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Eoghain: Athbhreithniú ag an gCoimisiún Idirnáisiúnta
Saineolaithe**

Meitheamh 2012

**Report of the Joint Committee on Communications,
Natural Resources and Agriculture on the Meath/Tyrone
Report: Review by the International Expert Commission**

June 2012

Joint Committee on Communications, Natural Resources and Agriculture

CHAIRMAN'S FOREWORD

The Joint Oireachtas Committee on Communications, Natural Resources & Agriculture wishes to thank the Minister for commissioning the Meath-Tyrone Report: Review by the International Expert Commission. The report was intended to provide clarity on the technical issues surrounding the proposed Meath-Tyrone 400kV interconnector.

The debate on this important issue was very worthwhile and the Committee is grateful to the representatives from the International Expert Commission, officials from the Department of Communications, Energy and Natural Resources, representatives from EirGrid, ESB Networks, North East Pylon Pressure Campaign, County Monaghan Anti-Pylon Committee and Ratheniska Action Group who attended formal meetings of the Committee in Leinster House. The opportunity to give a full public hearing to all concerned provided the Committee with clear insights into the differing opinions on all of the processes involved. The transcripts of the debates which are available on the Oireachtas website merit full reading and the body of the Report contain a summary of the main issues of relevance which are outlined in four sections namely technical feasibility for undergrounding; affordability for undergrounding; acceptability of undergrounding; and issues with the planning process.

The Committee wishes to thank all of those who participated in the meetings, the Oireachtas Library and Research Service for their expert assistance and to the Committee Secretariat for ensuring that everything ran smoothly.

A handwritten signature in blue ink, appearing to read 'Andrew Doyle', with a long horizontal flourish extending to the right.

Andrew Doyle T.D.
Chairman

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Executive Summary

EirGrid Plc aims to upgrade the capacity of the electricity transmission network between Northern Ireland and Ireland by building an interconnection development (hereafter the “interconnector”) consisting of a double circuit 400kV overhead transmission line between counties Meath and Tyrone (a total distance of 140km). EirGrid submitted a planning application to this effect to An Bord Pleanála on 18 December 2009. On 29 June 2010 this application was withdrawn because of planning irregularities and, at the time of writing, has yet to be re-submitted.

In July 2011 the Minister for Communications, Energy and Natural Resources Pat Rabbitte TD (hereafter the “Minister”), set up an International Expert Commission to review and report on the case for, and cost of, ‘undergrounding’ the power lines (i.e. installing the cables underground). The Minister received the Commission’s report on 9 January 2012. The report was forwarded on 17 January 2012 to Andrew Doyle TD, Chairman of the Joint Oireachtas Committee on Communications, Natural Resources and Agriculture (“the Committee”) in order to allow for a period of reflection and for a Committee debate.

The Committee held an intensive series of meetings following receipt from the Minister of the report of the International Expert Commission and in advance of the re-submission by EirGrid of its planning application to An Bord Pleanála. The meetings were held in Leinster House on the 21st and 29th February with representatives from the International Expert Commission, EirGrid, ESB Networks, North East Pylon Pressure Campaign, County Monaghan Anti-Pylon Committee and Ratheniska Action Group on issues relating to the proposed interconnector.

This Executive Summary provides a list of the main points of discussion at these meetings. It also outlines the positions taken on those issues by those in favour of and those against an overhead power line. The transcripts of the debates are hyperlinked to the Oireachtas website in Appendix 1 on page 9.

There is broad agreement on the need for an interconnector. It is generally accepted that this is necessary to ensure security of supply of electricity on the island of Ireland and that it would allow wind power to be better integrated into the network.

What is disputed is whether the power line should be laid underground or established overhead. Proponents of the overhead line (OHL) contend that as a proven technology, it is a cheaper and better option. Opponents of the OHL do not deny that the line is necessary for security of supply and that it would allow wind power to be integrated. However, they oppose establishing the line overhead rather than installing the cable underground. Installing the cable underground will require a switch in technology from AC (alternating current) to High Voltage Direct Current (“HVDC”).

