



**North South 400 kV
Interconnection Development**

**Non-statutory Consultation on the
Preliminary Re-evaluation Report**

**EirGrid's Response to Feedback
Received at the Meeting of Monaghan
County Council on 20 June 2011**

August 2011

PREAMBLE

On 20 May 2011 EirGrid received an invitation from Monaghan County Council, on behalf of the elected members, to attend the full Council Meeting on 20 June 2011. The members requested that they be given a presentation on EirGrid's 'North South 400 kV Interconnection Development - Preliminary Re-evaluation Report' which was published on 09 May 2011 and which was, at that time, the subject of an eight week period of non-statutory public consultation.

Subsequently (25 May 2011) EirGrid received a second invitation from Monaghan County Council requesting that either the Chief Executive or the Chairperson of EirGrid attend the Council meeting on 20 June 2011. EirGrid responded to the two invitations on 03 June 2011 by accepting the invitation but stated that as the Chief Executive and the Chairperson were not available that day they would not be able to attend. Instead a delegation from EirGrid's Project team led by an executive director, Mr Andrew Cooke, would be in attendance.

On 20 June 2011 the following delegation from EirGrid attended the meeting of Monaghan County Council -

- Mr. Andrew Cooke, Director Grid Development and Commercial
- Mr. Aidan Geoghegan, Project Manager, North South 400 kV Interconnection Development
- Mr. Shane Brennan, Project Engineer
- Mr. Des Cox, Planning Consultant
- Mr. David Martin, Communications
- Mr. Bernard O'Reilly, External consultant and transmission expert

The elected members of the Council, the acting County Manager and other County Council officials were in attendance at the meeting. Two members of the Oireachtas, Deputies Sean Conlon TD and Caoimhghín Ó'Caoláin TD were present in an observer capacity as were three representatives of the Monaghan Anti Pylon Group, Margaret Marron, Nigel Hillis and Philip Connolly. Members of the print and radio media were also present.

EirGrid's project manager, Mr. Aidan Geoghegan gave a presentation on EirGrid's project re-evaluation process and the associated Preliminary Re-evaluation Report (a copy of the presentation slides that were shown at the meeting is attached as Appendix A for reference). Copies of the Preliminary Re-evaluation Report were handed out to the members at the meeting.

Following the presentation, the Chairman, County Mayor Seamus Coyle, invited the elected members to address the meeting and to put questions to the EirGrid delegation. Thirteen councillors availed of the opportunity. Subsequently the two Oireachtas members Sean Conlon and Caoimhghín Ó'Caoláin, were also invited to address the meeting and in doing so put further questions to EirGrid.

The EirGrid delegation was given an opportunity to answer the questions put to them however due to time constraints many of the questions remained unanswered. As a result, Mr. Andrew Cooke of EirGrid proposed to the Chairman that EirGrid prepare written answers to all of the questions raised at the meeting and that these would be sent to the Chairman for distribution to the Members. The Chairman accepted this offer and this document is the result.

As stated above thirteen Councillors and the two Oireachtas members put questions to EirGrid. The questions and EirGrid's response are presented in this document in fifteen sections, with one section allocated to each of the fifteen speakers. As there was some repetition in the questions asked by the speakers this has resulted in a corresponding repetition in EirGrid's response. This repetition is considered to be necessary in the interest of clarity as it will facilitate each speaker in determining whether his or her specific questions have been answered.

EirGrid believes that all of the questions raised at the Monaghan County Council Meeting on 20 June 2011 have been answered in full. If however any question has been omitted or if there are any follow up questions EirGrid would be happy to address these in an addendum to this document.

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Councillor Bannigan

- 1. A number of landowners have engaged a solicitor to act on their behalf. The solicitor has written to EirGrid and instructed that all engagement with this group of landowners be directed through his office. Why is EirGrid ignoring the Solicitor's instructions? (Cllr. Bannigan)**

In circumstances where any individual landowner expresses a willingness to engage with EirGrid plc and its representatives, EirGrid plc shall continue to engage with any such landowner.

In circumstances where landowners have engaged solicitors to represent them EirGrid shall ensure that general correspondence in relation to the proposed development is sent to the landowner's solicitor.

- 2. How will EirGrid carry out the required survey of the line route if the landowners refuse access? Will EirGrid use its legal powers to gain entry? (Cllr. Bannigan)**

It is in the landowners' interest to allow EirGrid to carry out a survey of the lands at the earliest possible opportunity as that is the best way of ensuring that the landowners' concerns and preferences can be taken on board.

In circumstances where access for survey has been refused EirGrid will seek to rely on other measures including aerial photographs, LIDAR (Light Detection and Ranging) surveys and by adopting an environmentally precautionary approach in the design to ensure compliance with governing legislation and European Directives.

EirGrid does not generally use statutory powers however EirGrid reserves its statutory rights in this regard in individual cases where a need to enter upon lands is considered necessary and a landowner is not willing to facilitate EirGrid in this regard.

- 3. Given the uncertainty about the health effects of exposure to the EMF why does EirGrid not apply the 'precautionary principle' when planning overhead lines? (Cllr. Bannigan)**

EirGrid designs and operates the transmission network in accordance with the relevant EMF guidelines recommended by the European Commission (EU Council Recommendation 1999/519/EC) and which have been adopted, without variation, by the Irish Government.

The European Commission recommends¹ that the 'precautionary principle' be applied when "*there are indications that the possible effects on the environment, or human, animal or plant health may be potentially dangerous*".

The Commission decided² not to apply the 'precautionary principle' in the case of its EMF guidelines on the basis that it would be inappropriate to do so "*as there are no clear*

¹ Communication from the Commission on the Precautionary Principle - COM/2000/0001

² Implementation report on the Council Recommendation limiting the public exposure to electromagnetic fields (0 Hz to 300 GHz) http://ec.europa.eu/health/ph_determinants/environment/EMF/implementation_rep_en.pdf

scientific indications that the possible effects on human health may be potentially dangerous”.

4. Provide details of the increased levels for magnetic fields in the new ICNIRP guidelines? (Cllr. Bannigan)

ICNIRP (International Commission on Non-Ionizing Radiation Protection) published its new “Guidelines for Limiting Exposure to Time-Varying Electric and Magnetic Fields (1 – 100 kHz)” in December 2010. A Fact Sheet summarising the new guidelines can be accessed on the ICNIRP website at www.icnirp.de.

In the case of magnetic fields the 1998 ICNIRP Guidelines identified a ‘reference level’ for assessing compliance with the recommendations on limiting exposure to EMFs. The ‘reference level’ is ICNIRP’s threshold, below which compliance with the Guidelines can be assumed. If a designer can show by calculation that the expected EMF will be lower than the ‘reference level’ then it can be assumed that that particular installation or equipment complies with the Guidelines. A calculated value that is greater than the ‘reference level’ would not mean non-compliance but rather that further investigation is required.

The 1998 ICNIRP Guidelines specified a ‘reference level’ of 100 microtesla for exposure of the general public to time-varying magnetic fields. In the 2010 ICNIRP Guidelines this threshold has been increased to 200 microtesla.

The EU Guidelines (EU Council Recommendation 1999/519/EC) are based on the 1998 ICNIRP Guidelines with the additional specification that they apply to locations where persons spend significant amounts of time. The EU Guidelines have been adopted, without variation, by the Irish Government³.

The EU Guidelines have not been amended in accordance with the new ICNIRP Guidelines so they still refer to the lower and more conservative reference level of 100 microtesla. EirGrid must still comply with these as they remain the de facto Guidelines in Ireland. The new North South 400kV Interconnector will be designed accordingly.

5. Do you accept that other countries in Europe have specified a minimum distance between dwellings and transmission lines in order to ensure a lower level of public exposure to EMF than the recommended levels set by the EU Commission? (Cllr. Bannigan)

Overhead transmission lines come in many shapes and sizes, with different voltage levels, different power carrying capacities and different configurations. The EU Guidelines recognise this and instead of specifying a minimum clearance distance the Guidelines specify ‘Basic Restriction Levels’ for the exposure of the general public to EMF. As the strength of the EMF is at its highest in the immediate vicinity of the live wire and decreases rapidly with growing distance from the overhead line a minimum clearance distance that satisfies the Guidelines can be derived for every type and size of HVAC overhead line.

The EU Guidelines were issued as a ‘Recommendation’ not as a ‘Directive’. The recommendation seeks the application of a consistent approach across member states however it does not preclude any member state from adopting lower restriction levels

³ Implementation report on the Council Recommendation limiting the public exposure to electromagnetic fields (0 Hz to 300 GHz) http://ec.europa.eu/health/ph_determinants/environment/EMF/implement_rep_en.pdf

than those in the recommendation. Some EU countries, such as Sweden and the Netherlands have adopted lower restriction levels than the recommended levels. Most EU countries, including Ireland, adopted the EU Guidelines without any variation.

In the case of the 400kV overhead lines for the new Interconnector EirGrid can confirm that the new overhead line will be sufficiently far enough away from dwellings to ensure that the resulting EMFs will be lower than the restriction levels specified in the EU Guidelines. In fact it can be expected that for those existing dwellings that are closest to the proposed overhead line the resulting magnetic field levels will be so low as to be comparable with the 'background' levels already existing in those dwellings. The 'background' levels are caused by the electrical wiring installed in the building as well as the types of electrical appliances in use in that building.

6. What are the implications for EirGrid of the recent Council of Europe resolution regarding EMF (Cllr. Bannigan)

The resolution in question has no new implications for EirGrid. The resolution was passed on 06 May 2011 by a committee of the Council of Europe. It called for a reduction in human exposure to EMF and microwave radiation from mobile phones and other wireless devices, such as cordless telephones and WiFi transmitters. The resolution made little reference to the EMF emanating from extremely low frequency devices such as electrical appliances and transmission and distribution overhead lines and underground cables.

It did however make one recommendation (8.4.1) concerning the planning of electric power lines whereby it called for high-voltage power lines and other electric installations to be kept at a safe distance from dwellings. In planning the Irish transmission network EirGrid will always locate the overhead lines, underground cables and electricity substations at a 'safe distance from dwellings'.

7. Does EirGrid's staff here today have any personal concerns for their own health due to exposure to EMF? (Cllr. Bannigan)

No, the EirGrid staff that were present at the meeting on 20 June 2011 are aware that the transmission system in Ireland complies with the EU Guidelines on EMF and that the levels of EMF emitted from transmission installations are therefore within the safe threshold.

8. What are the implications for EirGrid of the recent statement by the World Health Organisation on usage of mobile phones? (Cllr. Bannigan)

None - the recent statement by the World Health Organisation does not make any reference to high voltage overhead lines or underground cables.

9. Why is EirGrid engaging in public consultation at this stage when it is Government policy to appoint a Commission to investigate the use of underground cable for the project? (Cllr. Bannigan)

EirGrid's commencement of this phase of analysis and non-statutory consultation does not in any way conflict with, or pre-empt, the Government's review. EirGrid understands that the review will report by October; this will allow time for any findings or analysis presented from the review to be considered.

The Minister of Communications, Energy and Natural Resources' position on this question was detailed in his response to a parliamentary question on 21 June 2011 in which he stated –

“The Programme for Government commits to the establishment of an independent international expert commission to review within six months the case for, and cost of, undergrounding all or part of the Meath-Tyrone line. The review will not consider whether the Meath-Tyrone Interconnector should be built. It will consider the case for and cost of undergrounding and will take account of the significant corpus of analysis already commissioned into the undergrounding option.

*EirGrid has begun a new round of non statutory public consultation in relation to the Meath—Tyrone Interconnector preparatory to a formal new application to An Bord Pleanála. **This preparatory work by EirGrid does not in any way pre-empt or undermine the Programme for Government commitment.** There is no requirement in the Programme for Government that EirGrid should halt all preparatory work and EirGrid has publicly stated that it will fully cooperate with the review and have due regard to its findings”. (Emphasis added)*

10. What will you do if the commission recommends underground cable? (Cllr. Bannigan)

The Expert Commission was set up by, and will report to, the Minister and to the extent that it makes policy recommendations, then those will be a matter for the Minister and Government. EirGrid however will have due regard for any data, information and analysis which is presented by the Expert Commission, as we do with any other information or analysis submitted to us.

11. The re-evaluation process is a sham because you have come back with the same route? (Cllr. Bannigan)

The re-evaluation process comprises a very open, transparent and comprehensive step-by-step process entailing review of all issues and decisions associated with the previous application in respect of the North-South Interconnector Development. This comprehensive review has resulted in the identification of largely the same route, with some local modifications, accompanied by a documented rationale for decisions taken.

