proximity to the towers and overhead line.
- 6.34 PSU 11 advises that siting of electricity power lines will be controlled in terms of the visual impact on the environment, with particular reference being given to designated areas of landscape or townscape value. It advises that lines should be planned to avoid areas of landscape sensitivity; avoid sites and areas of nature conservation or archaeological interest; minimise visual intrusion; follow natural features of the environment and keep wirescape to a minimum in urban areas. The proposed Tyrone-Cavan Interconnector avoids all areas of designated landscape and avoids nature conservation and archaeological areas of interest and has sought to minimise its intrusion and follow the natural features of the environment. This approach is therefore compliant with policy PSU 11. In terms of the visual impact on the countryside generally, PPS 21 acknowledges that such developments are acceptable in

principle in the countryside. PSU 8 allows such development where there is an overriding need, and the wider Government support for the proposed Tyrone-Cavan Interconnector in the SEF 2010 acknowledges that the proposed Tyrone-Cavan Interconnector cannot come forward without visual impact. The proposed Tyrone-Cavan Interconnector does not breach any specific visual impact policies relating to the protection of landscape and in the balancing exercise the overriding national and regional need for the proposed Tyrone-Cavan Interconnector outweighs its landscape and visual impact.

- 6.35 PSRNI policy DES 10 states that a landscaping scheme will normally be required for any development proposals involving new building. The application documents include a landscaping planting layout for the substation site. In terms of landscaping at the towers replacement planting will be provided as far as practical.

Integration of Substation into the Countryside

- 6.36 PPS 21 policy CTY 1 (page 12) advises that *“There are a range of other types of non-residential development that may be acceptable in principle in the countryside e.g. certain utilities...Proposals for such development will continue to be considered in accordance with existing published planning policies”*. The proposed Tyrone-Cavan Interconnector (which requires a substation) is primarily assessed against the policies in PSRNI and in complying with PSRNI policy PSU 8 and 11, it is consistent with PPS 21 policy CTY 1.
- 6.37 PPS 21 policy CTY13 and policy 14 only apply to buildings in the countryside and therefore the switchgear building and the control building located within the substation are the only buildings which need to be assessed against those policies. PPS 21 policy CTY 13 states that *“planning permission will be granted for a building in the countryside where it can be visually integrated into the surrounding landscape and is of appropriate design”*. It sets out a range of criteria against which to assess a proposed building. PPS 21 policy CTY 14 states that *“Planning permission will be granted for a building in the countryside where it does not cause a detrimental change to, or further erode the rural character of an area”*. It also sets out a range of criteria against which a proposal will be assessed. The switch gear and control buildings are within the substation site, which has achieved integration into the countryside by using land form and existing and proposed vegetation to screen views of it. It will be landscaped to minimise its impact on the rural area (as explained in paragraph 6.35 above). Further, this policy must be applied having regard to the functional requirements of the substation. Its design reflects its purpose which is not uncommon in a rural area.
- 6.38 The proposed Tyrone-Cavan Interconnector will not erode the rural character of the area under policy CTY14. In any event, any perceived effects on the area would be significantly outweighed by the overriding national and regional need for the proposed Tyrone-Cavan Interconnector of which the substation and its associated buildings form part.

Construction (TR 4)

- 6.39 The construction of the proposed Tyrone-Cavan Interconnector is set out in the CES Volume 2 Chapter 5 (summarised in the CES Volume 1 NTS Section 5.4-5.6) and CES Addendum Volume 2 Chapter 1 (and summarised in the CES Addendum Volume 1 NTS paragraphs 24-33). Mr Michael Hewitt, Mr Robert Arthur, Mr Fay Lagan and Mr Richard Manson deal with construction in TR 4.
- 6.40 The CES has been prepared to outline the proposed mitigation measures which will be used to eliminate or minimise the impacts of the proposed development. The construction and operational phases for the substation, towers, overhead line and associated works have been assessed within the environmental topics discussed throughout the CES. The potential effects on the countryside from the construction of the development have been considered. Examples of potential impacts are potential water pollution, impacts on traffic, potential effects to business including Linwoods bioremediation area and disruption to agriculture activity.
- 6.41 Various mitigation measures have been included in the revised Outline Construction Environmental Management Plan (CES Addendum Volume 3 Appendix 9.1). CES Volume 2 Table 21.1 (page 645) provides a summary of the proposed mitigation measures. Examples of construction mitigation includes adherence to a Pollution Prevention Plan, controlling working practices, covering up or ramping excavation over night and limiting numbers of HGV movements per hour or daily.
- 6.42 Most of the construction impacts will be short term and temporary in nature. Details of the exact impacts are set out in the respective CES Chapters, and in each of the TRs and below. By way of an example permanent impacts such as the diversion of ditches is considered to be neutral in impact. The loss of hedgerows and scatter trees are considered to be minor negative impacts and the impact on the highway network from transportation of the proposed Tyrone-Cavan Interconnector transformer is assessed to be short-term moderate adverse impacts, but no long term impacts are identified. Impact on two land parcels are identified as major adverse impact due to the construction of the substation.

Traffic and Haulage (TR 15 & TR 12)

- 6.43 Traffic and haulage are dealt with by Mr Tim Robinson and Mr Nathan Clarke in TR 15. Mr Fay Lagan deals with haulage route and transport impacts on the local community in TR 12. TR 15 explains that the assessment of traffic and transport effects is presented in the CES Volume 2 Chapter 18 and the CES Addendum Volume 2 Chapter 7. That assessment concludes that the construction of the proposed Tyrone – Cavan Interconnector will result in a temporary increase in traffic levels on a number of roads within the study area and in accordance with the significance criteria detailed in CES Chapter 18 these increases are considered to be minor or negligible and as such not significant (TR 15 paragraph 2).

- 6.44 PPS 3 Access, Movement and Parking (PPS 3)¹¹ provides traffic policy to assess the proposed Tyrone-Cavan Interconnector. The key policies are Access to Public Roads (policy AMP 2) and Car Parking and Service Arrangements (policy AMP 7).
- 6.45 Access to the proposed Turleenan substation site from the B106 road between Moy and Tamnamore meets the requirements of policy AMP 2 in that it “*will not prejudice road safety or significantly inconvenience the flow of traffic*” (policy AMP 2, page 20). The applicant has assessed all accesses for construction purposes. Details of these are set out in CES Volume 2 Chapter 18.
- 6.46 As TR 15 paragraphs 50-51 set out, site access points to each tower access were reviewed to check whether all construction vehicle movements could take place. If this was not possible then temporary improvements including widening to the access have been identified or else traffic management arrangements put in place. Where widening involved hedge removal, hedgerow will be reinstated post construction. As a further check, each site access and the haul route to it from the nearest main road was assessed. In some instances the routes are wide enough for two way traffic. On others, whilst the road is narrower there are informal passing opportunities where, if two vehicles meet (as occurs currently) they can pass each other at a number of locations. The latter represents the position for the majority of haul routes but there are a number of site access points that require temporary traffic management measures e.g. one way systems. These have been established as feasible but final detail will be agreed with TransportNI and the contractor as part of the Construction Traffic Management Plan.
- 6.47 Car parking and service arrangements related to the proposed substation comply with policy AMP 7 to ensure parking is contained within the proposed Tyrone-Cavan Interconnector site. TR 15 paragraph 44 confirms there will be 6 parking spaces at the substation when it is operational.
- 6.48 TR 12 paragraphs 51-52 set out the impacts on the community of the haulage routes. This is discussed in Community Amenity below. TR 15 paragraphs 109-111 state that the haulage routes for the proposed Tyrone-Cavan Interconnector have been fully assessed and found to involve short term moderate adverse impacts to road users because the transportation of the transformers to the proposed Turleenan substation will require three trips by a 20-axle transporter to transport each of the three 222 tonne transformers from Warrenpoint Port to Moy. This transportation will take up to seven hours per trip and will result in local traffic disruption because of temporary road closures and the slow moving traffic. There would be no long-term impacts.

¹¹ SPPS paragraphs 6.293-6.305 (pages 106-110) do not add any material changes to PPS 3.