It was in this context that the Minister set up the International Expert Commission. Both proponents and opponents of the OHL now acknowledge that the underground option is technically feasible. However, EirGrid, one of the proponents of the OHL expressed ‘concerns as to the technical feasibility of switching to HVDC for this *particular* project’ in its submission to the Committee on 15 March 2012.

With regard to affordability the proponents of the OHL argue that the underground option is too costly and would diminish the benefits of the project. Opponents of the OHL argue that delaying the line is costly and that if EirGrid would agree to undergrounding the project that it

could be put into place sooner. There is still some disagreement as to how much more undergrounding would cost as opposed to the costs of an OHL. No detailed figures have been made available to the Committee.

The OHL is unacceptable to many of the people who live along the proposed route. Undergrounding of the route does appear to be acceptable to the same individuals.

The Committee is of the opinion that early and continued engagement with the stakeholders should involve maximising transparency and making as much information as possible available to the general public.

Background

EirGrid proposes to install a double circuit 400kV overhead transmission line between Meath and Tyrone, a total distance of 140km. The aim is to upgrade the capacity of the electricity transmission network between Northern Ireland and Ireland. This in turn will facilitate the harvesting of energy generated by wind power from predominantly along the West coast and, in turn, contribute to meeting targets for renewable energy. Therefore the Meath – Tyrone 400kV Interconnection will facilitate security of supply on the island.

In Ireland the transmission system comprises 400kV, 220kV and 110kV networks. In Northern Ireland, the transmission system comprises a 275 kV network (designed for 400 kV) and a 110 kV network. The systems are relatively small and isolated in comparison with other transmission systems in Europe

(see <http://www.eirgrid/APPLICATIONPLANNINGREPORT.pdf>)

The only existing interconnectors between the two jurisdictions are:

- the Louth-Tandragee 275 kV Interconnector,
- two 110 kV circuits (Letterkenny, Co Donegal – Strabane, Co Tyrone and Corraclassy, Co Cavan – Enniskillen, Co Fermanagh).

The existing 275 kV interconnector operates in parallel with the two 110 kV tie-lines; however, the 275 kV interconnector forms the only effective large scale interconnection pathway between the transmission systems of Northern Ireland and Ireland. The two 110 kV tie-lines do not, on their own, have sufficient power-carrying capacity to securely hold the transmission systems together.

In the early 2000s Northern Ireland Electricity and ESB National Grid started to examine the need for additional interconnection between Northern Ireland and Republic of Ireland (see <http://www.eirgridprojects.com/media/Selection%20of%20Preferred%20Option.pdf>). It was at this point that upgrading of the 100 kV lines was excluded from consideration.

It is in the context of security of supply and increased wind power that EirGrid applied to An Bord Pleanála for permission to build an overhead line on 18 December 2009. This application was subsequently withdrawn on 29 June 2010 because of irregularities with the planning application and, at the time of writing, has yet to be re-submitted. A parallel planning application was adjourned in Northern Ireland.

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Several groups have objected to the proposal on the grounds that the line should be undergrounded and that consultation processes had been poor. Arguments arose to the technical and economic feasibility of undergrounding part or all of the line. It is in this context that in July 2011 the Minister for Communications, Energy and Natural Resources Pat Rabbitte TD (“the Minister”) set up an International Expert Commission to review and report on a case for, and cost of, undergrounding (all or part of) the Meath-Tyrone 400kV power lines.

The members of the Expert Commission were Mr. Bo Normark from Sweden, Mr. Hoelsaeter from Norway and Professor Ronnie Belmans from Belgium. Each has long-standing professional and academic credentials and experience in transmission and power systems.

In preparing its report the Expert Commission was tasked to:

- Review expert literature already available both in Ireland and internationally in relation to undergrounding high voltage power lines;
- Consider the route or routes proposed by EirGrid;
- Examine the case for and cost of undergrounding all or part of the Meath-Tyrone 400kV line;
- Consult with EirGrid, the North East Pylon Pressure Committee (“NEPPC”) and the County Monaghan Anti Pylon Committee, and such other bodies or organisations as the Commission saw fit to consult.