The purpose of this re-evaluation process is to ensure that there is an understanding of, and confidence in, EirGrid's conclusions, and that is why this process provides for significant public and stakeholder input as well as an opportunity to provide inputs and suggestions on the routing of the line

12. How will EirGrid carry out surveys along the route of the line during the ‘growing season’ if the landowners refuse access (Cllr. Bannigan)

EirGrid assumes that this question primarily refers to ecological surveys. The purpose of such surveys is to identify the presence or otherwise of protected species within sensitive environments, such as hedgerows, and where other survey options, such as reference to aerial photographs or LIDAR (Light Detection and Ranging) surveys may not always be adequate. Adequate surveys can clearly occur where access to land is obtained. Where access to land is not possible on account of refusal of access, EirGrid will have to consider whether it is necessary to undertake such on-the-ground survey or whether alternative design solutions are available, while adopting an environmentally precautionary approach to ensure compliance with governing legislation and European Directives. This is also a matter for the individual landowners affected.

It should be noted that while EirGrid does not generally use statutory powers, EirGrid reserves its statutory rights in this regard in individual cases where a need to enter upon lands is considered necessary and a landowner is not willing to facilitate EirGrid in this regard.

13. What does EirGrid mean by ‘public consultation’ if it is not going to seek some middle ground compromise? (Cllr. Bannigan)

EirGrid is always open to seeking consensus on its projects. EirGrid is however the holder of the licence to act as Ireland’s sole Transmission System Operator (TSO) and must comply with the conditions of that licence as defined in Statutory Instrument 445 of 2000. In particular with regard to this project Eirgrid is required “*to operate and ensure the maintenance of and, if necessary, develop a safe, secure, reliable, economical, and efficient electricity transmission system and to explore and develop opportunities for interconnection of its system with other systems, in all cases with a view to ensuring that all reasonable demands for electricity are met and having due regard for the environment*”. Consensus and compromise must therefore always be sought within these specified constraints and this is not always possible.

In addition to seeking consensus EirGrid also seeks to engage with all interested parties in respect of a planned development, in order to provide clear information regarding that development, and to seek to ensure an understanding of the need for that development.

EirGrid has been consulting and engaging on this project for the last four years, and inputs from the public have had significant influence on the project to date. EirGrid continues to pursue consensus in relation to the routing of the line, and in particular the location of towers, by proactively engaging with landowners to try and mitigate any potential impact on current farming practices and other land uses, while trying to balance other competing priorities such as environmental constraints and distance to dwellings.

However, it is the case that, due to the technical nature of a project, or competing environmental priorities, it may not always be possible to accommodate suggestions by stakeholders regarding the routing of a transmission line. In this instance, the indicative route identified by EirGrid in the Preliminary Re-evaluation Report, is considered to ensure the most appropriate balance between often competing technical, environmental, community and other criteria.

Councillor Carthy

14. Numerous studies raise concerns about exposure to EMF - on the basis of these is EirGrid still saying that there is no change in its attitude to EMF? (Cllr. Carthy)

EirGrid's position regarding exposure to EMF is based on the explanations and recommendations of authoritative bodies such as the World Health Organisation, ICNIRP (the International Commission on Non-Ionizing Radiation Protection), the European Commission and the Irish Government. Backed by this weight of expert opinion, EirGrid is satisfied that the low levels of EMF emanating from its high voltage overhead lines, underground cables and substations do not present a risk to human or animal health and as such can be considered to be safe.

Extensive EMF related scientific research has been carried out across the world. ICNIRP has reviewed the findings of this body of research and concluded that a link between the levels of EMF that would typically be emitted by an electricity transmission installation and negative health effects in humans and animals has not been established. In addition the research has not been able to provide a biological explanation or mechanism for how exposure to these low levels of EMF could cause damage to a living cell. In other words no scientist has ever observed a living cell been damaged by exposure to low levels of EMF nor has any scientist provided an explanation for how a living cell might be damaged by long term exposure to low levels of EMF.

It is from the totality of these studies that ICNIRP developed its 'Guidelines for limiting exposure to time-varying electric, magnetic and electromagnetic field (up to 300GHz)'. Both the World Health Organisation and the European Commission have endorsed these guidelines. The 1998 ICNIRP Guidelines form the basis of EU Council Recommendation 1999/519/EC which describes the EU Guidelines. EirGrid designs and operates the Irish transmission network in accordance with the EU Guidelines.

15. EirGrid is saying that implementation of the proposed development will result in a saving of approximately €20 to €30 million per annum for electricity consumers from 2017 onwards. How will this arise? (Cllr. Carthy)

The figures that EirGrid stated in the presentation to the Council relate to cost savings which arise due to the way in which the proposed interconnector alleviates congestion on the network for generators and increases overall network capacity. This will result in a decrease in the charges paid by retail suppliers of electricity for the bulk electricity that they buy in the wholesale market. In a competitive retail market this saving will be passed on to the end user, the electricity consumer.

16. What is the likely domestic saving? (Cllr. Carthy)

There are a wide range of benefits associated with the interconnector that will ultimately benefit consumers and result in domestic savings. These include how investment in electricity infrastructure can reduce congestion on the network, improve productivity rates, increase economic growth rates, reduce long term maintenance and outage costs and facilitate renewable investment.

It is difficult to provide an exact figure on domestic savings due to the range of external factors which can influence how some of these benefits will interact. The cost saving range (€20 million to €30 million per annum) that EirGrid outlined to the Council specifically relates to quantifiable savings in the wholesale electricity market which arise due to the way in which the proposed interconnector alleviates congestion on the network for generators and increases overall network capacity.

17. What benefit will the proposed development bring to the people of County Monaghan? (Cllr. Carthy)

The Second North South Interconnector will facilitate cross-border sharing of electricity; improve the efficiency of the all-island electricity market - resulting in lower electricity bills; allow more renewable energy to be connected to the network thus reducing our production of greenhouse gases and our reliance on imported fossil fuels; and will enhance the security of the electricity supply throughout Ireland. These benefits accrue to everyone in Ireland including the residents of County Monaghan.

The proposed development will however also deliver a benefit that is specific to the residents of the north east area including those in County Monaghan. EirGrid is predicting that between 2015 and 2020 the reliability of the electricity supply in the north east area will fall below the acceptable standard. If nothing is done to correct this the quality of the local electricity supply will slowly deteriorate. This will have a negative impact on economic activity in the area and on the standard of living and quality of life of local inhabitants. The implementation of the overall development as proposed by EirGrid will keep the north east in compliance with the quality of supply standards for many years to come.

18. Are there any significant differences related to that part of the proposed development located in Co. Monaghan resulting from the re-evaluation of the previous proposal? (Cllr. Carthy)

In respect of that portion of the Interconnection Development within Co. Monaghan, the preferred approximately 1km wide route corridor, and indicative route within that corridor, identified in the Preliminary Re-evaluation Report remains as per the previous proposal. The Preliminary Re-evaluation Report has not identified any issue which would require modification to that previously proposed alignment within the county. However, the current process of public and stakeholder consultation is intended to identify any issues that might have been overlooked in the Preliminary Re-evaluation Report, and which would justify such modification of the alignment. In addition, the overall re-evaluation process will conclude with identification of a preferred route. However, this will be subject to detailed confirmation and environmental assessment, intended to occur in dialogue with affected landowners and other stakeholders, which are likely to result in local modifications to the alignment in the final proposal.

19. Does EirGrid accept the criticism of the Monaghan County Council Planner regarding the previous proposal? Does it accept that there is a Material Contravention of 25 policies of the Development Plan, especially Policies ENV2 and ENV3; (Cllr. Carthy)

EirGrid acknowledges the submission of the County Monaghan Planning Authority to An Bord Pleanála in respect of the previous application for approval of the Interconnection Development. To that extent, EirGrid intends to continue to liaise and work pro-actively with the Executive of Monaghan County Council, to seek to ensure clarification on issues, and ultimately to ensure that the optimum solution emerges as the proposed development.

EirGrid remains satisfied that its proposed development will not materially contravene the policies of the Monaghan County Development Plan. However, it is the role of An Bord Pleanála, as the Competent Authority for Strategic Infrastructure Development to determine whether any residual environmental impact of these projects is justified, when considered against the benefit of provision of such strategic infrastructure, in the context of proper planning and sustainable development.

20. What regard does EirGrid have for democracy when it is the case that all of the Members of Monaghan County Council are in favour of underground cable? (Cllr. Carthy)

EirGrid has a mandate from the Irish Government to provide the people of Ireland with a safe, reliable and cost effective electricity transmission system while having due regard for the environment. EirGrid also acknowledges the role played by the elected members of Monaghan County Council and considers all public and stakeholder input and dialogue in developing its projects.

In specific respect of this project, if EirGrid was to propose a development consisting entirely (or substantially) of underground cable it would not be fulfilling its statutory mandate to provide the people of Ireland with a safe, reliable and cost effective electricity transmission system while having due regard for the environment.

EirGrid can appreciate that the underground alternative may be the preference of the elected Members of Monaghan County Council; however EirGrid has to be guided by technical expertise and experience in this matter, an expertise and experience which results in EirGrid adopting a position in respect of undergrounding of 400 kV circuits that is consistent with its equivalent Transmission System Operators throughout Europe and worldwide. Unfortunately, therefore the Members' preference in this regard cannot be accommodated on a project of this nature, scale and extent.

21. If the substation near Kingscourt is an integral part of the project why is it now being deferred and put into a separate application? (Cllr. Carthy)

The substation near Kingscourt remains an integral part of the overall strategic scheme and will be progressed at the appropriate time. The reason why it is not expected that it will be included in the current application for planning approval is explained in Section 4.1 of the Preliminary Re-evaluation Report.

In summary the report states that an Interconnector between the existing Woodland Substation in County Meath and the proposed new substation at Turleenan in County Tyrone will on its own, without any intermediate substation near Kingscourt, provide an increase in the capacity of the transmission network in the north east area. It does this by effectively 'bypassing' the existing high capacity transmission circuits running between the Greater Dublin area and the transmission network in Northern Ireland (via Louth Substation), thus freeing up more spare capacity on these existing circuits for the supply of electricity to local consumers.

Based on the most recent forecast for growth in electricity consumption it is now considered that this 'spare capacity' will be sufficient to cater for the projected load growth in the north east area for at least the next decade. At some stage thereafter electricity consumption in the north east will grow to a level that will require further reinforcement of the local transmission network. It is envisaged at this point in time that such reinforcement will be best achieved by the construction of the intermediate substation near Kingscourt.

The fact that EirGrid is now of the opinion that the intermediate substation will not be required for at least ten years is significant as it is considered that it would not be appropriate, in the context of proper planning and sustainable development, for a developer to apply for planning permission for something which he does not expect to commence within ten years of receipt of planning approval. It is expected therefore that the intermediate substation will not be included in the planning application for the Interconnector but will instead be the subject of its own application at a later date, when the need arises.

22. What happens if one part of the proposed development, say that part in the Republic gets permission and the other part, that part in Northern Ireland, doesn't? (Cllr. Carthy)

This is one of the scenarios that was considered in Section 4.1 of the Preliminary Re-evaluation Report.

Should planning approval be delayed indefinitely in Northern Ireland then EirGrid would bring forward its plan for the construction of a substation near Kingscourt. This substation connecting into the existing 220 kV line and connecting to a new overhead line between it and the existing substation at Woodland would provide the required reinforcement of the transmission network in the north east area. This limited development however would obviously not provide the required North South Interconnector.

Councillor McNally

23. The Chief Scientific Adviser has made a "huge statement" when he says that the EMF from power lines could not possibly cause cancer as we don't know the cause of most cancers. People often say things to reflect the views of those who are paying for a study; (Cllr. McNally)

This question refers to the position paper "A Review of Recent Investigations into the Possible Health Effects of Exposure to Electromagnetic Fields (EMF) from Power Lines" (July 2010) issued by the office of the Chief Scientific Adviser which concluded that it "is simply not possible for the level of energies associated with power lines to cause cancer".

EirGrid is aware that following the meeting of 20 June 2011 the Council wrote to the Office of the Chief Scientific Adviser (CSA) about this matter and that the CSA subsequently replied. A copy of the CSA's reply was forwarded to EirGrid for information purposes and is attached here (Appendix B) for completeness.

The Office of the Chief Scientific Adviser (CSA) was established to provide the Government with independent, expert advice on issues related to public science policy. The CSA is appointed by the Government and is supported by a panel of experts across a range of scientific disciplines. The Office of the CSA is funded by Government.

24. Has there been any change in national policy regarding the Interconnector as a result of the change of Government? (Cllr. McNally)

The position of the new Government with regard to this project was set out in a statement by the Minister for Communications, Energy and Natural Resources on 21 June 2011. The Minister stated, in his response to a parliamentary question, that –

"The planning, development and routing of transmission line infrastructure is a matter for EirGrid, which is the State owned body responsible for the electricity transmission system. I have no statutory function regarding the planning and construction of energy networks.

The Government fully endorses the strategic national importance of investing in Ireland's electricity transmission infrastructure. In that context the Meath-Tyrone 400KV Interconnector is a key strategic project for the economies and consumers both North and South. It is also critical to ensuring energy supply adequacy on the island of Ireland.

The Programme for Government commits to the establishment of an independent international expert commission to review within six months the case for, and cost of, undergrounding all or part of the Meath-Tyrone line. The review will not consider whether the Meath-Tyrone Interconnector should be built. It will consider the case for and cost of undergrounding and will take account of the significant corpus of analysis already commissioned into the undergrounding option.