- 6.49 The fact that TNI has no objection to the proposed Tyrone-Cavan Interconnector reinforces the conclusion that the proposal complies with policy AMP 2 of PPS 3. Transport NI have accepted the use of temporary accesses and included a request for conditions in their consultation response (dated 8th July 2015), which states as follows: “*Construction Access to be provided in accordance with the Volume 3 Part 5 of 5 Appendix 18A*”; and that “*All redundant accesses from the site to the public road shall be permanently closed off and the roadside verge reinstated to the satisfaction of Roads Service*”.
- 6.50 The requirement to comply with PPS3 access policy is to be considered in the light of the objective (set out in PPS 21 Aims and Objectives) “*to protect the countryside from unnecessary or inappropriate development*”. The PAC’s approach in these circumstances can be noted from appeal 1998/A025 (**Appendix B**) where in an appeal for an apartment development in an Area of Townscape Character (Knockdene), the Commission considered the weighting that should be accorded to environmental considerations as compared to road safety and traffic considerations and that a proposed traffic solution would facilitate retention of existing boundary and internal hedges; widening of existing entrances should be minimal; and the layout of car parking areas should take account of environmental characteristics of the area. The Commission endorsed the approach by Roads Service, which withdrew the need for a footpath in order to take proper account of the necessity to protect the area’s environmental characteristics. The Commission advised that existing vegetation within the site should be retained and the landscape plan should indicate strengthening particularly along the boundaries. The PAC’s approach has similarities with the approach being proposed in this case where the temporary traffic measures are the preferred option in order to maintain the environment.

Cultural and Built Heritage (TR 10)

- 6.51 Assessment of the proposed Tyrone-Cavan Interconnector’s cultural and heritage impact both during construction and operational stages are set out at CES Volume 2 Chapter 12 and CES Volume 1 NTS Section 6.9 and in a separate TR 10 by Ms Helen Maclean and Mr Dawson Stelfox.
- 6.52 TR 10 paragraph 39 sets out that there are no construction effects on any recorded assets by the proposed Tyrone - Cavan Interconnector. The towers have been located to avoid all previously recorded cultural heritage sites. Within the footprint of the proposed substation, there is one recorded asset - a lodge recorded from early 20th century historic mapping. It is not anticipated that any original remains of this lodge survive as the building has been redeveloped to such an extent that the original structure is no longer apparent, and no historic interest remains, resulting in a neutral effect, even though this structure will be demolished as part of the proposals.

- 6.53 TR 10 paragraph 40 notes that where possible, existing tracks will be used for construction. Any new tracks will be constructed on the surface without the need for topsoil removal. Therefore access track construction will not impact upon any archaeological sites. In a number of areas, undergrounding of existing overhead services will be required. None of these affect any recorded archaeological sites.
- 6.54 There are no direct physical impacts from the towers to any cultural heritage sites and an archaeological watching brief during construction is recommended to address impacts to unknown sites.
- 6.55 The impact to the setting of cultural heritage sites, including the historic landscape has been discussed above under the assessment against the Plans in Section 4. The relevant policy for assessment is provided under PPS 6¹².

Archaeological Remains of Regional Importance

- 6.56 PPS 6 policy BH1 (preservation of archaeological remains of regional importance) only permit development proposals that would adversely affect such sites in “*exceptional circumstances*”. As explained above the impacts on the setting of three regionally important assets has been found to be moderate adverse and two have been found to be slight adverse resulting in effects on views from these assets. Under PPS 6 policy BH 1 these impacts are outweighed by the overriding national and regional need for the proposed Tyrone-Cavan Interconnector.

Archaeological Remains of Local Importance

- 6.57 PPS 6 policy BH 2 (protection of archaeological remains of local importance) only permit development proposals that would adversely affect such sites where “*the proposed development or other material considerations outweigh the value of the remains in question*”. Curiously, PPS 6 policy BH 2 has a higher test for local archaeological remains than regionally important archaeological remains where the impacts of a proposal on a setting (as opposed to the integrity of its setting) can be allowed if the Department consider the proposal or other material considerations to outweigh the value of the remains in question. When inconsistencies between policies such as this occur, the applicant has the right to have the proposal assessed on the basis of policy most favourable towards it. As such, the appropriate test would be to consider a proposal’s impact on the integrity of the setting, and if harm is caused consider whether there are exceptional circumstances that outweigh the harm. Again consistent with the policy BH 1 text the proposed Tyrone-Cavan Interconnector should be allowed given the ‘exceptional circumstances’ of the overriding national and regional need for it.
- 6.58 There is one site of local archaeological remains that has moderate adverse impacts on its setting caused by views of the Tyrone-Cavan Interconnector from the asset. This impact is

¹² SPSS paragraphs 6.1-6.30 (pages 37-44) do not make any material changes to PPS 6.

outweighed by the 'exceptional circumstances' of the overriding national and regional need for the proposed Tyrone-Cavan Interconnector.

Historic Parks, Gardens and Demenses of Special Historic Interest

- 6.59 PPS 6 policy BH 6 does not normally permit development which would lead to the loss of, or cause harm to, the character, principal components or setting of parks, gardens and demesnes. The proposed Tyrone-Cavan Interconnector has a slight adverse impact on the Argory registered garden as there will be views of the proposed Tyrone-Cavan Interconnector from the asset. This impact on the setting of the Argory Garden is outweighed by the overriding national and regional need for the proposed Tyrone-Cavan Interconnector.

Listed Buildings.

- 6.60 PPS 6 policy BH 11 deals with impact on the setting of listed buildings. It is also recognised that pursuant to section 91 (2) of the 2011 Act, in considering effects on a listed building, special regard shall be had to the desirability of preserving the building or its setting. The proposed Tyrone-Cavan Interconnector impacts on the setting of 7 listed buildings to a slight adverse level because the proposed Tyrone-Cavan Interconnector will be viewed from the listed buildings. The impacts are reduced by existing surrounding trees, woodland, the topography of the area, the distance to the proposed Tyrone-Cavan Interconnector and limited and restricted views from the various listed buildings.
- 6.61 The impact on the former back gate lodge to Tullydowey House (No 39 Tullydowey Road, a grade B1 listed building) is addressed specifically in the CES Volume 3 Part 4 Appendix 12 F and TR 10 paragraph 43 because of the moderate adverse impact of the proposed Tyrone-Cavan Interconnector which arises as a consequence of the overhead line passing directly behind the lodge and a tower is located nearby. At Appendix 12F Mr Dawson Stelfox advises he does not consider that the proposed Tyrone-Cavan Interconnector has an adverse effect on the immediate setting of No 39 Tullydowey Road, but that it has a moderate adverse impact on the 'extended' setting of the house. In terms of policy BH 11, the proposed Tyrone-Cavan Interconnector would have an adverse effect. That does not mean that the proposed Tyrone-Cavan Interconnector is unacceptable. Policy BH 11 anticipates exceptions to the policy and the use of the word 'normally' is explained in page 5 of PPS 6. It is included in policy because it is recognised that on occasion there will be circumstances where other material considerations outweigh these policies. Those material considerations include the significant need and wider policy support explained above.
- 6.62 Undergrounding the proposed Tyrone-Cavan Interconnector at this location to address the impacts on the secondary setting of the listed building would not be justified. This has been explained above (paragraph 6.19) in respect of Benburb, which includes Tullydowey House

- 6.63 In terms of compliance with PPS 6 policy BH 11, the proposal does impact the setting of listed buildings but in each occasion those impacts are outweighed by the overriding national and regional need for the proposed Tyrone-Cavan Interconnector.
- 6.64 Having regard to all the cultural heritage assets, the impacts caused by the proposed Tyrone-Cavan Interconnector are outweighed by the overriding national and regional need for it. This conclusion is reinforced by the fact that NIEA Protecting Historic Monuments (consultation dated 20th August 2015) do not object in principle to the proposed Tyrone-Cavan Interconnector and agree with the approach in the CES to provide an archaeological watching brief during ground works. They have requested a condition requiring a programme of archaeological works be attached to any planning approval.