The case for the actual provision of the Meath-Tyrone power line was not subject to review (see <http://www.dcenr.gov.ie/>).

The Committee held hearings related to the report on 21 February and 29 February 2012. The Committee received submissions from a number of organizations, including the Expert Commission, EirGrid and NEPPC, all of which reviewed the feasibility and cost of undergrounding the Meath-Tyrone interconnector (see Appendix 1 for a full list of speakers/submissions to be added). The Committee meetings gave an opportunity to all parties to outline issues and to further submit written comments to the Committee after the meetings concluded.

The case for and against undergrounding the Meath – Tyrone Interconnector

Three decision criteria must be addressed in justifying the recommendation for undergrounding the Meath-Tyrone interconnector, namely, feasibility, affordability and acceptability. These must be viewed in light of the planning process in Ireland which tends to promote an adversarial approach not always conducive to good planning.

First, the undergrounding option must be examined for technical feasibility, including safety, reliability and security of supply. Although responsibility for this decision rests with EirGrid, important insights and inputs can be gleaned from the transmission system operators in other countries and from independent experts in industry and academia. In this regard, the International Expert Commission and the Meath-Tyrone report have particular relevance.

The next decision relates to affordability and in this regard the full project cost-benefit analysis and value for money are of critical importance. Responsibility for this decision lies with the Government, as part of its strategic direction on transmission infrastructure.

The acceptability of electricity infrastructure is very much centred on concerns related to impact on health, environment and local communities. Responsibility for this decision rests with the public in general, but particularly with affected landowners and communities.

This report is in four sections:

1. technical feasibility for undergrounding;
2. affordability for undergrounding;
3. acceptability of undergrounding; and
4. issues with the planning process.

Technical feasibility of undergrounding

All submissions agreed with the Expert Commission that undergrounding is technically feasible given the improvements in technology especially with the advances in HVDC technology. However, EirGrid are still concerned about undergrounding of this *particular* line but did not outline reasons why this particular line raises problems. Notwithstanding EirGrid's lack of specific information the Committee feels that the following concerns remain:

- As this is a relatively new technology, issues arise as to how sustainable this technology is over the longer term;
- It is likely that any faults that arise would take a longer time to fix compared to an overhead line, however there is no certainty on how much time this would take;
- There is limited information on the failure rate of HVDC cables. However in the East-West Interconnector Review – Kema Study, submitted to the Committee it was stated that there is no reason to assume a higher failure rate for HVDC cables than for High Voltage Alternating Current (“HVAC”).
- In future technology may become available that allows the Woodland converter used for the East-West interconnector, to also take the Meath-Tyrone interconnector.
- A HVDC line is more costly and technically difficult to branch off from than an AC line. While there are no plans to branch from the line at the present time in the future there may be increased electricity demand in the North-East. Therefore any future requirements to branch from the line would be more difficult if it were a HVDC line.

Affordability of Undergrounding

There was much discussion in the Committee about the extra costs associated with undergrounding the interconnector. Mr Jerry O’Sullivan, Managing Director, ESB Networks stated the following to the Committee at its meeting on 21 February 2012:

“The commission also said the HVDC solution is three times more expensive and would cost €333 million. From our experience of networks, we would concur with that finding.

Beyond that factual statement, I remind the Committee that the ESB needs to borrow money on world markets for this infrastructure. They are quite challenging, which the Committee knows. Any incremental cost of any infrastructure will increase the price of electricity for all customers. Our small system was referred to earlier. The €333 million cost has to be funded, as do all the other things that will happen over the next 50 years, and will cost customers in the order of 0.7%, including VAT.”

Mr Dermot Byrne of EirGrid at the same meeting also said that the cost of undergrounding HVDC was three times more expensive than overhead AC.