EirGrid has begun a new round of non statutory public consultation in relation to the Meath—Tyrone Interconnector preparatory to a formal new application to An Bord Pleanála. This preparatory work by EirGrid does not in any way pre-empt or undermine the Programme for Government commitment. There is no requirement in the Programme for Government that EirGrid should halt all preparatory work and EirGrid has publicly stated that it will fully cooperate with the review and have due regard to its findings."

25. Concern remains for constituents who are adjacent to, but not directly under the line, who will receive no compensation. (Cllr. McNally)

In the case of the North South 400 kV Interconnector, EirGrid will ensure that every reasonable effort is made to minimise the potential impacts of the 400kV overhead line on adjacent property owners. In this regard EirGrid will ensure –

- The use of a less visually intrusive pylon design than was used in the past.
- The careful positioning, where possible in agreement with landowners, of the pylons.
- The implementation of any other reasonable mitigation measures that are agreed with potentially affected property owners.

26. While it is acknowledged that public consultation has taken place what evidence is there that the people's views have been taken on board? (Cllr. McNally)

EirGrid can assure all those who participated in the significant pre-application and application processes relating to the previous proposal, and subsequently in respect of the process for the intended new proposal, that their views have been taken on board and given full consideration. People's views will continue to be taken on board as the re-evaluation process continues, and subsequently as the process of route confirmation develops, particularly comprising engagement with landowners.

EirGrid also intends to publish a report as part of the Re-evaluation process which will summarise feedback received and proposed actions. Ultimately the public will be able to see how such views have been incorporated in defining the nature and extent of the planned Interconnection Development, which will eventually be submitted to the Strategic Infrastructure Division of An Bord Pleanála. EirGrid reminds the Members that all parties will subsequently have additional opportunity to state their views to An Bord Pleanála during a specified period for the making of submissions, following submission of the application.

27. Why proceed with an overhead line proposal now when it could be technically feasible in five years time to do it using underground cable? (Cllr. McNally)

There is no new technology currently being tested and which will be commercially available within the next five years that will enable long lengths of 400 kV AC underground cable to operate safely and securely on the Irish transmission system. Nor is there any new technology on the horizon which would alter EirGrid's opinion that a 400 kV overhead line is now and will remain for many years to come the most appropriate technology for the North South Interconnector.

28. EirGrid doesn't "give a damn" about anyone but is just pursuing its own agenda; (Cllr. McNally)

EirGrid's mandate from Government is to provide the people of Ireland with a safe, reliable and cost effective electricity transmission system while having due regard for the environment. Its activities in this regard are regulated by the Commission for Energy Regulation and are primarily, and ultimately, funded by the electricity consumers of Ireland.

Councillor Connolly

29. Health concerns of the community remain – don't accept the findings of the Chief Scientific Adviser - what about fluorescent lights under power lines? (Cllr. Connolly)

EirGrid acknowledges the fact that members of the community are concerned about EMF. It was as a result of general concerns regarding the possible negative health effects from exposure to magnetic fields that prompted the World Health Organisation to initiate the establishment of the independent body ICNIRP (International Commission on Non-Ionizing Radiation Protection) which has the responsibility for establishing a safe level of exposure to magnetic fields. In 1998 ICNIRP issued guidelines on this and these were incorporated into a recommendation issued by the European Commission (EU Council Recommendation 1999/519/EC). The EU Guidelines on EMF have been adopted, without variation, by the Irish Government.

EirGrid has the responsibility of planning and developing the electricity transmission system. Electricity transmission installations are a source (although not the only source) of magnetic field exposure for the general public. By implication therefore EirGrid has a responsibility to inform the public of the issues, demonstrate that its installations comply with the guidelines, and provide expert testimony when required, and all this is to be done in order to try and allay any concerns that might be held within the community. The Office of the Chief Scientific Adviser (CSA) was established to provide the Government with independent, expert advice on issues related to public science policy.

The findings of the CSA that are referred to in the question are contained in its position paper "A Review of Recent Investigations into the Possible Health Effects of Exposure to Electromagnetic Fields (EMF) from Power Lines" (July 2010). The CSA concluded that it "is simply not possible for the level of energies associated with power lines to cause cancer". EirGrid is aware that following the meeting of 20 June 2011 the Council wrote to the Office of the Chief Scientific Adviser about this matter and that the CSA subsequently replied. A copy of the CSA's reply was forwarded to EirGrid for information purposes and is attached here (Appendix B) for completeness.

Electrical power has two components, the voltage measured in volts and the current measured in amps. Electricity is often compared to the flow of water in a pipe, with the voltage being comparable to the water pressure and the current being comparable with the rate of flow of water. The EMF from an overhead line also has two components; a magnetic field caused by the flow of the current through the electricity wires and an electric field caused by the voltage between the electric wire and the ground. It is the magnetic field which has raised health concerns not the electric field.

The very faint light emitted by a fluorescent tube under a high voltage overhead line is caused by the electric field and not the magnetic field. Holding the tube upright results in a voltage difference between the two ends of the tube and this causes the tube to glow. Lighting a fluorescent tube in this way requires very little electric energy. A similar effect can be achieved using static electricity by rubbing an inflated balloon against your hair or against a wool jersey and then in a dark room hold the balloon up to tube.

The phenomenon of the fluorescent tube glowing faintly under a high voltage overhead line has therefore a very simple scientific explanation and is of no cause for concern.

30. It is acknowledged that there is not a lack of consultation, but is it a closed process and just a box ticking exercise? (Cllr. Connolly)

EirGrid can assure all who participate in the consultation process that it is not a closed or meaningless process – the process of consultation, including landowner engagement, is an essential component of all projects developed by EirGrid and is enshrined within the Project Development Roadmap that EirGrid adheres to in all its projects. In this instance, EirGrid intends compiling a report following this period of consultation in respect of the Preliminary Re-evaluation Report. The overall consultation process will also be carefully documented and presented in any future application to An Bord Pleanála for its scrutiny. It is considered likely that An Bord Pleanála would seek to satisfy itself that adequate consultation occurred in the development of the project.

31. What would it cost to underground the Interconnector? (Cllr. Connolly)

PB Power (Parsons Brinkerhoff) carried out a study to determine the comparative costs of using a 400 kV overhead line and a 400 kV underground cable for the Interconnector. This was a site specific study in that a route corridor was identified for both the overhead line option and the underground cable alternative. The study estimated that if the cost of equipment, and other costs, common to both options are excluded then the overhead line from Woodland to Turleenan would cost €81 million while the comparable cost for underground cable would be €588 million. This means that the underground cable alternative would cost in excess of €500 million more than the overhead line proposal.

It should be noted that the PB Power study did not seek to establish the feasibility, from a system wide perspective, of installing long lengths of 400 kV underground cable on the all-island transmission network. The fact that PB Power has calculated a cost estimate for the underground cable alternative does not in any way imply that PB Power has established that such an underground cable is technically feasible.

32. A 400 kV underground cable was installed recently in London. Why was that not considered to be prohibitively expensive? (Cllr. Connolly)

EirGrid is required, in accordance with its licence obligation as Transmission System Operator, to develop the transmission system using least cost, technically feasible and environmentally acceptable solutions. Proposing the use of a 400 kV underground cable for the North South Interconnector would not comply with this requirement.

National Grid Co. UK is the developer of the new 400 kV underground cable in London. National Grid has a similar licence obligation to that of EirGrid. In this case however it was asked by the London Development Agency to remove an existing 400 kV overhead line to make way for the development of the Olympic Park required for the 2012 Olympics. The only option available to National Grid in this instance was the installation of a 400 kV underground cable in an air conditioned tunnel. National Grid based its decision to proceed with the underground cable development on the basis that -

- The cable route is only 12.6 km in length. The transmission system on the island of Britain is large enough to accommodate the electrical effects of 400 kV cables of this length. The underground cable option is therefore technically feasible.
- The cost of the development was £250 million and was paid for in full by the London Development Agency.

The development therefore met the criteria, from the perspective of both the National Grid Co. and OFGEM (the energy regulator), of being the least cost, technically feasible and environmentally acceptable solution.

Councillor Crowe

33. Councillor Crowe presented a paper on EMF at the oral hearing in 2010. EirGrid never subsequently requested a copy of the presentation. Why Not? Especially when the paper said EMF was harmful. (Cllr. Crowe)

EirGrid already has a copy of the statement that Councillor Crowe read into the record at the oral hearing on 03 June 2010 as copies were handed out on the day and EirGrid still retains the copy it received that day.

EirGrid's position regarding the health effects of exposure to EMF is based on the explanations and recommendations of authoritative bodies such as the World Health Organisation, ICNIRP (the International Commission on Non-Ionizing Radiation Protection) and the European Commission

Extensive EMF related scientific research has been carried out across the world. ICNIRP has reviewed the findings of this body of research and concluded that a link between the levels of EMF that would typically be emitted by an electricity transmission installation and negative health effects in humans and animals has not been established. In addition the research has not been able to provide a biological explanation or mechanism for how exposure to these low levels of EMF could cause damage to a living cell. In other words no scientist has ever observed a living cell been damaged by exposure to low levels of EMF nor has any scientist provided an explanation for how a living cell might be damaged by long term exposure to low levels of EMF.

It is from the totality of these studies that ICNIRP developed its 'Guidelines for limiting exposure to time-varying electric, magnetic and electromagnetic field (up to 300GHz)'. Both the World Health Organisation and the European Commission have endorsed these guidelines. The 1998 ICNIRP Guidelines form the basis of EU Council Recommendation 1999/519/EC which describes the EU Guidelines. EirGrid designs and operates the Irish transmission network in accordance with the EU Guidelines.

34. Is EirGrid pre-empting the findings of the Government appointed International Commission with the publication of its Preliminary Re-evaluation Report and the associated non-statutory public consultation? (Cllr. Crowe)

EirGrid's commencement of this phase of analysis and non-statutory consultation does not in any way conflict with, or pre-empt, the Government's review. EirGrid understands that the review will report by October; this will allow time for any findings or analysis presented from the review to be taken into account.

The Minister of Communications, Energy and Natural Resources' position on this question was detailed in his response to a parliamentary question on 21 June 2011 in which he stated –

“The Programme for Government commits to the establishment of an independent international expert commission to review within six months the case for, and cost of, undergrounding all or part of the Meath-Tyrone line. The review will not consider whether the Meath-Tyrone Interconnector should be built. It will consider the case for and cost of undergrounding and will take account of the significant corpus of analysis already commissioned into the undergrounding option.”

*EirGrid has begun a new round of non statutory public consultation in relation to the Meath—Tyrone Interconnector preparatory to a formal new application to An Bord Pleanála. **This preparatory work by EirGrid does not in any way pre-empt or undermine the Programme for Government commitment.** There is no requirement in the Programme for Government that EirGrid should halt all preparatory work and EirGrid has publicly stated that it will fully cooperate with the review and have due regard to its findings". (Emphasis added)*

35. What are the implications for EirGrid's application for planning approval if it is going to take two to three years to get a decision on NIE's application in Northern Ireland? (Cllr. Crowe)

EirGrid and NIE (Northern Ireland Electricity) do not have any information that would indicate that it will take up to three years to reach a decision on the application for planning approval in Northern Ireland. The authorities in Northern Ireland are progressing with the application and a public hearing on the matter has been scheduled for January 2012.

36. Is the real reason for the Interconnector all about getting more electricity into Dublin? (Cllr. Crowe)

No. The Second North South Interconnector will facilitate cross-border sharing of electricity; improve the efficiency of the all-island electricity market - resulting in lower electricity bills; allow more renewable energy to be connected to the network thus reducing our production of greenhouse gases and our reliance on imported fossil fuels; and will enhance the security of the electricity supply throughout Ireland. These benefits accrue to everyone in Ireland including the residents of County Monaghan.

The proposed development will however also deliver a benefit that is specific to the residents of the north east area including those in County Monaghan. EirGrid is predicting that between 2015 and 2020 the reliability of the electricity supply in the north east area will fall below the acceptable standard. If nothing is done to correct this the quality of the local electricity supply will slowly deteriorate. This will have a negative impact on economic activity in the area and on the standard of living and quality of life of local inhabitants. The implementation of the overall development as proposed by EirGrid will keep the north east in compliance with the quality of supply standards for many years to come.

37. What happens if the Interconnector gets permission and is built but the substation near Kingscourt doesn't subsequently get Permission? (Cllr. Crowe)

EirGrid is confident that when the Interconnector is built, and when the need for the substation near Kingscourt arises, that it will be possible to clearly show that the planned substation will constitute a sustainable development and with appropriate design and siting that it would receive the necessary planning approval.