Tourism (TR 14)

- 6.65 Mr Ken Glass and Mr Fay Lagan deal with tourism in TR 14. The relevant policy is PPS 16 Tourism (PPS 16). The policies of PPS 16 supersede the tourism policies SP10 and TOU 1 to TOU 4 of the Planning Strategy for Rural Northern Ireland (PSRNI) and also policy CTY 1 of PPS 21 as it relates to the tourism policies of PSRNI.¹³
- 6.66 PPS 16 policy TSM 8 seeks to safeguard tourism assets and paragraph 7.42 of the policy states *“What constitutes ‘adverse impact’ and the determination of the extent of its influence are matters of planning judgement and each case will be assessed on its merits”*. Paragraph 7.43 advises that *“this policy is not intended to prevent all development. Development that will not significantly compromise the overall tourism value of the asset may be facilitated”*.
- 6.67 The proposed Tyrone-Cavan Interconnector does not adversely impact any tourism asset. As explained in CES Volume 2 Chapter 15 and in TR 14 paragraph 39 no tourist sites will be physically impacted by the proposed Tyrone-Cavan Interconnector. Some sites will have views of the proposed Tyrone-Cavan Interconnector during construction and operation, but the CES assesses these as not significant. Whilst 3 recreational routes are oversailed by the proposed Tyrone-Cavan Interconnector and will from a tourism perspective experience minor adverse impacts during construction, once operational the tourism impacts will, be negligible (TR 14 paragraph 76). Therefore, no impacts occur to tourist assets such as to significantly compromise their tourism value, either on its own or in combination with existing approved developments. Consequently, the proposed Tyrone-Cavan Interconnector should be facilitated as recognised in the justification and amplification text of the policy.

Community Amenity (TR 12)

- 6.68 PSRNI policy PSU 8 identifies the impact on existing communities as a consideration in assessing new infrastructure. CES Volume 2 Chapter 14 (summarised in CES Volume 1 NTS Section 6.11) and Mr Fay Lagan deals with community amenity matters in TR 12. The CES

¹³ SPPS paragraphs 6.251-6.266 (pages 97-100) do not make any material changes to PPS 16.

has considered the impacts of the proposed Tyrone-Cavan Interconnector against community facilities within 5km of the proposed line. It identifies a garden centre to be over-sailed. It will have moderate adverse impacts caused by stringing activity and disruption to the area around the centre during construction. In respect of other community facilities there is potential for interacting (cumulative) impacts during construction as a result of noise, landscape and visual and EMFs on residential, commercial and community facilities. This is assessed in the relevant CES Chapters, however it has been determined that because of the distance of facilities from the proposed Tyrone-Cavan Interconnector (i.e. a day nursery is located 900m from the line and a primary school 700m away) there will be no significant effects.

- 6.69 During construction there will be some diversion to electricity and telephone cables, which may result in temporary interruptions. There are potential impacts to road bowling clubs and other activities such as Tynan and Armagh Hunt and Moy Gun Club during construction works. The impacts involve events being prevented from occurring due to construction traffic or impacts to the quality of the road surface that would affect the quality of the event. These impacts are assessed as temporary major adverse. Similar issues involve impacts preventing access to river banks for anglers and canoeing and restricted access to roads for cycling and walking. These are considered to be temporary moderate adverse impacts. Longer journey times during construction around the area is considered to have a temporary moderate adverse impact, and the temporary disturbance on access tracks in close proximity to properties is assessed as temporary major adverse impact (CES Volume 2 Chapter 14 page 541).
- 6.70 Construction impacts will be mitigated as set out in the revised Outline Construction Environmental Management Plan, which includes giving residents advance notice of temporary road closures, providing signage for alternative routes and liaising with community groups. The contractor will be required to leave the road in a suitable condition for sporting activities to continue along the roads in the area.
- 6.71 No significant operational phase impacts are predicted. There will be no permanent land take from residential, commercial and community facilities during the operational phase. Patricia's Garden Village Garden Centre will be oversailed, but there will be no impacts that would prevent the centre from operating. It is accepted there will be an effect on the community, but the degree of impact is limited and would not outweigh the overriding national and regional need for the proposed Tyrone-Cavan Interconnector, from which the whole of Northern Ireland (including local communities themselves) will benefit.

Extant Planning Permissions for Chicken Sheds

- 6.72 The CES Chapter 14 and TR 12 paragraph 47 has also considered the impacts of four planning permissions relating to chicken sheds under the proposed line. Two of these would have imperceptible impacts. One would have a moderate adverse impact due to the location of conductors over the buildings. One would have a major adverse impact because Tower 22

is located at this site; however this permission expired in May 2013. If it transpires that the permission was not lawfully implemented the predicted major adverse impact would not occur.

- 6.73 As explained in Section 2 (above) a fifth group of chicken sheds is located on the proposed access track to Tower 40. There would be no impact resulting from a minor diversion of this access track, and while there are some additional impacts involving crossing a field drain and minor water course, and removal of mature trees should Tower 40 be accessed from Tower 41, those impacts have been assessed in TR 4 paragraph 9 and, with mitigation measures already allowed for in the CES in terms of ecology water, soils and agriculture they have been found not likely to be significant.

Land Use (TR 13)

- 6.74 CES Chapter 14 and Mr Con Curtin deals with agriculture in TR 13. 181 land parcels have been included within the Agronomy Study Area for the proposed Tyrone-Cavan Interconnector. TR 13 paragraph 37 notes that during construction of the substation there will be direct impacts on two parcels of land through the construction activities associated with the development of a substation (e.g. excavation, mounds, change of use, building works) and a dwelling will be demolished. Adjacent land parcels will be used in the temporary diversion of the existing 275kV line. These works result in a major adverse and a moderate adverse impact on the two parcels of land required for the substation (TR 13 paragraph 48).
- 6.75 One land parcel (willow plantation) will have a construction phase impact which is major adverse impact. As stated in TR 14 paragraph 86, the Applicant now proposes as part of this application and by way of mitigation to tanker off the effluent and agree reasonable compensation with the landowner accordingly. The residual effect of the proposal to use tankers as a mitigation measure has been assessed as being of major adverse significance. This level of significance has been determined to be appropriate because of the uncertainty arising from the inability to gain access to the bioremediation area and in such circumstances it was determined that a conservative assessment should be applied.
- 6.76 Site investigation works involving borehole drilling, trial pit excavation and ground water monitoring will be necessary at all of the tower locations. TR 13 paragraph 37 notes that a total of 102 towers will be constructed on 79 land parcels. The remaining 43 land parcels will be affected by other elements of the proposed Tyrone-Cavan Interconnector including use of the land for access routes, guarding locations, stringing sites, undergrounding trenches. Some hedgerows will be removed. TR 13 paragraph 35 notes that the entire construction phase of the proposed Tyrone-Cavan Interconnector is scheduled for 36 months, however the construction activity period at each tower site will not exceed 29 working days. Individual land parcel impacts are set out at CES Volume 3 Part 4 Appendix 14A. Impacts from construction will be effects on livestock, damage to soil structure and field drains, potential oil spillage, disturbance to cropping activity, increased dust and noise. The construction activity is

considered, having regard to mitigation measures to be an imperceptible or slight adverse impact on 96% of the affected land parcels (TR 13 Table at Section 13.13.1).

- 6.77 During the operational phase the proposed Tyrone-Cavan Interconnector will have slight adverse impact (without mitigation). This is set out in CES Volume 2 Chapter 14 Section 14.4.5 where total land loss will be 26ha. After construction potential for disease spread is negligible, damage to soil structure on small parcels of land will fade in the medium term and be negligible in the long term; there will be permanent disturbance to cropping and livestock due to the existence of the towers acting as obstacles, but as the towers are located about 340m apart this will be a low impact on activity. Noise will not be significant and health and safety impacts for farms located within 50m of the proposed Tyrone-Cavan Interconnector represents a low imperceptible impact.
- 6.78 As TR 13 paragraph 45-48 sets out, the residual impacts on agriculture in Northern Ireland will be imperceptible due to the loss of approximately 26 hectares (1.5% of the land use study area) under the towers and substation and short – medium impacts on a further approximately 26 hectares (1.5% of the land use study area) of land that is required only during the construction phase. There will be one major adverse residual impact to land parcel Ref No 001 and one moderate adverse residual impact to land parcel Ref No 1036 at the site of the proposed substation in Turleenan. There will be four moderate adverse residual impacts on land parcels Reference Nos 005, 040, 068 and 100 (due to the operation and maintenance of the overhead line).