Mr Andrew Cooke, EirGrid Director of Grid Development went further, stating that:

“I do not have an immediate figure. To compare the two figures, the original estimate for the project was €280 million, while the figure provided by the Expert Commission for the AC overhead circuit option is €133 million. At least two important differences arise between the two scenarios. The first is that the substation at Kingscourt is not included in the Expert Commission’s analysis and the second is that the commission provided for relatively low costs for the substation at Turleenan. The estimates provided for Woodlands are probably correct as it is an existing station which would only require some additional equipment. However, given that the Turleenan substation is a new station at the northern end of the project or at the Border, irrespective of location it would be a significant cost. Taking account of these two factors would significantly narrow the gap between the two figures. I do not know exactly what the Expert Commission included in its estimates in terms of equipment costs, project costs and compensation costs. For this reason, I am not sure if we are comparing apples with apples when we consider the two figures.

Aside from the changes to which I refer, specifically the removal of Kingscourt if we do not proceed with that element of the project in the current application, costs have not changed significantly from when we made the original estimates. There may be a little softening around several works costs arising from economic conditions. If we were to provide a new estimate, however, I do not believe it would be much different from the original figure.”

In light of the many economic unknowns and in the absence of a full cost-benefit analysis (CBA) it is difficult to make a firm judgement between the two options. In particular the Committee cannot make a judgement on how costs are affected by:

- The building of a substation at Kingscourt which is likely to be delayed pending an increase in demand for electricity;
- The result of laying of the line alongside public roads;
- Compensation to landowners regardless of which option is ultimately chosen; and
- The different externalities, such as the potential effects on tourism under both options.

Acceptability of Undergrounding

As far as the Committee can ascertain, the undergrounding of the interconnector is acceptable to the individuals who live along the route whereas the OHL option is not acceptable to most of these individuals.

The Planning Process

During the Committee meetings a number of issues were raised that were a cause of concern for the Committee. In summary, these are:

- **Costing of alternatives**

It is a statutory requirement set out in the Planning and Development Regulations 2001 (S.I. No. 600/2001) that an Environment Impact Assessment must include:¹

An outline of the main alternatives studied by the developer and an indication of the main reasons for his or her choice, taking into account the effects on the environment.

Given that the developer chooses the alternatives, the most advantageous alternative may not be chosen. This could potentially result in delay and distrust in the planning process.

For this reason, it would be preferable that early and continued engagement between the stakeholders should involve providing the maximum information to the public.

- **Adversarial approaches**

Several commentators remarked during the Committee meetings and in written communications received by the Committee that the Committee meetings were the only opportunity for informal airings of the issues. They asserted that the planning process reinforces the traditional adversarial approach and does not allow for proper informed and constructive consultation.

The inevitable result has been that the entire process has been extended longer than the Committee would have wished or would have been necessary had a more appropriate hearing process been in place.

¹ <http://www.irishstatutebook.ie/2001/en/si/0600.html>

APPENDIX 1

Hyperlinks to transcripts of Meetings held

Meeting held on 21st of February 2012

<http://debates.oireachtas.ie/AGJ/2012/02/21/00003.asp>

Meeting held on 29th of February 2012

<http://debates.oireachtas.ie/AGJ/2012/02/29/00003.asp>

APPENDIX 2

TERMS OF REFERENCE

a. Functions of the Committee – derived from Standing Orders [DSO 82A; SSO 70A]

- (1) The Select Committee shall consider and report to the Dáil on—
 - (a) such aspects of the expenditure, administration and policy of the relevant Government Department or Departments and associated public bodies as the Committee may select, and
 - (b) European Union matters within the remit of the relevant Department or Departments.
- (2) The Select Committee may be joined with a Select Committee appointed by Seanad Éireann to form a Joint Committee for the purposes of the functions set out below, other than at paragraph (3), and to report thereon to both Houses of the Oireachtas.
- (3) Without prejudice to the generality of paragraph (1), the Select Committee shall consider, in respect of the relevant Department or Departments, such—
 - (a) Bills,
 - (b) proposals contained in any motion, including any motion within the meaning of Standing Order 164,
 - (c) Estimates for Public Services, and
 - (d) other mattersas shall be referred to the Select Committee by the Dáil, and
 - (e) Annual Output Statements, and
 - (f) such Value for Money and Policy Reviews as the Select Committee may select.
- (4) The Joint Committee may consider the following matters in respect of the relevant Department or Departments and associated public bodies, and report thereon to both Houses of the Oireachtas:
 - (a) matters of policy for which the Minister is officially responsible,
 - (b) public affairs administered by the Department,
 - (c) policy issues arising from Value for Money and Policy Reviews conducted or commissioned by the Department,