38. What consideration has EirGrid given to new developments in the area of undergrounding? (Cllr. Crowe)

As part of the project re-evaluation process EirGrid carried out a review to ascertain whether there have been any significant advances in underground cable technology in recent years. The review also examined whether there has been any change in the practices of electricity utilities regarding the use of underground cables and overhead lines on their transmission networks in recent years. The review focused primarily on Europe but also referenced developments in other parts of the world. The purpose of the review was to verify whether EirGrid's policy and position on the use of underground cable (UGC) on the Irish transmission system, with particular reference to the use of 400 kV UGC for the proposed second North South Interconnector, was still valid.

The outcome of the review is detailed in Chapter 3 of the Preliminary Re-evaluation Report, a copy of which was given to each Councillor at the meeting on 20 June. In summary the review found -

- There have not been any developments in either UGC technology, or power system control and protection systems, which would alter EirGrid's opinion that the use of long HVAC cables on the Irish transmission system is not feasible within the constraints with which EirGrid must comply;
- No new information has come to EirGrid's attention which would alter its opinion that a 400 kV overhead line (OHL) is the best technical solution for this development, and that it would be significantly less costly than the UGC alternative.
- A hybrid 400 kV UGC/OHL circuit may be feasible, but only if the length of UGC to be installed is relatively short; and where the cost of using the short length of UGC can be proven to be an environmentally advantageous and cost effective way of overcoming an environmental or technical constraint to the preferred OHL; and where it can be confirmed that the use of UGC does not exceed the transmission system's capacity to accommodate such cables.
- EirGrid is obliged, within the terms of its licence as Transmission System Operator, to develop the transmission system using least cost, technically and environmentally acceptable solutions. Based on all of the above it is clear that in order to comply with this requirement, EirGrid must propose for the new North-South Interconnector Project a development that is substantially comprised of 400 kV overhead line.

Councillor Keelan

39. Has EirGrid been in contact with the new Minister and/or his Department? What were the outcomes? What is the direction of the Minister on this project?(Cllr. Keelan)

EirGrid is in regular discussion with the Department of Communications, Energy and Natural Resources on a range of issues, and both the Department and the Minister will be aware of EirGrid's overall plans in respect of the project, at a high level.

The Minister's position with regard to this project was detailed in his response to a parliamentary question on 21 June 2011 in which he stated –

“The planning, development and routing of transmission line infrastructure is a matter for EirGrid, which is the State owned body responsible for the electricity transmission system. I have no statutory function regarding the planning and construction of energy networks.

The Government fully endorses the strategic national importance of investing in Ireland's electricity transmission infrastructure. In that context the Meath-Tyrone 400KV Interconnector is a key strategic project for the economies and consumers both North and South. It is also critical to ensuring energy supply adequacy on the island of Ireland.

The Programme for Government commits to the establishment of an independent international expert commission to review within six months the case for, and cost of, undergrounding all or part of the Meath-Tyrone line. The review will not consider whether the Meath-Tyrone Interconnector should be built. It will consider the case for and cost of undergrounding and will take account of the significant corpus of analysis already commissioned into the undergrounding option.

EirGrid has begun a new round of non statutory public consultation in relation to the Meath—Tyrone Interconnector preparatory to a formal new application to An Bord Pleanála. This preparatory work by EirGrid does not in any way pre-empt or undermine the Programme for Government commitment. There is no requirement in the Programme for Government that EirGrid should halt all preparatory work and EirGrid has publicly stated that it will fully cooperate with the review and have due regard to its findings.”

40. Has EirGrid given any consideration to the impact that its proposed development will have on the tourism and agri-development initiatives being pursued by Monaghan County Council? (Cllr. Keelan)

The North-South 400 kV Interconnection Development will enhance and secure electricity supply to the North–East region which is essential to the achievement of tourism and agri-development initiatives being pursued by Monaghan County Council. In developing its proposal EirGrid will consider impacts on human beings, all land use issues including agronomy and socio-economic impact. This is most appropriately addressed in the EIS that will accompany the intended application. Such assessment will include the strategies being pursued or promoted by Monaghan County Council, particularly as set out in its own Development Plan, and the governing Regional Planning Guidelines for the Border Region. In addition, it is intended and hoped that the progression of the project can occur in ongoing positive dialogue with the Executive and Members of Monaghan County Council, where such issues can be considered and appropriately addressed.

41. Why is the substation near Kingscourt no longer being proposed when it was an integral part of the previous proposal? (Cllr. Keelan)

The substation near Kingscourt remains an integral part of the overall strategic scheme and will be progressed at the appropriate time. The reason why it is not expected that it will be included in the current application for planning approval is explained in Section 4.1 of the Preliminary Re-evaluation Report.

In summary the report states that an Interconnector between the existing Woodland Substation in County Meath and the proposed new substation at Turleenan in County Tyrone will on its own, without any intermediate substation near Kingscourt, provide an increase in the capacity of the transmission network in the north east area. It does this by effectively 'bypassing' the existing high capacity transmission circuits running between the Greater Dublin area and the transmission network in Northern Ireland (Louth Substation), thus freeing up more spare capacity on these existing circuits for the supply of electricity to local consumers.

Based on the most recent forecast for growth in electricity consumption it is now considered that this 'spare capacity' will be sufficient to cater for the projected load growth in the north east area for at least the next decade. At some stage thereafter electricity consumption in the north east will grow to a level that will require further reinforcement of the local transmission network. It is envisaged at this point in time that such reinforcement will be best achieved by the construction of the intermediate substation near Kingscourt.

The fact that EirGrid is now of the opinion that the intermediate substation will not be required for at least ten years is significant as it is considered that it would not be appropriate, in the context of proper planning and sustainable development, for a developer to apply for planning permission for something which he does not expect to commence within ten years of receipt of planning approval. It is expected therefore that the intermediate substation will not be included in the planning application for the Interconnector but will instead be the subject of its own application at a later date, when the need arises.

42. Do the comparative costs of the overhead line and underground cable alternatives include the impact on property values, tourism and the agri-business in Monaghan? (Cllr. Keelan)

No, but the consideration of such issues will be addressed in the Environmental Impact Statement (EIS) that EirGrid will prepare in support of its application for planning approval. The assessment of the impact of the proposed development on human beings, on land use issues such as agronomy and on socio-economic issues will form part of the Environmental Impact Assessment. An Bord Pleanála will carry out the assessment and based on its findings will decide whether the proposed development constitutes an appropriate and sustainable development.

Councillor Murray

43. What impact will the proposed overhead line have on the value of third party or adjacent property? Why should the public have to pay for this? (Cllr. Murray)

While there may be impacts on adjacent property EirGrid does not perceive that this will necessarily result in any depreciation in the value of said property.

EirGrid will ensure that every reasonable effort is made to minimise the potential impacts of the 400kV overhead line on adjacent property owners. In this regard EirGrid will ensure –

- The use of a less visually intrusive pylon design than was used in the past.
- The careful positioning, where possible in agreement with landowners, of the pylons.
- The implementation of any other reasonable mitigation measures that are agreed with potentially affected property owners.

44. What are the implications for EirGrid's application for planning approval if it is going to take two to three years to get a decision on NIE's application in Northern Ireland? (Cllr. Murray)

EirGrid and NIE (Northern Ireland Electricity) do not have any information that would indicate that it will take up to three years to reach a decision on the application for planning approval in Northern Ireland. The authorities in Northern Ireland are progressing with the application and a public hearing on the matter has been scheduled for January 2012.

45. Re the identified savings of at least €20 million - what does this amount to in terms of unit cost of electricity? (Cllr. Murray)

There are a wide range of benefits associated with the interconnector that will influence the unit cost of electricity and consumer savings in general. These include how investment in electricity infrastructure can reduce congestion on the network, improve productivity rates, increase economic growth rates, reduce long term maintenance and outage costs and facilitate renewable investment. It is difficult to provide an exact figure on domestic unit cost savings due to the range of external factors which can influence how some of these benefits will interact. The cost saving range that EirGrid has outlined to the council specifically relates to quantifiable savings in the wholesale electricity market which arise due to the way in which the proposed interconnector alleviates congestion on the network for generators and increases overall network capacity.

46. What is the rationale for the 'local need' for this development by 2017? (Cllr. Murray)

This is outlined in Chapter 2 of the Preliminary Re-evaluation Report, a copy of which was given to each Councillor at the meeting on 20 June.

The Report states that as part of re-evaluation process EirGrid "re-examined the case for reinforcement of the north-east based on the best and latest information available relating to the wide range of factors that could influence the decision. This focused in particular on changes in:

- Demand growth projections;
- Network topology;
- Generation portfolios;
- Market conditions;
- Network flows based on generation patterns throughout the system; and
- The TSO's licence condition that requires planning on an all-island basis.

Based on this EirGrid concluded that “there remains a need to reinforce the north-east area and that this is required sometime between 2015 and 2020”.

Consideration was also given to the implications of the continuing economic downturn and the resulting fall in electricity consumption in the area. It was observed that the need for reinforcement of the north-east area had been impacted by the fall in electricity consumption. The result is that the security of supply to the north-east area is not as precarious as had been predicted prior to the commencement of the recession in 2008. The latest growth projections for electricity consumption can be found in The All-Island Generation Capacity Statement 2011 - 2020, a joint report prepared by EirGrid and SONI (System Operator Northern Ireland). The Statement is forecasting that electricity demand in the Republic of Ireland will only return to 2007 levels sometime around 2013. These latest demand growth projections were applied in the re-evaluation of the need for the reinforcement of the north-east area as outlined above and they contributed to the conclusion that “there remains a need to reinforce the north-east area and that this is required sometime between 2015 and 2020”.

A second high capacity North South Interconnector will provide the required reinforcement of the north east area.

47. What is the local benefit being cited? (Cllr. Murray)

The Second North South Interconnector will facilitate cross-border sharing of electricity; improve the efficiency of the all-island electricity market - resulting in lower electricity bills; allow more renewable energy to be connected to the network thus reducing our production of greenhouse gases and our reliance on imported fossil fuels; and will enhance the security of the electricity supply throughout Ireland. These benefits accrue to everyone in Ireland including the residents of County Monaghan.

The proposed development will however also deliver a benefit that is specific to the residents of the north east area including those in County Monaghan. EirGrid is predicting that between 2015 and 2020 the reliability of the electricity supply in the north east area will fall below the acceptable standard. If nothing is done to correct this the quality of the local electricity supply will slowly deteriorate. This will have a negative impact on economic activity in the area and on the standard of living and quality of life of local inhabitants. The implementation of the overall development as proposed by EirGrid will keep the north east in compliance with the quality of supply standards for many years to come.

48. What is the cost of underground cable? (Cllr. Murray)

PB Power (Parsons Brinkerhoff) carried out a study to determine the comparative costs of using a 400 kV overhead line and a 400 kV underground cable for the Interconnector. This was a site specific study in that a route corridor was identified for both the overhead line option and the underground cable alternative. The study estimated that if the cost of equipment, and other costs, common to both options are excluded then the overhead line from Woodland to Turleenan would cost €81 million while the comparable cost for underground cable would be €588 million. This means that the underground cable alternative would cost in excess of €500 million more than the overhead line proposal.

It should be noted that the PB Power study did not seek to establish the feasibility, from a system wide perspective, of installing long lengths of 400 kV underground cable on the all-island transmission network. The fact that PB Power has calculated a cost estimate for the underground cable alternative does not in any way imply that PB Power has established that such an underground cable is technically feasible.

49. If it goes underground in Northern Ireland will it then go underground in the Republic? (Cllr. Murray)

Chapter 3 of the Preliminary Re-evaluation Report states that “*the use of long HVAC cables on the Irish transmission system is not feasible within the constraints with which EirGrid must comply*”. The transmission system is now planned on an ‘all-island’ basis and the two transmission networks on the island operate as if they were a single system. The statement above therefore applies equally to NIE.

Chapter 3 of the Preliminary Re-evaluation Report also concluded that a hybrid 400 kV underground cable/overhead line circuit may be feasible, but only if the length of underground cable (UGC) to be installed is relatively short; and where the cost of using the short length of UGC can be proven to be an environmentally advantageous and cost effective way of overcoming an environmental or technical constraint to the preferred overhead line; and where it can be confirmed that the use of UGC does not exceed the transmission system’s capacity to accommodate such cables. This finding applies to the ‘all-island’ network not just that part in the Republic.

The length of the route from the national border to Turleenan in County Tyrone is in the region of 30 km. A 400 kV underground cable of that length would fall into the category of ‘*long HVAC cables*’ and would not therefore be technically feasible.

50. What is the rush with this? In the period waiting for the NIE to get planning permission for its part of the overall development there could be technological changes? (Cllr. Murray)

The question infers that it will take many years for the planning authorities in Northern Ireland to reach a decision on the application for planning approval for that part of the Development located in that jurisdiction. EirGrid and NIE (Northern Ireland Electricity) do not have any information that would indicate that this will be the case. The authorities in Northern Ireland are progressing with the application and a public hearing on the matter has been scheduled for January 2012.

There is no new technology currently being tested and which will be commercially available within the next few years that will enable long lengths of 400 kV underground cable to operate safely and securely on the Irish transmission system. Nor is there any new technology on the horizon which would alter EirGrid's opinion that a 400 kV overhead line is now and will remain for many years to come the most appropriate technology for the North South Interconnector.