Socio Economics (TR 14)

- 6.79 CES Volume 2 Chapter 15 and Mr Fay Lagan deals with socio-economic matters in TR 14. These consider there to be a positive impact on employment and indirect employment, and an indirect positive impact on the hospitality industry in the local area at the construction stage of the proposed Tyrone-Cavan Interconnector (TR 14 paragraphs 54-55). There will be no significant impacts on visitor numbers or spending as a result of the construction and operational stages of the proposed Tyrone-Cavan Interconnector.
- 6.80 In terms of economic impacts TR 14 paragraph 40 explains that studies by SONI and EirGrid have shown the proposed Tyrone-Cavan Interconnector will help customers on the island of Ireland to save approximately €20m in 2020 and between €40m and €60m by 2030. This is considered to be a major positive cumulative impact. In terms of socio-economic impacts, the proposed Tyrone-Cavan Interconnector has been assessed to result in benefits in terms of employment.
- 6.81 TR 14 paragraphs 56-59 sets out that the potential impacts to the Linwoods facility are disruption to normal operations due to construction traffic and the impacts to the bioremediation area. Because of the distance from the proposed Tyrone-Cavan

Interconnector there will be no direct impact on the Linwoods facility. The bio-remediation area would be directly affected in part through construction of Tower 71 and other associated works. TR 14 paragraph 89 notes that it is likely that willow affected by the proposed Tyrone-Cavan Interconnector will need to be harvested to facilitate the construction of the proposed Tyrone-Cavan Interconnector. As set out in TR 14 paragraph 86, the Applicant now proposes as part of this application and by way of mitigation to tanker off the effluent and agree reasonable compensation with the landowner accordingly. The residual effect of the proposal to use tankers as a mitigation measure has been assessed as being of major adverse significance. This level of significance has been determined to be appropriate because of the uncertainty arising from the inability to gain access to the bioremediation area and in such circumstances it was determined that a conservative assessment should be applied.

- 6.82 The overriding national and regional need for the proposed Tyrone-Cavan Interconnector outweighs the socio-economic impacts created.

Noise and Vibration (TR 9)

- 6.83 Issues that might be considered to affect residential amenity (EMF, perception of harm, visual impact) are considered above. Mr Rey Gaston, Mr Rupert Thornely-Taylor and Mr Barry Sheridan deal with noise and vibration in TR 9. The noise from the proposed Tyrone-Cavan Interconnector is assessed at CES Volume 2 Chapter 11 (summarised in the CES Volume 1 NTS Section 6.8).
- 6.84 Policy on noise is provided in the Noise Policy Statement, which is a broad guidance document. It acknowledges that some noise is an inevitable consequence of development and its objectives are to avoid significant adverse impacts on health and quality of life; mitigate and minimise adverse impacts on health and quality of life; and where possible contribute to the improvement of health and quality of life. The statement recognises the role of the planning system in preventing and minimising noise, through development management, development plan processes and through the application of planning policy statements.
- 6.85 Noise associated with the construction of the proposed Tyrone-Cavan Interconnector will be limited short term noise that will be mitigated through limitations on hours of working, site vibration monitoring, and low vibration piling methods. The CES concludes that the residual impact from noise and vibration following the implementation of mitigation measures is not significant.
- 6.86 Noise associated with the operation of the proposed Tyrone-Cavan Interconnector is limited to intermittent corona noise and continuous transformer/plant noise at the substation. The CES Volume 2 Chapter 11 and TR 9 paragraph 68 advises that predicted levels of noise are within the recommended levels and targets set by the WHO and British Standards and are thus within acceptable limits for Northern Ireland.

- 6.87 The proposed Tyrone-Cavan Interconnector is consistent with the objectives of the Noise Policy Statement.

Natural Heritage and Ecology (TR 8)

- 6.88 As TR 8 paragraph 36 sets out, the CES addendum, in particular Appendix 8.1 entitled "Information to inform Habitats Regulations Assessment", which supersedes the "Test of Likely Significance" presented in the CES, satisfies the requirements of article 6(3) of the EC Habitats Directive¹⁴, to assess the proposed Tyrone-Cavan Interconnector for any likely significant effects on European sites, either alone or in combination with other plans or projects. As required by the *Waddenzee* case¹⁵, the assessment was conducted in light of the requirement of the precautionary principle, and by using the best scientific knowledge in the field. It can be concluded, on the basis of the objective information in the CES and its Addendum, that the project will not have significant effects on the conservation objectives of any European sites, either alone or in combination with other plans or projects.
- 6.89 As explained earlier planning policy relevant to ecology is set out in PPS 2. PSRNI policy PSU 8 also requires consideration of the natural heritage and PSU 11 requires overhead lines to avoid sites of nature conservation importance¹⁶. Priority habitats and species have been identified on a UK basis as part of compliance with the EU Habitats Directive, in a Northern Irish context. This matter is addressed by Dr Eleanor Ballard, Dr Paul Lynas and Mr Tim Goodwin in TR 8 and in the CES Volume 2 Chapter 10 (summarised in CES NTS Section 6.7). The development of the proposed Tyrone-Cavan Interconnector would be consistent with the requirements of the Habitats Directive and the associated domestic Habitats Regulations.
- 6.90 The proposed Tyrone-Cavan Interconnector avoids all designated areas, and where relevant potential impacts upon protected species and habitats can be avoided through the provision of mitigation measures. TR 8 paragraph 62 advises that the proposed Tyrone-Cavan Interconnector will have a neutral effect on all habitats, due to the fact that the main sensitive habitats are avoided, temporary vegetation loss is reinstated and hedgerows and trees to be permanently lost are replaced elsewhere.
- 6.91 TR 8 paragraph 48 confirms that the proposed Tyrone-Cavan Interconnector will have minimal impact upon the ecology of the land affected by the proposed overhead line and no recognised site of international, national or local conservation value will be adversely affected. The CES Volume 2 Chapter 10 Executive Summary and TR 8 paragraph 10 notes that the proposed Tyrone-Cavan Interconnector will have minimal effect on ecology with no likely significant effects.

¹⁴ As transposed in Northern Ireland by the Conservation (Natural Habitats, etc.) Regulations (Northern Ireland) 1995 (as amended)

¹⁵ *Decision of the ECJ in Waddenzee (C-127/02) Appendix C*

¹⁶ SPPS paragraphs 6.168-6.198 (pages 80-85) do not make material changes to PPS 2.

6.92 This position is reinforced by the fact that NIEA Natural Heritage (consultation reply dated 20th August 2015) “has considered the impacts of the proposal on Designated sites and other Natural Heritage interests and based on the information provided and the HRA is content with the proposal with conditions”. Again the overriding national and regional need for the proposed Tyrone-Cavan Interconnector demonstrably outweighs the minimal impact on ecology.

Floodplain and Water (TR 6)

6.93 Revised PPS 15 Planning and Flood Risk (PPS 15) is the main policy consideration in this regard¹⁷. Mr Peter Robinson and Ms Kathryn Thorp deal with this matter in TR 6. The CES Volume 2 Chapter 17 and TR 6 describes the measures that have been taken to ensure that the proposed substation development will avoid the floodplain and sets out the temporary nature of the works within the floodplain and the mitigation work that is proposed. There will be a temporary alignment of the access road to the substation during construction works which could result in the temporary loss of floodplain storage. The volume has been assessed to be not significant in respect to the effect that it will have upon the floodplain of the River Rhone or River Blackwater. This has been confirmed by Rivers Agency. In regard to the overhead line the CES and TR 6 paragraph 74 confirms that while a number of towers are within the 1% Annual Exceedance Probability flood level as shown on the Rivers Agency Flood Maps, the nature of the development has been assessed and the potential for the towers being affected by flooding or affecting existing flood risk is considered to be not significant, due to the effect upon flood levels being minor and localised and there being no vulnerable receptors to flood risk in close proximity to the tower locations.