Councillor O'Hanlon

51. If the part of the project in Northern Ireland doesn't go ahead what is the status of the part in the Republic? (Cllr. O'Hanlon)

If the application for planning approval for that part of proposed development in Northern Ireland is refused or delayed for many years while EirGrid receives permission for the part in the Republic then EirGrid would consider bringing forward the construction of the proposed substation near Kingscourt. While this limited development would not provide the required second high capacity North South Interconnector it would at least solve the problem of the required reinforcement of the transmission network in the north east.

52. Have regular updates occurred - for example between Minister in NI and ROI? (Cllr. O'Hanlon)

EirGrid is not in a position to answer this question and suggests that it be directed to the relevant Government Department.

53. The presentation given by EirGrid at the Council meeting in June was incomplete as there was no input from NIE. Where is the report from NIE? Is this a joint application? (Cllr. O'Hanlon)

EirGrid responded to the invitation from the Council which requested that EirGrid attend and give a presentation on its Preliminary Re-evaluation Report. The invitation did not mention or request the attendance of NIE (Northern Ireland Electricity).

Information on the part of the proposed development to be located in Northern Ireland, in so far as it has relevance for that part of the development in the Republic of Ireland, is provided in EirGrid's Preliminary Re-evaluation Report, copies of which were handed to Councillors at the meeting on 20 June 2011.

The application for planning approval for that part of the Interconnector located in the Republic will be submitted to An Bord Pleanála. It will be submitted by EirGrid alone. It will not be a joint application with NIE (Northern Ireland Electricity).

54. If EirGrid was a private company, and where cost wasn't an issue would the project be dealt with like this?; (Cllr. O'Hanlon)

The electricity supply sector in Ireland is state regulated and the Commission for Energy Regulation has the role of ensuring compliance with the regulations. Participants in the electricity sector, regardless of whether they are state owned or private companies, are required to comply with the regulations.

EirGrid is a state owned company and is the holder of the licence to act as Ireland's sole Transmission System Operator (TSO). The duties of the TSO are defined in Statutory Instrument 445 of 2000 as follows –

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

Compliance with these duties, certain EU Directives and Government policy results in the project being proposed as it is. In addition, compliance with the TSO licence conditions requires EirGrid to develop a cost effective transmission system, meaning that 'cost' must always be an issue. The fact that EirGrid is not a private company has no bearing on the matter.

Councillor Carville

55. What is happening in terms of cross-border dialogue? (Cllr. Carville)

EirGrid is responsible for planning the transmission network in the Republic of Ireland; Northern Ireland Electricity (NIE) has that responsibility in Northern Ireland. The energy regulators North and South have agreed that the electricity transmission network shall be planned on an 'all-island' basis. EirGrid and NIE are therefore required to work together in the planning of the network.

EirGrid and NIE are partners in the planning and development of the second North South Interconnector project and work closely together with the common purpose of achieving the earliest possible completion.

56. What concerns has EirGrid "taken on board" from the 2010 Oral Hearing? There has been no taking on board of developments in technology? (Cllr. Carville)

Concerns and issues have been taken on board by EirGrid arising from submissions made to the Oral Hearing, and indeed the overall application in respect of the previous proposal. These have fed into the re-evaluation process, and the conclusions of the Preliminary Re-evaluation Report – indeed some specific concerns and issues have been specifically addressed within the content of the Report.

Chapter 3 of the Preliminary Re-evaluation Report specifically addresses recent 'developments in technology' and concludes in Section 3.9 that –

"There have not been any developments in 2010 in either UGC technology, or power system control and protection systems, which would alter EirGrid's opinion that the use of long HVAC cables on the Irish transmission system is not feasible within the constraints with which EirGrid must comply."

Other issues that were raised during the Oral hearing for the previous application included 'the lack of landowner input into the design of the line and a request for 'more consultation with non-landowners in close proximity to the line'. EirGrid has responded to these inputs by again inviting landowners to engage with us on the location of the towers and the Indicative line route and by attempting to engage directly with residents within 100 metres of the line to get their views on the proposed alignment and the Re-evaluation Report.

57. EirGrid has not provided information on the part of the project located in Northern Ireland. (Cllr. Carville)

Information on the part of the proposed development to be located in Northern Ireland, in so far as it has relevance for that part of the development in the Republic of Ireland, is provided in EirGrid's Preliminary Re-evaluation Report, copies of which were handed to Councillors at the meeting on 20 June 2011.

In December 2009 NIE (Northern Ireland Electricity) submitted an application for planning approval to the appropriate authorities in Northern Ireland for that part of the Interconnector located in that jurisdiction. In January 2011 NIE submitted an addendum report on foot of a request for further information from the planning authorities. NIE's application is currently making its way through the planning process in Northern Ireland. A public hearing on the matter has been scheduled for January 2012.

Comprehensive information on the NI part of the project can be found on the NIE website at www.nie.co.uk/majorprojects.

Councillor O'Brien

58. How has EirGrid calculated the cost savings? (Cllr. O'Brien)

The cost savings presented by EirGrid at the council meeting were calculated by running a software program which models the all-island power system both with and without the interconnector. These models include generator dispatch and production cost simulations which allow the reduction in constraint and capacity payments in the wholesale electricity market to be identified.

59. In 2007-2009 the project was based on forecasted growth - how can this still be the justification when we can't currently afford it and it is not likely to be required for 20-30 years? (Cllr. O'Brien)

The strategic 'all-island' need for a second high capacity North South Interconnector is outlined in the Preliminary Re-evaluation Report. The Report shows that the original justification for the Second North South Interconnector was not based on forecasted growth in electricity consumption. Instead it was, and remains to this day, driven by Government policy and certain EU Directives. The strategic need is an immediate need.

The local need, that is the need to reinforce the transmission network in the north east area, is however influenced by growth in electricity consumption in the area. In EirGrid's Preliminary Re-evaluation Report consideration was given to the implications of the continuing economic downturn and the resulting fall in electricity consumption. It was observed that the need for reinforcement of the north-east area had been impacted by the fall in electricity consumption. The result is that the security of supply to the north-east area is not as precarious as had been predicted prior to the commencement of the recession in 2008.

The latest growth projections for electricity consumption can be found in The All-Island Generation Capacity Statement 2011 - 2020, a joint report prepared by EirGrid and SONI (System Operator Northern Ireland). The Statement is forecasting that electricity demand in the Republic of Ireland will only return to 2007 levels sometime around 2013. These latest demand growth projections were applied in the re-evaluation of the need for the reinforcement of the north-east area and they contributed to the conclusion that "there remains a need to reinforce the north-east area and that this is required sometime between 2015 and 2020". As it will take a number of years to deliver the proposed Interconnection Development it can be stated that the need to reinforce the north east is also an immediate need.

The economic benefits of the Second North South Interconnector are significant to the extent that the proposed development will pay for itself within a relatively (in comparison with other types of nationally significant infrastructure projects) short number of years.

The project has the full approval of the Commission for Energy Regulation in the Republic and its counterpart in Northern Ireland, the Utility Regulator.

Councillor McPhillips

60. EirGrid's sets out its reasons for not using underground cable in Chapter 3 (p.33-34) of the Preliminary Re-evaluation Report as 'it has not been done before'. The fact that it has not been done before does not mean that it is not feasible to do it now? (Cllr. McPhillips)

The reasons why EirGrid holds the opinion that it is not technically feasible to implement the entire length of Interconnector using 400 kV underground cable is explained in the 2009 EIS. The 2009 EIS is referenced extensively in the Preliminary Re-evaluation Report.

The purpose of Chapter 3 of the Preliminary Re-evaluation Report is to review whether there have been any changes in industry practice, or advances in technology, since the completion of the 2009 EIS which would alter EirGrid's opinion that the installation on the island of Ireland of a long length of 400 kV underground cable for this (or any other similar) development is not technically feasible.

Section 3.1 of the Preliminary Re-evaluation Report restates the criteria that EirGrid used to evaluate the technology options in the 2009 EIS. One of these criteria is that whatever EirGrid proposes for the development of the transmission system it must comply with 'good utility practice'.

Section 3.4 (on pages 33 and 34) is a factual account of the current 'state-of-the-art' for 400 kV underground cables and the extent of their use by utilities in Europe. The conclusion of Section 3.4 is that the electricity utilities of Europe still consider the use of overhead line for 400 kV circuits to be best practice and that 400 kV underground cable is only "used in very limited situations and only over relatively short lengths". From this EirGrid concluded that to implement the entire length of Interconnector using 400 kV underground cable could not be considered as complying with 'good utility practice'.

It was noted in the footnote on page 31 that "*Compliance with 'Good Utility Practice' does not preclude the use of innovative practices, methods or technologies; however, when such innovative practices, methods or technologies are under consideration, the accompanying risk of failure and consequence of such failure must also be considered*". Using a long length of 400 kV underground cable on the Irish transmission network would fall into the category of "*the use of innovative practices, methods or technologies*".

In the 2009 EIS EirGrid considered the "*accompanying risk of failure and consequence of such failure*" of using a long length of 400 kV underground cable for the Interconnector and concluded that it would not be technically feasible to do so. This position was reviewed for the Preliminary Re-evaluation Report and it was concluded that there had not been any new advances in underground cable technology which would alter EirGrid's opinion that "*the use of long HVAC cables on the Irish transmission system is not feasible within the constraints with which EirGrid must comply*".

61. What is meant by “Good Utility Practice”? (Cllr. McPhillips)

The term ‘Good Utility Practice’ is similar in meaning to terms such as ‘Best International Practice’ and ‘Good Industry Practice’. These are generic terms in widespread use in the energy utility industry in countries where the industry is subject to Government regulation.

In the case of Preliminary Re-evaluation Report the term ‘Good Utility Practice’ is a modified version of the definition used by FERC (the United States Federal Energy Regulatory Commission). FERC defines ‘Good Utility Practice’ as –

“Any of the practices, methods and acts engaged in or approved by a significant portion of the electric utility industry during the relevant time period, or any of the practices, methods and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result of the lowest reasonable cost consistent with good business practices, reliability, safety and expedition. Good Utility Practice is not intended to be limited to the optimum practice, method or act to the exclusion of all others, but rather to be acceptable practices, methods, or acts generally accepted in the region and consistently adhered to by the Transmission Provider.”

The modified definition as applied in the Preliminary Re-evaluation Report is as follows - .

“Any of the practices, methods and acts engaged in or approved by a significant portion of the electric utility industry in Europe during the relevant time period, or any of the practices, methods and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result of the lowest reasonable cost consistent with good business practices, reliability, safety and expedition. Good Utility Practice is not intended to be limited to the optimum practice, method or act to the exclusion of all others, but rather to be acceptable practices, methods, or acts generally accepted in the ENTSO-E region and consistently adhered to by EirGrid.”

The changes to the FERC definition are –

- The term “*electric utility industry*” is changed to “*electric utility industry in Europe*” and refers to the electricity transmission industry in Europe, or to be more precise the electricity transmission networks controlled by the 41 members of ENTSO-E (European Network of Transmission System Operators for Electricity).
- The term “*region*” is changed to “*in the ENTSO-E region*” and means the 34 European countries from which the members of ENTSO-E are drawn.
- The term “*Transmission Provider*” is changed to read “*EirGrid*”.

Councillor McElvanny

62. What compensation is being paid to landowners? (Cllr. McElvanny)

In the event that the proposed transmission development receives planning approval and proceeds to construction any losses incurred by the owner of lands on which the line is constructed will be compensated by means of a statutory compensation process.

All agreements with landowners are negotiated individually since the effect of the transmission line on each landowner's property will vary from landowner to landowner. EirGrid will endeavour to complete negotiations with each landowner prior to construction. A landowner who is dissatisfied with the amount of compensation offered has the statutory right to have the compensation amount assessed by an independent arbitrator.

In addition to this, in the case of previous and current overhead line transmission projects, in accordance with schemes agreed between EirGrid and the IFA, monies have been paid to landowners to facilitate the efficient construction of the overhead lines. It is envisaged that a similar scheme will be put in place for this proposed development after planning approval is received.

Councillor Treanor

63. Are the policies of the County Development Plan and the Regional Planning Guidelines (e.g. Pol23) being ignored? It is necessary to demonstrate that the proposed development is required, with due consideration for social cultural impact etc. Has this been done? (Cllr. Treanor)

Consideration of the policies of the County Development Plan and the Regional Planning Guidelines has formed a key element in the preparation of the previous proposal, and in the current process of re-evaluation of the Interconnection Development project. Such policies will also comprise an integral element of the future planning application and EIS for the planned development.

The Border Regional Planning Guidelines were adopted in September 2010 and therefore subsequent to the withdrawal of the previous application. They also occur in the context of Section 7 of the Planning and Development (Amendment) Act 2010 which amends Section 10 of the Planning and Development Act 2000 (the Principal Act) to require the written statement of a development plan to include a core strategy “*which shows that the development objectives in the development plan are consistent, as far as practicable, with National and regional development objectives set out in the National Spatial Strategy and regional planning guidelines*”.

EirGrid has had particular regard to Map 5.1 of the Border RPGs which comprises an *Indicative Map of Transmission Network Strengthening Required in the Border Region*. This Map, sourced from EirGrid, clearly identifies the fact that new transmission infrastructure is planned to traverse County Monaghan; in addition, Section 5.4.2.3 of the RPGs, the section to which Map 5.1 refers, notes that “*until the second large scale North – South transmission link is completed, there is a transmission constraint between the two jurisdictions on this island, which can constrain the electricity market from delivering the most economic generation to the consumer. This constraint will be alleviated following the completion of the second North – South interconnector*”.

Subsequently, in Section 5.4.2.6 of the Border RPGs – *Planned Developments for the Transmission Network*, it is stated that the Meath-Tyrone 400 kV Interconnector Development “*is required to improve competition by increasing transfer capacity between the two systems, thereby reducing transmission constraints that are currently restricting the efficient performance of the all-island Single Electricity Market. This project will support the development of generation from renewable energy sources and ensure security of supply for the north east, along with improving security of supply on the island by allowing sharing of generation across the island*”.

It is in this context of endorsement of the North-South Interconnection Development in the Border RPGs that EirGrid has had careful regard to Policy INFP23 of the RPGs. This policy states that:-

“Development plans should facilitate the provision of energy networks in principle, provided that it can be demonstrated that –

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

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

With regard to the implication of the question that there has been no demonstration of the need for the development, EirGrid would immediately refer to the justification set out in the Border RPGs, with which the Monaghan County Development Plan must now be consistent. The justification and strategic need for the project is also set out in the Preliminary Re-evaluation Report.

It is EirGrid’s view that, for the purposes of the Preliminary Re-evaluation Report, the identified indicative route has given due consideration to all environmental impact, and is the most appropriate technically and economically feasible option having regard to international best practice. The final proposal will be subject to full environmental impact assessment, and a comprehensive technical justification. In this latter regard, the potential for undergrounding of the project has also been considered from the outset, but as outlined above, has been considered to be technically and economically infeasible. Such consideration should not be taken as ignoring INFPOL23.

Deputy Ó'Caoláin

64. EirGrid says that it is not technically feasible to implement the second North South Interconnector using underground cable and that it would also cost too much money – but how can you cost something which is not technically feasible? (Deputy Ó'Caoláin TD)

It is technically feasible to install short lengths of 400 kV cable on a transmission system and there are numerous examples of this throughout the world. Indeed it is even proposed to install a short length of 400 kV cable at the Woodland end of this Interconnector Development.

The extent of the civil works required for a 400 kV cable is therefore well understood and a quantity surveyor can without much difficulty calculate the per metre cost of such works. The cost per metre of underground cable, and the cost per unit of the ancillary equipment, can be obtained from suppliers.

PB Power carried out a survey of the area between Woodland in County Meath and Turleenan in County Tyrone and identified a route corridor within which they were confident that a route for a 400 kV underground cable could be found. From this they were able to measure the approximate route length for an underground cable and by simply applying the known per metre and per unit costs they arrived at a cost estimate of €588 million to install the 400 kV cable.

It is therefore possible to provide a credible cost estimate for the installation of 400 kV underground cable from Woodland to Turleenan. It is also possible to install such a 400 kV cable. What is not possible however is to get long 400 kV underground cable of that length to operate satisfactorily on Ireland's transmission system.

It is in this way that we can cost the 400 kV underground cable alternative while at the same time say with confidence that such an alternative is not technically feasible.

65. Will EirGrid compensate the public for costs incurred in opposing the proposed development? (Deputy Ó'Caoláin TD)

EirGrid submitted its previous application in accordance with the applicable legislation. In that legislation there was no jurisdiction for An Bord Pleanála to award costs to third parties in the case of an application for development of electricity transmission infrastructure pursuant to Section 182A of the 2000 Act. The Act was however subsequently amended in October 2010 to include such provision and this will apply in the case of the next application.

Deputy Conlon

66. The saving of €20 million per annum is not a sufficient cost benefit to justify this project. (Deputy Conlon TD)

As outlined by the regulators in their joint report on the case for a second North South Interconnector in 2004, the need / justification for the project is based on a number of factors including economic, technical and key stakeholder objectives. Notwithstanding this broad set of criteria the cost benefits of the Second North South Interconnector that were presented to the Council (€20 million to €30 million per annum) are on their own significant to the extent that the proposed development will pay for itself within a relatively short number of years. That is a relatively short number of years in comparison with other types of nationally significant infrastructure projects and considering that the Interconnector will have a life in excess of 40 years.

A summary of the strategic need, rationale and justification for the project is included in Chapter 2 of the Preliminary Re-evaluation Report published by EirGrid in May 2011.

APPENDIX A



EIRGRID

North South 400 kV Interconnection Development

Preliminary Re-Evaluation Report

Presentation to Monaghan County Council

20 June 2011



Outline of Presentation

1. Purpose of the Re-evaluation Process
2. Structure of the Preliminary Re-evaluation Report
3. Public and Stakeholder Consultation
4. Closing Summary
5. Comments



Section 1

Purpose of the Re-evaluation Process



Previous Application for Planning Approval

- Submitted in December 2009
- Withdrawn in June 2010
- A new planning application will now be prepared.



New Application for Planning Approval

- The process for formulating any planning application commences with the Information Gathering Stage.
- A large volume of information is already available.
- Most of this was collected prior to the submission of the previous application and is still relevant today.
- Some new and valuable information was subsequently received from stakeholders, including landowners and the general public, in the form of written and oral submissions during the period of the previous application.



The Re-evaluation Process

- Commenced August/September 2010
- A comprehensive review of the already available information.
- Updating the information where required.
- Published the findings in the Preliminary Re-evaluation Report.



The Re-evaluation Process (cont.)

- The Preliminary Re-evaluation Report presents an Indicative Project Solution.
- Currently the subject of non-statutory public and stakeholder consultation.
- The closing date for receipt of submissions has been extended from 17 June to 01 July 2011.
- Following consideration of feedback received a further Re-evaluation Report will be published.

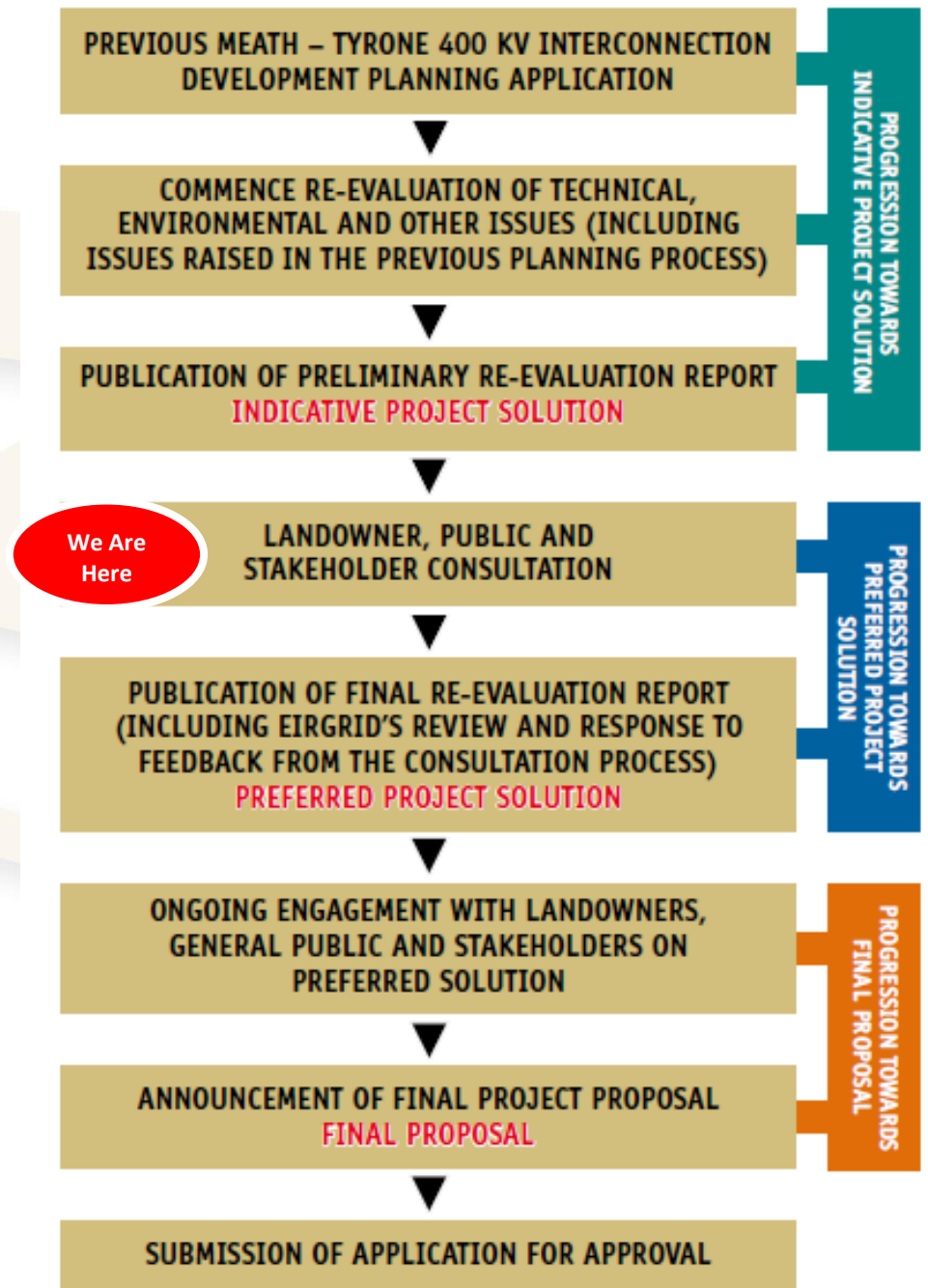


The Re-evaluation Process (cont.)

- The Re-evaluation Report will present EirGrid's Preferred Project Solution.
- Its publication will bring the Re-evaluation Process to a close.
- The Re-evaluation Report will form the basis of further public, stakeholder and landowner engagement.



Graphical presentation of the Progression Towards a New Planning Application



Section 2

Structure of the Preliminary Re-evaluation Report



Structure of the Report

STEP 1 - Confirm that there is still a need for the interconnector

STEP 2 - Confirm the technological form that it should take

STEP 3 – Identification of Study Area

STEP 4 – Identification of Constraints within the Study Area



Structure of the Report

STEP 5 – Evaluation of constraints and identification of feasible route corridor options.

STEP 6 – Evaluation of Route Corridors and Identification of Preferred Route Corridor

STEP 7 – Identification of Indicative Route within Preferred Route Corridor – *The Indicative Project Solution*



Section 3

Key Conclusions



Project 'Need'

- The Interconnector is required in order to comply with Irish and UK Government policy and governing European Commission directives.
- The continuing economic recession does not change the 'need' for the interconnector nor does it make a case for delaying its development.



Strategic All-Island Benefits

- Greater cross-border sharing of electricity.
- Improve the efficiency of the electricity market.
- Save the electricity customers of Ireland between €20m and €30m in 2017 and substantially more in subsequent years.



Strategic All-Island Benefits (cont.)

- Improve the security of supply throughout the island of Ireland.
- Allow more renewable energy to be connected to the network thus supporting Ireland's renewable targets and reducing dependency on imported fossil fuels.



Local Benefit

- Based on latest forecast for growth in electricity consumption, it will be necessary, by around 2017, to reinforce the network in the north east.
- The Interconnector will provide the required reinforcement.



Technology Options

Facts for Consideration

In Europe in the past ten years –

More than 10,000 km of 400 kV overhead line installed.

Less than 200 km of 400 kV cable installed.

The longest cable circuit is 20 km in length.

In Europe in the next ten years –

More than 23,000 km of 400 kV overhead line planned.

Only a few hundred km of 400 kV cable planned and mostly in short lengths.



Technology Options

- Undergrounding the entire Interconnector
 - Is not technically feasible.
 - Would be Prohibitively Expensive
- Undergrounding of short sections is feasible but no new areas that would warrant such undergrounding have currently been identified.