6.94 In addition, in operational phase terms, the location of towers within the floodplain is *de minimis* development in the overall context of the floodplain area. The effect of the towers in the floodplain has been assessed and found that its function at each location is for the storage of flood water. The towers have been designed to limit the requirement for foundations to extend above ground level, to ensure that there is no loss of floodplain storage. However, should the tower locations impinge conveyance capacity, the effect was considered to be localised and that there is no vulnerable receptor in close proximity.

6.95 Rivers Agency does not oppose the proposed Tyrone-Cavan Interconnector and in this overall context the proposed Tyrone-Cavan Interconnector is an exception listed under PPS 15 policy FLD 1 sub paragraph (d) (page 28) being “*Development for agricultural use, transport and utilities infrastructure, which for operational reasons has to be located within the flood plain*”. The proposed Tyrone-Cavan Interconnector is consistent with PPS 15 policy FLD 1 as the route of the proposed Tyrone-Cavan Interconnector has been selected to connect the proposed Tyrone-Cavan Interconnector to the existing grid, based on operational and

¹⁷ SPPS paragraphs 6.99-6.132 (pages 61-68) do not make material changes to PPS 15.

technical requirements. There is therefore an operational requirement for the proposed Tyrone-Cavan Interconnector to occupy locations between the required connection points identified. The selected route has also sought to avoid sensitive landscapes and its linear form means it is not possible to seek to locate some towers outside floodplains, when it would consequently have wider environmental impacts. For example additional diversions of the line route would require additional angle towers which are more visually intrusive than intermediate towers, and the towers would be located on higher ground. However, even if the Commissioner and the Department considers that the proposed Tyrone-Cavan Interconnector is not strictly within the defined list of FLD 1 exceptions, it is broadly consistent with the policy, as operational needs were part of the routing determination. Any contended non-compliance therefore needs to be weighed against the value of taking a balanced approach to environmental impacts, which steers the proposed Tyrone-Cavan Interconnector into the floodplain. Again it is relevant to note that Rivers Agency are content with the matter.

- 6.96 PPS 15 policy FLD 1 also recognises that development proposals may be allowed in a floodplain where it demonstrates an exceptional benefit to the regional or sub-regional economy and demonstrates that the proposal requires a location within the floodplain and justification of why possible alternative sites outside the floodplain are unsuitable. As explained above the proposed Tyrone-Cavan Interconnector meets the policy test of being a development of overriding national and regional need (and there are, additionally, imperative reasons of overriding public interest for it). The thorough exploration of the detailed route and technical requirements of the proposed Tyrone-Cavan Interconnector demonstrate that the alternatives are unsuitable
- 6.97 CES Volume 3 Appendix 17A provides a Flood Risk Assessment and Surface Water Management report. The surface water management strategy proposes to incorporate a sustainable drainage system at the substation which will attenuate, treat and discharge runoff at an equivalent undeveloped site rate. This is consistent with PPS 15 policy FLD 3.
- 6.98 CES Volume 2 Chapter 8 and TR 6 set out the environmental impacts on water. The CES and TR 6 paragraph 42 explains that watercourses have been physically avoided as much as practically possible. There are some potential short term effects (caused by potential site runoff, fuel spillages and physical effects to morphology of watercourse from construction of towers) on watercourses during construction, leading to short term reductions in water quality, however mitigation will be put in place to ensure that effects are not significant. At nine locations ditches may be impacted during construction works to install tower foundations. These will be reinstated resulting in no overall effect. The proximity of the River Rhone to the substation site means it may be indirectly impacted by contaminated site runoff, which following mitigation measures proposed in the CES Volume 2 Chapter 8 Section 8.5 (Silt Management (Barrier controls) and spillage management) is assessed as resulting in potential

slight adverse impact. All other impacts are neutral. TR 6 paragraph 67 also sets out that in operational terms effects are expected to be neutral and slightly beneficial as a result of reinstatement of ephemeral drainages and reinstatement of ditches temporarily culverted for widened field accesses.

- 6.99 PPS 15 policy FLD 4 states that the planning authority will only permit artificial modification of a watercourse in circumstances where it is necessary to provide access to a development site or part thereof or where a specific length of watercourse needs to be culverted for engineering reasons and there is no reasonable or practical alternative. TR 6 paragraph 61 and CES Chapter 8 explains that in addition to the nine tower locations where ditches will be affected, (four ditches will be slightly diverted along the same general course and profile) there are 59 tower access locations where some minor and localised modifications to ditches of low importance may be required, as a result of widening of field accesses. This would have a neutral impact in the long term following reinstatement. It has been assumed that low importance ditches exist at all these locations and widening of the crossing may require a temporary increase in length of existing culverts. As shown in the transport assessment in CES Chapter 18 and TR 15, the alternative is that temporary traffic measures could be employed to avoid such access widening works. If that approach is adopted it will avoid many identified impacts. Even assuming that these minor works are required to provide access to the site, the watercourse diversions are needed for engineering reasons to allow the construction of tower foundations and there is no practical alternative, such that they are an exception in FLD 4 policy terms. The CES Chapter 8 Section 8.5.13 acknowledges that appropriate consents will be required from Rivers Agency. The proposed Tyrone-Cavan Interconnector is therefore consistent with policies relating to the floodplain and water. Again this conclusion is reinforced given Rivers Agency do not object to the applications.

Contamination (TR 7)

- 6.100 Contamination is addressed by Mr Philip Smart in TR 7 and in the CES Volume 2 Chapter 9 (pages 266-270). TR 7 paragraph 43 explains that two of the towers (T49 and T72) were considered to be located close to potentially contaminated land and 5 towers (T10, T25, T26, T29 and T31) are within 500m of potentially contaminated sites. TR 7 paragraph 44 concludes that potentially contaminated lands in close proximity to the route of the proposed Tyrone-Cavan Interconnector do not pose a significant risk of contamination or constraint. NIEA Land and Resource Management are satisfied with the Contaminated Land Risk Assessment reports provided for these towers and recommend approval subject to conditions.
- 6.101 Prior to construction a Construction Environmental Management Plan (CEMP) (an outline of which is at CES Addendum Volume 3 Appendix 9.1) will be agreed with NIEA to facilitate the management of any contaminated land unexpectedly discovered during the construction work to prevent adverse impacts on human health, groundwater and surface water. Whilst there is

no evidence that such areas exist, it is considered prudent to incorporate this work within the CEMP.

Air Quality & Climate Change (TR 16)

- 6.102 This is addressed in CES Addendum Volume 2 Chapter 9 and by Dr Tom Stenhouse in TR 16. Air Quality is identified at Annex A to the SPPS as a material consideration and advises that developments should ensure that the location of development should not, as far as practicable, be adversely affected by major existing or potential future sources of air pollution. It also advises that where a proposed development is likely to have a significant air quality impact or add to a cumulative impact in an area, applications should be supported by sufficient information to allow full consideration of the impact on local air quality. As set out in TR 16 paragraph 2-3 during construction, the greatest potential dust impacts were predicted to be medium adverse due to earthworks and construction activity at the Turleenan substation site. The potential dust-generating impacts due to construction of the overhead line towers were predicted to be low or negligible due to the distance from receptors and small size of the individual working areas. Appropriate construction dust mitigation controls (water sprays, enclosure, correct storage of materials, wheel washing, vehicle routing plans and monitoring) will be put in place and the overall effect will be 'not significant'.
- 6.103 The proposed Tyrone-Cavan Interconnector will be beneficial in terms of climate change. Greenhouse gases will be emitted during the construction phase, although these emissions are unlikely to be significant compared with the facilitated emissions reductions expected once operational. During the operational phase the Tyrone-Cavan Interconnector will facilitate the uptake of renewable energy sources, such as wind, by improving access to the end market. This will have long-term beneficial greenhouse gas and climate change effects. This will support government objectives and climate change reduction commitments.