Identification of the Study Area

Typically determined by the –

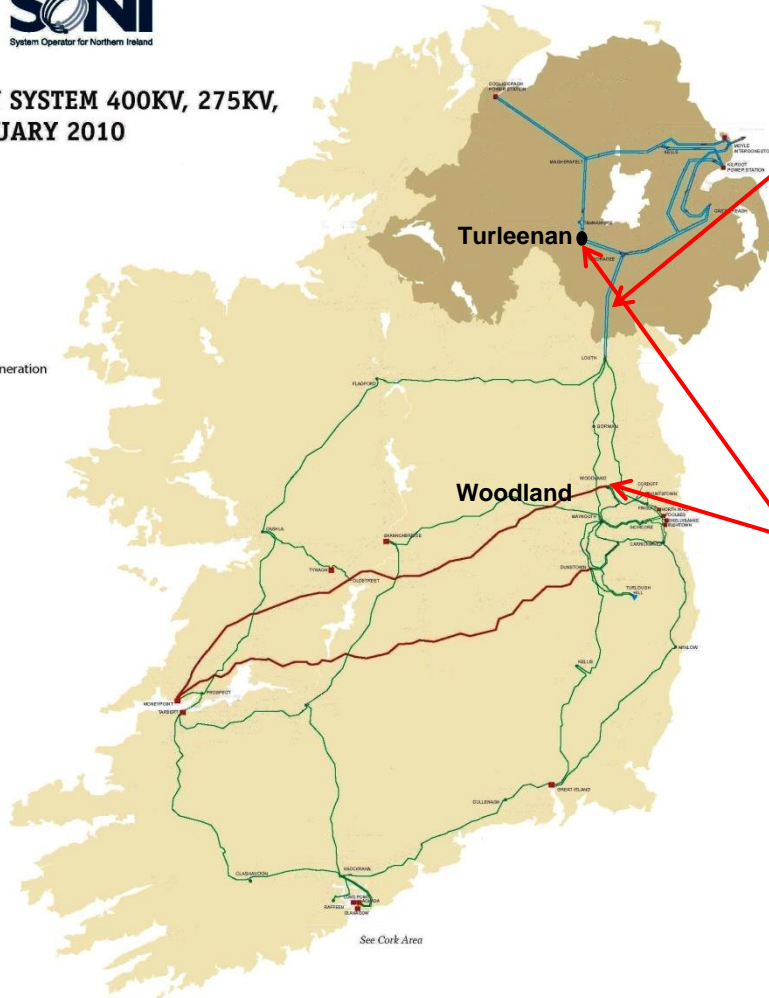
- Identification of where the proposed circuit should connect to the existing network.
- Objective of achieving the shortest environmentally and technically acceptable route.

Identification of Study Area for the Interconnector



TRANSMISSION SYSTEM 400KV, 275KV,
220KV - JANUARY 2010

- 400kV Lines
- 275kV Lines
- 220kV Lines
- - - 220kV Cables
- 400kV Stations
- 275kV Stations
- 220kV Stations
- Transmission Connected Generation
- Hydro Generation
- Thermal Generation

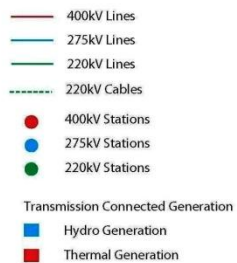


1. Existing high capacity interconnector
2. A 2nd high capacity interconnector is required and for security of supply reasons it must be geographically separate from the existing Interconnector.
3. Woodland Substation in Co. Meath is the most appropriate location for the southern terminus.
4. Our partner, Northern Ireland Electricity, has determined that Turleenan in Co. Tyrone is the most appropriate location for the northern terminus.

Identification of Study Area for the Interconnector (cont.)



TRANSMISSION SYSTEM 400KV, 275KV,
220KV - JANUARY 2010



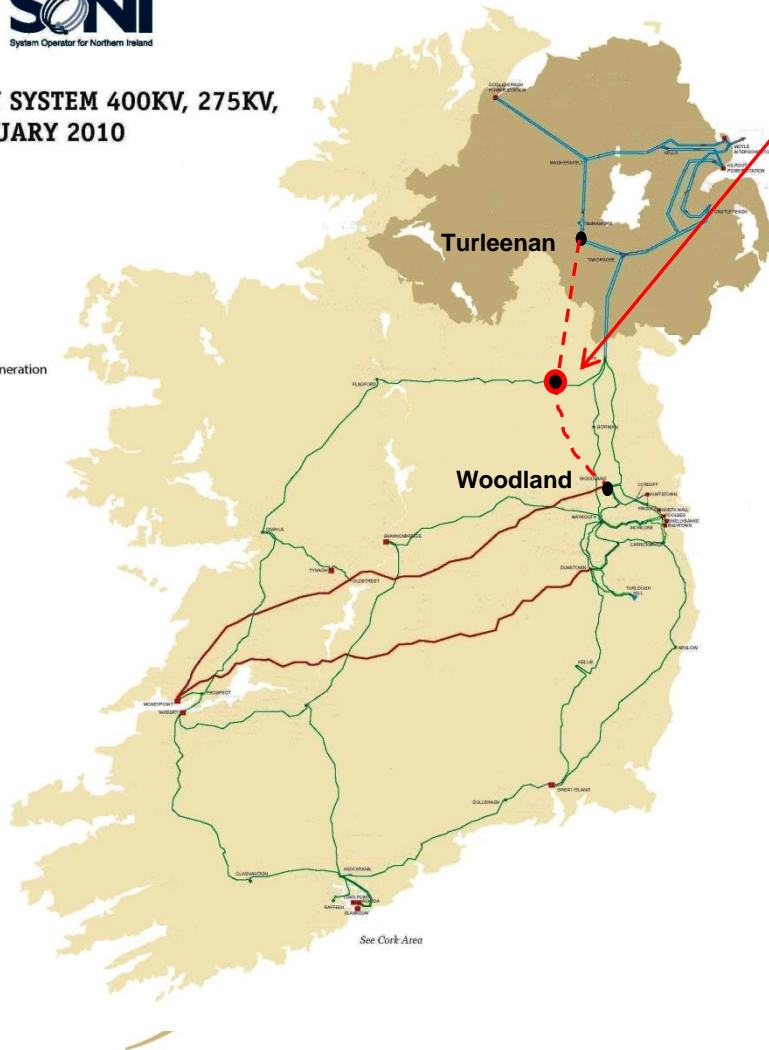
4. The task is to find the most direct environmentally and technically acceptable route between Woodland and Turleenan.
5. For environmental reasons the route of the Interconnector must be located to the west of Navan Town.
6. It is as a consequence of this process that our Study Area is located in Counties Meath, Cavan and Monaghan.

The Need for an Intermediate Substation



TRANSMISSION SYSTEM 400KV, 275KV,
220KV - JANUARY 2010

- 400kV Lines
 - 275kV Lines
 - 220kV Lines
 - - - 220kV Cables
 - 400kV Stations
 - 275kV Stations
 - 220kV Stations
- Transmission Connected Generation
- Hydro Generation
 - Thermal Generation



A new substation will be required at the point of intersection of the Interconnector and the existing Flagford – Louth 220 kV overhead line.

Based on latest load growth forecasts for the north east area this substation is not required for at least another decade.

Therefore in accordance with proper strategic planning and sustainable development the intermediate substation will not be included in the new application for planning approval.

Identification of Route Corridor Options

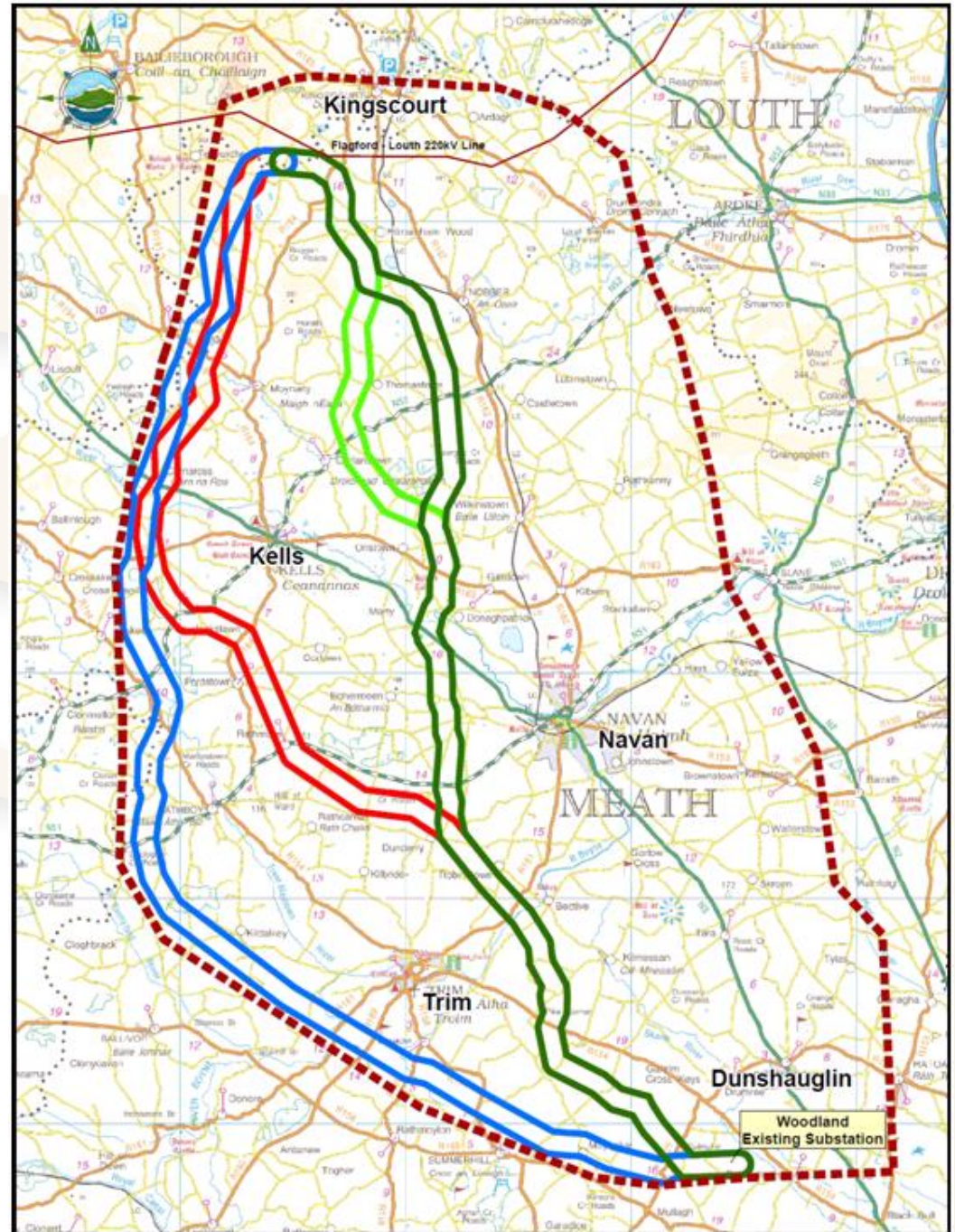
Two Study Areas identified –

- The Meath Study Area
- The Cavan Monaghan Study Area

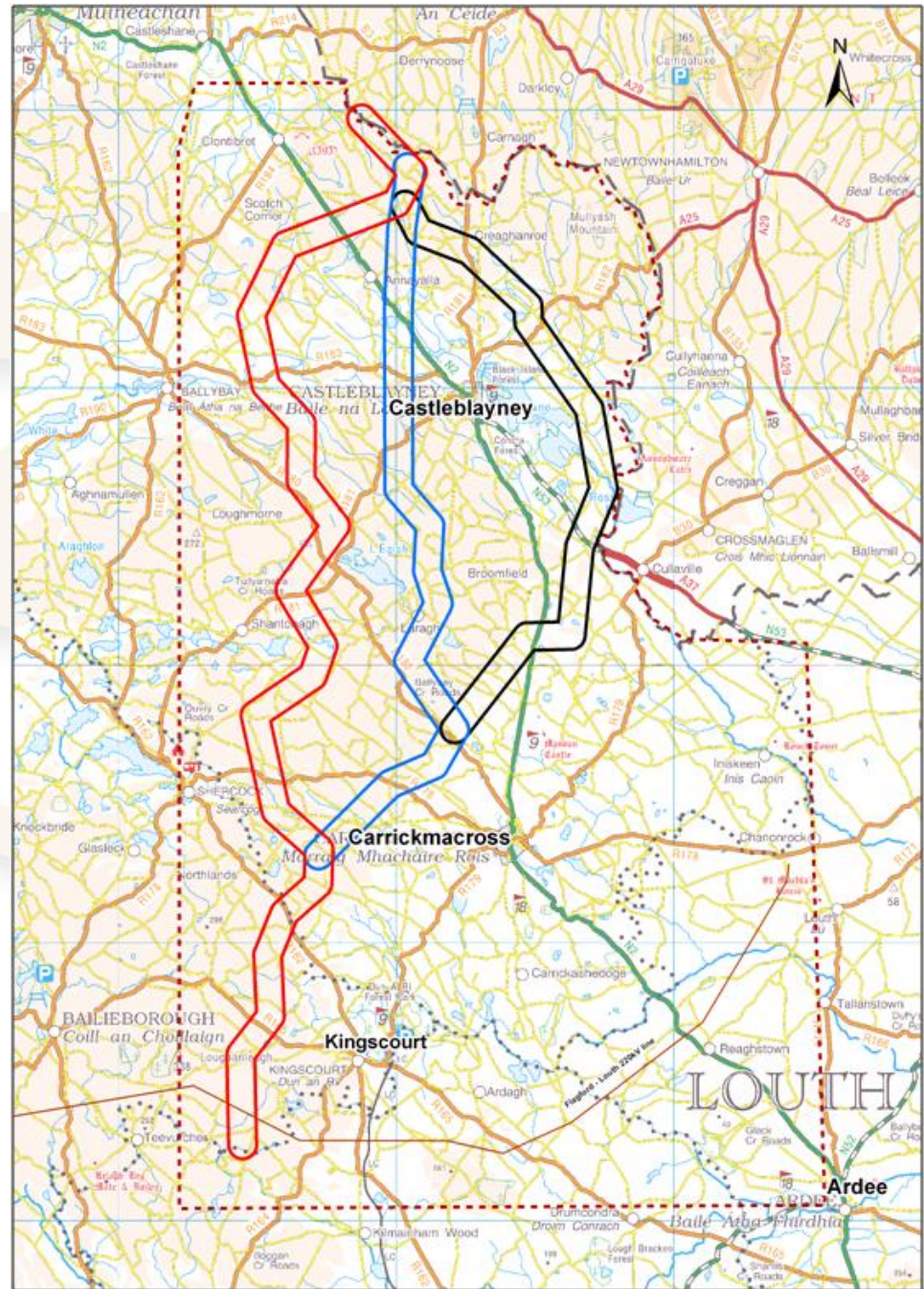
In both cases –

- No new and/or a previously unidentified route corridor emerged that is of equal or greater merit than the three previously identified route corridors.
- No new environmental or other constraint was identified that has material implications for the locations of the previously identified route corridor options.