Telecommunications

- 6.104 The proposed Tyrone-Cavan Interconnector complies with PPS10 Telecommunications policy TEL 2. As shown in CES Volume 2 Chapter 16, it will not cause interference with terrestrial television broadcasting services.

Trans-boundary Issues

- 6.105 Transboundary impacts have been considered in detail in the CES Volume 2 Chapter 20 (and CES Volume 1 NTS Section 6.16) and in the CES Addendum Volume 2 Chapter 6 (and CES Addendum Volume 1 NTS paragraphs 155-158). The nearest constructed property to the centreline of the overhead line is located in County Monaghan. It is 54m away and it has been fully assessed in the CES, e.g. EMF (CES Volume 2 Chapter 6), Noise (CES Volume 2 Chapter 11) and Landscape and Visual (CES Volume 2 Chapter 13). Full details of the

impact assessment are contained in the assessment chapters of the CES as relevant. The impact of the proposed Tyrone - Cavan Interconnector has been based on an assessment of the likely significant impacts and as such has included receptors and impacts within the Republic of Ireland, as required by the EIA Regulations, regardless of jurisdiction.

- 6.106 The main transboundary impact relates to landscape and visual. The proposed Tyrone-Cavan Interconnector route as it approaches the border between Northern Ireland and the Republic of Ireland, can be viewed from within the Republic of Ireland. This includes the Mullyash Uplands looking north towards Northern Ireland and views from locations within the immediate area along the overhead line route. As a consequence transboundary impacts are predicted to be non-significant apart from moderate adverse landscape impacts (on the Mullyash Uplands LCA) and visual impacts (viewpoints 30 and 31), primarily to visual receptors in close proximity to the line route. There are no transboundary matters that would outweigh the overriding national and regional need of the proposed Tyrone-Cavan Interconnector.

Joint Environment Report (JER)

- 6.107 In addition to transboundary impacts, as the proposed interconnector¹⁸ involves applications running concurrently in the Republic of Ireland and Northern Ireland, the applicant has also addressed the combined effect of the development anticipated by the relevant applications.
- 6.108 In May 2013, the European Commission published '*Guidance on the Application of the Environmental Impact Assessment Procedure for Large-scale Transboundary Projects*'. The aim of the EC Transboundary Guidance document was to build on "*experience and the good practices identified so far*" in the EIA field and to provide a greater clarification of how to approach "*large - scale transboundary projects*". These types of project are defined in the EC Transboundary Guidance document as those which are "*physically located in more than one country*" (such as the proposed interconnector).
- 6.109 While the EC Transboundary Guidance document (Page i) does state that it "*in no way creates any obligation for the Member States or project developers*", it is considered a useful consolidation of current best practice for projects such as the proposed interconnector.
- 6.110 The Joint Environment Report (JER) (see CES Addendum Appendix 2.1) for the proposed interconnector has been prepared and submitted to accompany the CES in Northern Ireland and Environmental Impact Statement for the North-South 400kV Interconnection Development¹⁹ in the Republic of Ireland. The purpose of the JER is to provide an overview of impacts and the transboundary issues of the proposed interconnector, taking into account the EC Transboundary Guidance document. The JER is not intended to satisfy the requirements

¹⁸ proposed interconnector is the term used to describe the overall project from Turleenan in Northern Ireland to Woodland in the Republic of Ireland.

¹⁹ North-South 400kV Interconnection Development is the southern part of the proposed interconnector located in the Republic of Ireland being promoted by EirGrid

of cumulative impacts and transboundary impacts as required by EIA Regulations. The JER is a non-mandatory document for planning purposes but has been provided to help provide an overview of the entire proposed interconnector. The JER considers the entirety of the project, covering both Northern Ireland and Republic of Ireland elements of the proposed interconnector. The CES Addendum Chapters 5 and 6 present the cumulative impacts and transboundary effects for the proposed Tyrone-Cavan Interconnector. The full details of the project are contained in the respective planning applications and accompanying documents which should be read in conjunction so that the detail of the project can be fully realised.

- 6.111 A summary of the conclusions of the JER are provided at CES Addendum Volume 3 Appendix 2.1 where it can be noted that in broad terms the proposed interconnector has positive effects in respect of capital spend, employment and greenhouse gas emissions. The maximum EMF levels from the proposed interconnector are within EMF guidelines of both Republic of Ireland and Northern Ireland and also the EU. Impacts on the local population, water, ecology, geology, soils and hydrology are similar in nature to the proposed Tyrone-Cavan Interconnector. The main impacts from the proposed interconnector will be the impacts on cultural heritage and landscape and visual impacts. Mitigation measures have been proposed to reduce as far as practical these impacts. The JER also considers cumulative impacts and interactions. For the purposes of this Inquiry, the JER has not raised any new issues that have not been considered earlier in this OTR and that would outweigh the overriding national and regional need for the proposed Tyrone-Cavan Interconnector.

Cumulative Impacts

- 6.112 The CES Volume 2 Addendum Chapter 5 (and CES Addendum Volume 1 NTS paragraphs 138-154) sets out the cumulative impact assessment, and finds that they are generally predicted to be not significant. TR 11 Landscape and Visual sets out that there will be some moderate and major landscape and visual cumulative impacts with the proposed Tyrone-Cavan Interconnector and the Tamnamore to Omagh 110kV project, the North-South 400kV Interconnection Development and proposed wind turbines in the study area. TR 14 paragraph 95 notes the combined capacity and production savings from the Tyrone - Cavan Interconnector were estimated at €20m per annum in 2020 rising to between €40m to €60m per annum in 2030, exerting downward pressure on electricity prices in Northern Ireland and Republic of Ireland. This cost can be split pro-rata between the jurisdictions, based on energy consumed, with approximately 25% to Northern Ireland customers and 75% to Republic of Ireland customers. In the short term, prior to the commissioning of the proposed Tyrone-Cavan Interconnector customers in Northern Ireland are directly bearing a cost of approximately £8.9m per annum to ensure their security of supply. It is expected that the all island security of supply cost of not having the proposed Tyrone-Cavan Interconnector will grow to approximately €19m per annum by 2030. If Northern Ireland's generation capacity

continued to be in deficit, the majority of the capacity benefit from the proposed Tyrone-Cavan Interconnector would be to Northern Ireland customers. This is considered to be a significant cumulative impact. There are no cumulative impacts that would outweigh the overriding national and regional need of the proposed Tyrone-Cavan Interconnector.

Overview of Environmental Issues

- 6.113 The CES Addendum, in particular Appendix 8.1 entitled "Information to inform Habitats Regulations Assessment", which supersedes the "Test of Likely Significance" presented in the CES, satisfies the requirements of article 6(3) of the EC Habitats Directive²⁰, to assess the proposed Tyrone-Cavan Interconnector for any likely significant effects on European sites, either alone or in combination with other plans or projects. As required by the Waddenzee case²¹, the assessment was conducted in light of the requirements of the precautionary principle, and by using best scientific knowledge in the field. It can be concluded, on the basis of the objective information in the CES and its Addendum, that the project will not have significant effects on the conservation objectives of any European sites, either alone or in combination with other plans or projects.
- 6.114 While it is acknowledged that there are some environmental impacts and also objections to the proposed Tyrone-Cavan Interconnector which are voluminous and raise material planning concerns, none are matters either individually or cumulatively that outweigh the overriding national and regional need for the proposed Tyrone-Cavan Interconnector.
- 6.115 In having regard to the precautionary principle as identified in planning policy, it is clear from the foregoing that the impacts on the environment are known and have been assessed in accordance with policy. The majority of those impacts will not cause significant harm to the environment. Whilst the main impacts are on the visual landscape and cultural heritage these impacts are outweighed by the overriding national and regional need for the proposed Tyrone-Cavan Interconnector.

Third Parties and Statutory Consultees

- 6.116 Between 2009 and 2012, there were approximately 6,000 third party submissions made in relation to the proposed Tyrone-Cavan Interconnector. These were reviewed and taken into account in the writing of the CES. Following the publication of that document in 2013 and between May 2013 to May 2015, 2,957 third party submissions were made. All submissions that were made have been taken into account in the writing of the CES Addendum.
- 6.117 Between June 2015 and November 2016, there have been 594 third party submissions. The applicant and its team of consultants have reviewed and addressed all objections raised against the proposed Tyrone-Cavan Interconnector. The schedules at **Appendix E** set out on

²⁰ As transposed in Northern Ireland by the Conservation (Natural Habitats, etc.) Regulations (Northern Ireland) 1995 (as amended)

²¹ *Decision of the ECJ in Waddenzee (C-127/02) Appendix C*

a topic basis the number and type of objections raised and addressed. It can be noted that there are also a number of supporters of the proposed Tyrone-Cavan Interconnector. For completeness the schedules also provide a summary of the views of the statutory consultees.

Effect on Property Value

6.118 Some objectors raise the issue of property value in their objection. Property and land values are considered a private interest matter in the SPPS paragraph 2.3 which states:

“The basic question is not whether owners and occupiers of neighbouring properties would experience financial or other loss from a particular development, but whether the proposal would unacceptably affect amenities and the existing use of land and buildings that ought to be protected in the public interest”.

6.119 In this respect, the public interest in Northern Ireland as set out in the Government driven policy need for the proposed Tyrone-Cavan Interconnector, overwhelmingly supports the proposed Tyrone-Cavan Interconnector which outweighs amenity impacts on individuals

6.120 The Courts²² have found in a human rights context that rights to respect for private and family life (ECHR Article 8) or to the peaceful enjoyment of possessions (ECHR Article 1 of the First Protocol) may be engaged if someone is severely and exceptionally affected by development carried out in consequence of a planning decision; and this may be reflected in the devaluation of property interests. The Court of Appeal in England²³ has confirmed however that devaluation does not of itself involve a breach of Convention rights. The authorities emphasise not only the extremity of the effects that are required to engage the rights but also the need for private interests to be balanced against the public interest when assessing whether any breach of Convention rights has occurred.²⁴

6.121 In this case, to the extent that a balancing exercise needs to be carried out in the human rights context with respect to private and public interests, for the reasons given above there are compelling grounds to conclude not only that the proposals are acceptable in planning terms but that they involve no breach of Convention rights.

Precedent

6.122 Some objectors raise the issue that the proposed Tyrone-Cavan Interconnector creates a precedent for future applications. No precedent is created as all applications must be treated on their own merits. The proposed Tyrone-Cavan Interconnector will only be granted if considered acceptable in planning terms, and approval of an acceptable proposal cannot possibly set a precedent for the approval of unacceptable development. Without prejudice to this principle, the very significant exceptional factors (such as the strategic need and the cross

²² See *Rowsome's Application* [2003] NIQB 61 (**Appendix C**); *Re Stewart's Application* [2003] NI 149. See too *Re HM* [2007] NICA 2 (**Appendix C**).

²³ See *Lough v First Secretary of State* [2004] EWCA Civ 905 (**Appendix C**).

²⁴ *Ibid.*

border regulatory and Governmental support) specific to the proposed Tyrone-Cavan Interconnector are limiting factors that prevent any future proposal from relying on the proposed Tyrone-Cavan Interconnector as a precedent. There is no merit in the argument that the proposed Tyrone-Cavan Interconnector sets a precedent for overhead lines. The use of overhead lines is already established in Northern Ireland with the grid being extensively characterised by overhead line development including the existing interconnector²⁵. No precedent therefore arises as a result of the proposed Tyrone-Cavan Interconnector.

The Planning Balance and the Presumption in Favour of Sustainable Development

- 6.123 As set out in Section 2, the Department and PAC must be guided by the principle that sustainable development should be permitted having regard to the plan, and all other material considerations, unless the proposed development will cause demonstrable harm to interests of acknowledged importance. In furthering that objective of sustainable development the planning system requires complex social, economic and environmental factors to be balanced. No single one of these factors is promoted, but in case-specific proposals, the weight to be attached to each of these factors is a matter of planning judgement.
- 6.124 The relevant local development plans are out of date, as are many of their policies. The proposal complies with a number of their retained policies (and many up to date regional policies) and may be perceived to conflict with others to a limited degree. The proposed Tyrone-Cavan Interconnector is a sustainable development which would have strong economic benefits by ensuring security of supply, increased competition in the electricity market and facilitating the renewable energy sector. Its potential impacts on the environment have been minimised by avoiding areas such as designated landscapes, tourism assets and cultural heritage sites, as well as homes and towns. It would help support the reduction of greenhouse gas emissions and reliance on fossil fuels. In the overall planning judgement of this case the benefits clearly outweigh the adverse impacts and no impacts have been identified that would cause the presumption in favour of sustainable development not to be applied. The proposed Tyrone-Cavan Interconnector is therefore clearly acceptable.

²⁵ The Tandragee to Louth overhead line

7.0 SUMMARY AND CONCLUSION

- 7.1 This OTR provides the overarching case for the proposed Tyrone-Cavan Interconnector. It addresses the merits of the proposed Tyrone-Cavan Interconnector. These are fully resourced applications that consider all aspects of the planning and environmental issues that the proposed Tyrone-Cavan Interconnector raises.
- 7.2 In respect of the detail of the proposed Tyrone-Cavan Interconnector, there is one minor amendment required to the access arrangements to construct Tower 40. Two options are presented which are both *de minimis* in nature and do not go to the core of the applications. Option AT40B is the option the applicant proposes.
- 7.3 The proposed Tyrone-Cavan Interconnector (including its associated works) have been fully described in the CES and CES Addendum. The site of the proposed Tyrone-Cavan Interconnector avoids all designated landscapes.
- 7.4 In assessing the proposed Tyrone-Cavan Interconnector the principles of the plan-led system, the requirement for planning to support wider Government strategies, the presumption in favour of sustainable development, the precautionary principle and the biodiversity duty on Government have been applied.
- 7.5 The Local Development Plans relevant to these applications are out of date as are a number of policies within them. While there are no specific policies for overhead power lines in either the AAP, AAP Alt 1 or the DSTAP, the proposed Tyrone-Cavan Interconnector has been found to be in accordance with a number of the environmental, transport and recreation policies of these Plans. It may be perceived to conflict with others to a limited degree. Any perceived conflict with the Plans is heavily outweighed by other material considerations, in particular the need for the proposed Tyrone-Cavan Interconnector, as supported in a range of policy documents.
- 7.6 The proposed Tyrone-Cavan Interconnector is acceptable in principle in the countryside under PPS 21. There are overriding regional or national reasons for the proposed Tyrone-Cavan Interconnector, which derive from limitations to the existing transmission network. These limitations mean that there are risks to the transmission network that require to be managed, which restrict the flow on the existing interconnector. Such restrictions prevent the full operation of the Single Electricity Market (SEM), restrict the extent to which generation in each system can contribute to security of generation supply in Northern Ireland and the Republic of Ireland, and will act as an impediment to the full operation of renewable energy. As a consequence, the need for the proposed Tyrone-Cavan Interconnector is based on the operational needs of improving competition by removing constraints which restrict the efficient performance of the all island SEM; improving security of supply; and supporting the