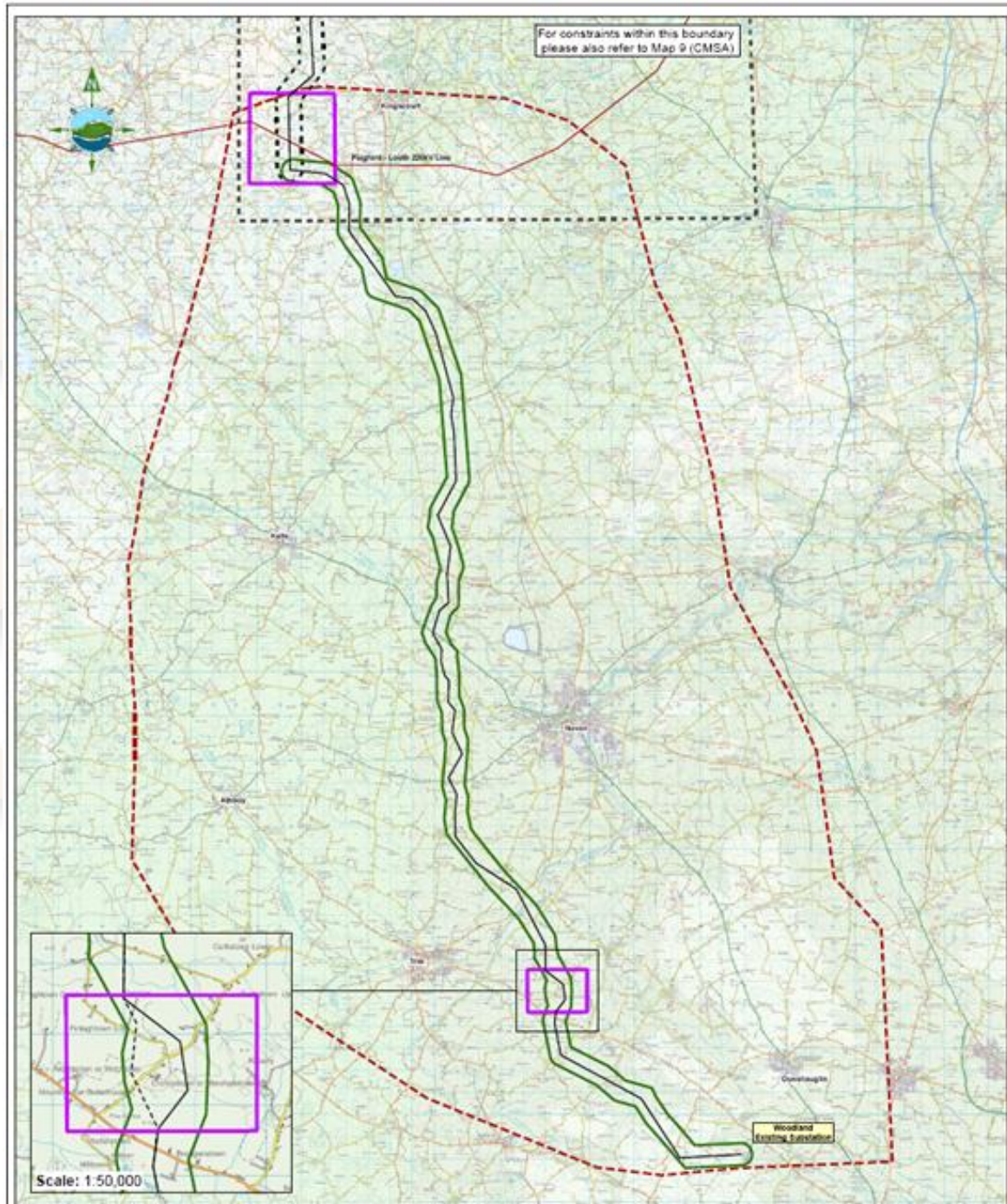
Meath Study Area and Route Corridor Options



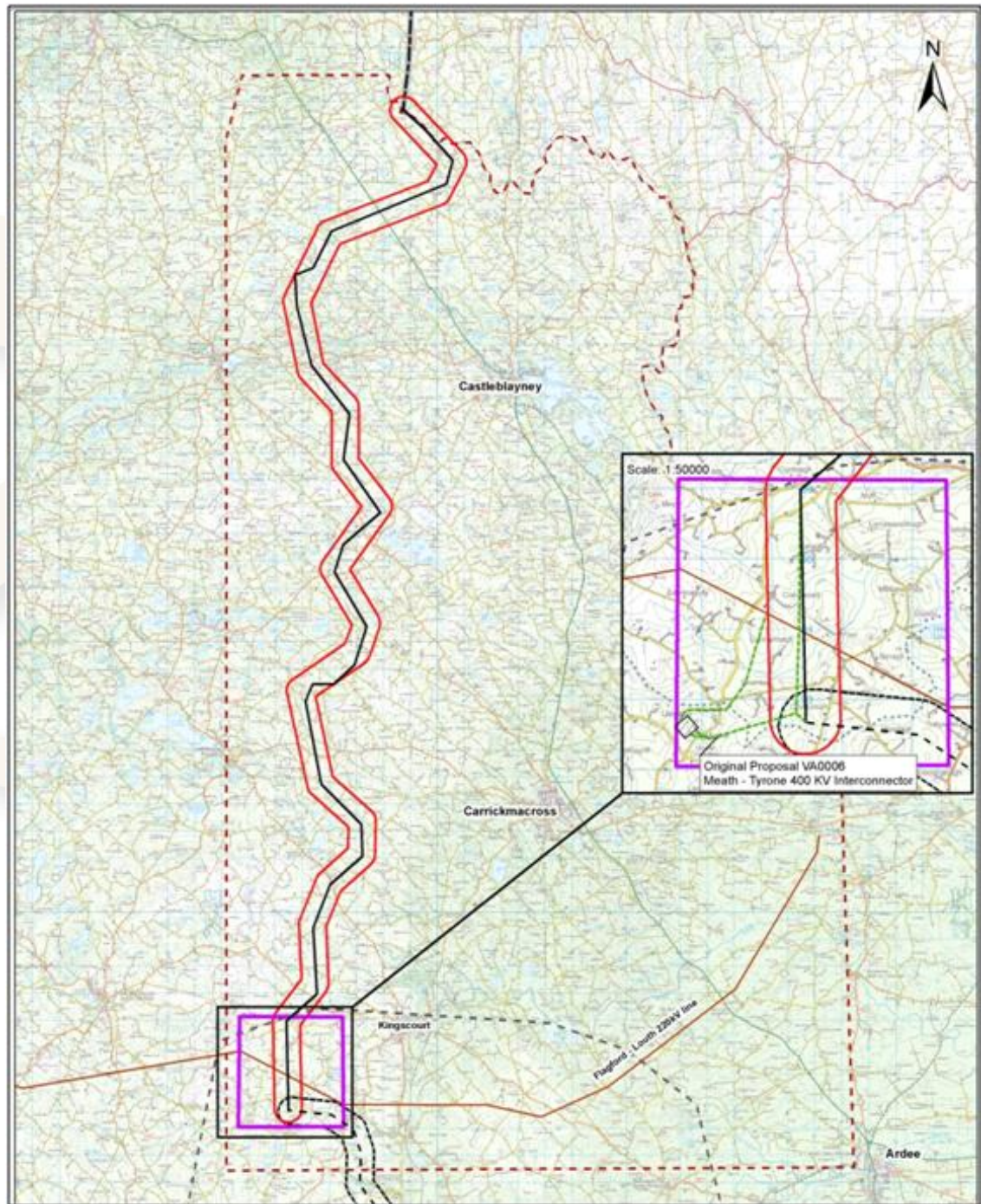
Cavan Monaghan Study Area and Route Corridor Options



Meath Study Area showing Preferred Route Corridor (3B) and Indicative Line Route within the corridor.



Cavan
Monaghan
Study Area
showing
Preferred
Route Corridor
(A) and
Indicative Line
Route within
the corridor.



Section 3

Public and Stakeholder Consultation



Non-Statutory Public Consultation

- Commenced 09 May 2011
- Initially for six weeks.
- Two week extension – closing on 01 July 2011.
- The invitation asks interested stakeholders for their comments and views on three key questions.



Non-Statutory Public Consultation

1. Has EirGrid considered all relevant criteria in determining that the optimum technical solution for this project is an overhead line? If not, what additional information should EirGrid consider or what viable, cost-effective alternative would you suggest?
2. Have all environmental criteria been appropriately considered? Is there anything else that you think should be looked at?
3. Are there any other key issues that EirGrid needs to consider before submitting a new planning application?



Non-Statutory Public Consultation

- Consultation with landowners and residents along the indicative line route.
- Invitation by letter to all who participated in the previous planning process and invitation by media advertisements to all other interested parties.
- Consultation is facilitated by the opening of drop-in Information Centres in Carrickmacross and Navan.
- A dedicated lo-call telephone number.
- A dedicated project email address.



Section 4

Closing Summary



Closing Summary

- There is still a need for a 2nd North South Interconnector.
- There is still a need to reinforce the transmission network in the north east area.
- The Interconnector will provide significant benefits for the people of Ireland in general and the people of the local region.



Closing Summary

- The best environmental, technical and cost effective solution for this project is a 400 kV overhead line running from the existing Woodland Substation in Meath to the proposed substation at Turleenan in Tyrone.
- The previously planned intermediate substation is not now expected to be required within the next decade and will therefore be subject to a separate planning application when the need arises.

Closing Summary

- Each of previously identified route corridors remains viable as a routing option.
- Route 3B in Meath and Route A in Cavan-Monaghan remain the corridors that strike the best balance between all criteria.
- The indicative line route is broadly similar to the line proposed in the previous application.

Comments



APPENDIX B



Chief Scientific Adviser to the Government

July 13th, 2011

Ms Carmel Thornton
Meetings Administrator
Monaghan County Council
Council Offices
The Glen
Monaghan

copy

Ac Received
18th July 2011

CC: Prof. Denis O'Sullivan
Dr. Eamonn Cahill
Mr. Nigel Hillis
Mr. Aidan Corcoran

copy AG ✓
TM
AC

Dear Ms. Thornton,

Thank you for your letter of July 11th.

I will endeavour to give you and the elected members of Monaghan County Council as much clarification as possible.

Attached is a copy of the position paper on Possible Health Effects of Exposure to Electromagnetic Fields from Power Lines, prepared at my request by Professor Denis O'Sullivan. Professor O'Sullivan is an internationally distinguished physicist whose career has been with the Dublin Institute of Advanced Studies. Over the course of his career he has collaborated with NASA, ESA and CERN. He has spent extended periods as a visiting researcher at the University of California at Berkeley. In preparing this paper, he consulted a number of specialists abroad, and reviewed the various international studies which have been carried out on this issue.

Section 7 of his report summarises his conclusions. There are very few absolute certainties in science. Professor O'Sullivan's conclusion is that the accumulated international evidence does not show any convincing demonstration of damage to health from exposure to 400 kV power lines, and in particular as it relates to childhood leukaemia. Controlled experiments in animals have supported this conclusion. Furthermore, as he says, there is no known biological explanation for such an effect. Basic physics calculations of the energy levels associated with power lines, and those required to disrupt molecular structures and cause cancer, indicate that the level of energy associated with power lines is many times too low to have such an effect.

I repeat that there are few absolute certainties in science, but the accumulated evidence on this issue is convincing and reassuring.

Yours sincerely,

Patrick Cunningham

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