- development and safe and secure operation of renewable power generation. These are material considerations which should be accorded very significant weight.
- 7.7 There is also a policy-driven need and broad support for the proposed Tyrone-Cavan Interconnector at EU, UK and NI level. The wider Government strategies (such as the RDS and the SEF) which express support for the proposed Tyrone-Cavan Interconnector demonstrate the national and regional need for the proposal, consistent with PSU 2. This too is a significant factor in demonstrating its acceptability in planning terms. There is also clear acceptance in planning policy (i.e. PSU 8 and PSU 11) and the SEF that overhead power lines cannot be delivered without environmental impacts. Whilst not required by policy to be demonstrated, there is clearly an imperative need of overriding public interest for the proposed Tyrone-Cavan Interconnector.
- 7.8 The proposed Tyrone-Cavan Interconnector is also supported by PPS 18 Renewable Energy. It will contribute directly to the regional economy through sustaining construction jobs, and indirectly by boosting confidence in the renewable industry sector. The proposal will facilitate renewable energy. The wider use of wind energy would bring significant benefits to both Northern Ireland and Republic of Ireland economies, whilst improving the overall diversity of supply and reducing dependence on imported energy. The development of further renewable generation is encouraged by both Governments. In combination, the need for the proposal (being increased competition in the energy market, security of supply, facilitating renewable energy, wide ranging Government support and the regional economic benefit) provides substantial and determining weight for the proposed Tyrone-Cavan Interconnector.
- 7.9 The applicant has thoroughly explored the alternatives to the proposed Tyrone-Cavan Interconnector in terms of alternative technologies and routes. It has been explained why undergrounding is not a suitable alternative: it will bring with it its own environmental impacts; there are significant increased costs; undergrounding an AC cable has never, in fact, been carried out to the extent that objectors would seek it in this case; and, importantly, it is not a requirement in planning policy or indeed wider Government terms. While partial undergrounding of the AC overhead line has also been considered it has been found that there is no justification for it.
- 7.10 The proposed Tyrone-Cavan Interconnector has been designed to comply with ICNIRP guidelines and the evidence also shows that there is no sustainable objection on grounds of perception of fear from EMFs.
- 7.11 The proposed Tyrone-Cavan Interconnector will have landscape and visual impacts, but in accordance with policy (i.e. SPPS, PSU 8 and PSU 11) it has been designed to minimise landscape and visual effect through line route selection, avoiding areas of sensitivity, ecological, natural and built heritage (such as designated sites, scheduled monuments, etc). It

- is compliant with the requirements of policy. The substation has a landscaping plan provided in accordance with PRSNI policy DES 10.
- 7.12 The substation and its associated buildings are the main construction works associated with the proposal. It is acceptable in the countryside in principle and it has been designed to integrate with the countryside.
- 7.13 The construction impacts of the proposed Tyrone-Cavan Interconnector have been fully considered and, whilst some impacts are likely, these will be mitigated through good construction practice techniques. Traffic and haulage involved with the proposed Tyrone-Cavan Interconnector has been assessed. Whilst the proposed Tyrone-Cavan Interconnector proposes the widening of some accesses for construction purposes, the applicant's preference is, in the spirit of protecting the environment, to employ traffic management procedures to access the site, such that environmental impacts can be avoided. The proposed Tyrone-Cavan Interconnector complies with PPS 3.
- 7.14 The impact of the proposed Tyrone-Cavan Interconnector on cultural and built heritage has been assessed and found the limited impacts on their setting which conflicts with PPS 6 policies BH1 and BH2 are permissible on the grounds that it is an exceptional circumstance. Adverse impact is predicted on the setting of a number of listed buildings under PPS 6 policy BH 11 and a historic garden under PPS 6 policy BH 6. Again these impacts are outweighed by the overriding national and regional need for the proposed Tyrone-Cavan Interconnector.
- 7.15 The proposal is compliant with PPS 16 tourism as no tourism assets are adversely impacted by the proposed Tyrone-Cavan Interconnector such as to significantly compromise their tourism value.
- 7.16 The impacts on the community from the proposed Tyrone-Cavan Interconnector are predicted to cause temporary traffic disruption, increased journey times, impact on the physical nature of roads, disturbance to residents in close proximity to access tracks and impact on community activity including delaying or preventing sporting and recreational activity during the construction stage. No significant operational impacts are predicted, as maintenance traffic will be infrequent and there is no permanent land take from any residential, commercial and community facility. The impacts on the community are outweighed by the overriding national and regional need for the proposed Tyrone-Cavan Interconnector.
- 7.17 Impacts on agriculture and business in the area have also been assessed. Only 3% of farms experience moderate adverse impacts and less than 1% of farms experience major adverse impacts. These impacts do not outweigh the need for the proposed Tyrone-Cavan Interconnector.
- 7.18 There are currently four planning applications for chicken sheds where their application site includes land directly under the proposed overhead line. None have been built to date. If built

in their approved location there would be no impacts on two of the chicken sheds as there is adequate clearance from the proposed 400kV line and adjacent towers. Of the other two, one would have moderate adverse impacts and the other would have major adverse impacts. There will be major adverse impacts on one willow plantation during the construction phase and the residual impact thereafter will be moderate adverse. There will be a major to moderate adverse impact to two land parcels upon which the proposed substation is being built. Overall these impacts are outweighed by the overriding regional need for the proposed Tyrone-Cavan Interconnector.

- 7.19 There will be only limited noise impacts from the proposed Tyrone-Cavan Interconnector. Operational noise will be within accepted British Standard noise levels, while construction noise will be short term and limited to day time activity. Vibration from the construction of the proposed Tyrone-Cavan Interconnector will be mitigated using low vibration piling.
- 7.20 The proposed Tyrone-Cavan Interconnector complies with the Habitats Directive. In ecological terms the proposed Tyrone-Cavan Interconnector will have limited environmental impacts as a result of: the implementation of detailed mitigation measures; the relatively small footprint of development when compared with the large area of land covered by the proposal; and the low land take and loss of habitat, which in any event is of low ecological value. The long term effect on biodiversity will be negligible. The proposal complies with PPS 2 policies.
- 7.21 The proposal has limited impacts on the water environment. While some towers are located in the floodplain the location of these towers is required for operational reasons and to minimise environmental impact of the proposed Tyrone-Cavan Interconnector. That location has wider environmental benefits of avoiding higher ground and heritage assets. If the Commission or the Department were to conclude that the proposal does not cleanly meet the exception in FLD 1, the proposal complies with the rationale underpinning the exception as operational needs were part of the routeing determination. Some ditches will be slightly diverted, and a number may require to have temporary culverting to allow access to the site. The preference is to not temporarily widen accesses or carry out any culverting to avoid environmental impacts. However if required the proposal complies with PPS 15 policies FLD 1 and FLD 4 as the proposed Tyrone-Cavan Interconnector is an exception as set out in these policies. The proposal complies with PPS 15 policy FLD 3 as drainage at the substation has been assessed.
- 7.22 The proposed Tyrone-Cavan Interconnector does not present a risk in terms of contaminated lands.
- 7.23 The proposed Tyrone-Cavan Interconnector will cause no significant effects by reason of dust, and will contribute to climate change objectives of Government. It is also compliant with PPS 10 policy TEL 2 as it will not interfere with terrestrial television services.

- 7.24 The majority of transboundary impacts are non-significant apart from moderate adverse impacts on one LCA and visual impacts on two viewpoints. These impacts would not outweigh the overriding regional need for the proposal. Cumulative impacts have been assessed and found to be generally insignificant. Although there will be some significant landscape and visual cumulative impacts between the proposed Tyrone-Cavan Interconnector, the Tamnamore-Omagh 110kV project, other infrastructure development and the North-South 400kV Interconnection Development, the landscape and visual resources of the wider area along the proposed route would not be harmed to a significant degree.
- 7.25 A Joint Environmental Report has been prepared and submitted that sets out the environmental considerations of the proposed Tyrone-Cavan Interconnector and the North-South 400kV Interconnection Development in the Republic of Ireland. The JER has not raised any new issues that have not been considered earlier in this OTR and that would outweigh the overriding national and regional need for the proposed Tyrone-Cavan Interconnector.
- 7.26 There would be no breach of human rights and there is no evidence to suggest that the proposed Tyrone-Cavan Interconnector will create a harmful precedent.
- 7.27 The proposed Tyrone-Cavan Interconnector has been found to be a form of sustainable development and there are no material considerations that outweigh the presumption in favour of this sustainable development proposal.
- 7.28 The evidence demonstrates that there are overriding national and regional reasons for the proposed Tyrone-Cavan Interconnector, as required by policy. It has also been established that there are imperative reasons of overriding public interest. The proposal benefits from widespread policy support deserving of very substantial if not determining weight. When considering the site specific circumstances of the proposed Tyrone-Cavan Interconnector it is accepted that the proposed Tyrone-Cavan Interconnector produces some environmental impacts that are unavoidable. However, none are of such significance that they would either individually or cumulatively outweigh the overriding national and regional need for the proposed Tyrone-Cavan Interconnector and the benefits to be gained. The proposed Tyrone-Cavan Interconnector is clearly acceptable in planning terms.