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- (d) Government policy in respect of bodies under the aegis of the Department,
 - (e) policy issues concerning bodies which are partly or wholly funded by the State or which are established or appointed by a member of the Government or the Oireachtas,
 - (f) the general scheme or draft heads of any Bill published by the Minister,
 - (g) statutory instruments, including those laid or laid in draft before either House or both Houses and those made under the European Communities Acts 1972 to 2009,
 - (h) strategy statements laid before either or both Houses of the Oireachtas pursuant to the Public Service Management Act 1997,
 - (i) annual reports or annual reports and accounts, required by law, and laid before either or both Houses of the Oireachtas, of the Department or bodies referred to in paragraph (4)(d) and (e) and the overall operational results, statements of strategy and corporate plans of such bodies, and
 - (j) such other matters as may be referred to it by the Dáil and/or Seanad from time to time.
- (5) Without prejudice to the generality of paragraph (1), the Joint Committee shall consider, in respect of the relevant Department or Departments—
 - (a) EU draft legislative acts standing referred to the Select Committee under Standing Order 105, including the compliance of such acts with the principle of subsidiarity,
 - (b) other proposals for EU legislation and related policy issues, including programmes and guidelines prepared by the European Commission as a basis of possible legislative action,
 - (c) non-legislative documents published by any EU institution in relation to EU policy matters, and
 - (d) matters listed for consideration on the agenda for meetings of the relevant EU Council of Ministers and the outcome of such meetings.
- (6) A sub-Committee stands established in respect of each Department within the remit of the Select Committee to consider the matters outlined in paragraph (3), and the following arrangements apply to such sub-Committees:
 - (a) the matters outlined in paragraph (3) which require referral to the Select Committee by the Dáil may be referred directly to such sub-Committees, and

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- (b) each such sub-Committee has the powers defined in Standing Order 83(1) and (2) and may report directly to the Dáil, including by way of Message under Standing Order 87.
- (7) The Chairman of the Joint Committee, who shall be a member of Dáil Éireann, shall also be the Chairman of the Select Committee and of any sub-Committee or Committees standing established in respect of the Select Committee.
- (8) The following may attend meetings of the Select or Joint Committee, for the purposes of the functions set out in paragraph (5) and may take part in proceedings without having a right to vote or to move motions and amendments:
- (a) Members of the European Parliament elected from constituencies in Ireland, including Northern Ireland,
- (b) Members of the Irish delegation to the Parliamentary Assembly of the Council of Europe, and
- (c) at the invitation of the Committee, other Members of the European Parliament.

b. Scope and Context of Activities of Committees (as derived from Standing Orders [DSO 82; SSO 70]

- (1) The Joint Committee may only consider such matters, engage in such activities, exercise such powers and discharge such functions as are specifically authorised under its orders of reference and under Standing Orders.
- (2) Such matters, activities, powers and functions shall be relevant to, and shall arise only in the context of, the preparation of a report to the Dáil and/or Seanad.
- (3) It shall be an instruction to all Select Committees to which Bills are referred that they shall ensure that not more than two Select Committees shall meet to consider a Bill on any given day, unless the Dáil, after due notice given by the Chairman of the Select Committee, waives this instruction on motion made by the Taoiseach pursuant to Dáil Standing Order 26. The Chairmen of Select Committees shall have responsibility for compliance with this instruction.
- (4) The Joint Committee shall not consider any matter which is being considered, or of which notice has been given of a proposal to consider, by the Committee of Public Accounts pursuant to Dáil Standing Order 163 and/or the Comptroller and Auditor General (Amendment) Act 1993.
- (5) The Joint Committee shall refrain from inquiring into in public session or publishing confidential information regarding any matter if so requested, for stated reasons given in writing, by—
- (a) a member of the Government or a Minister of State, or

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- (b) the principal office-holder of a body under the aegis of a Department or which is partly or wholly funded by the State or established or appointed by a member of the Government or by the Oireachtas:

Provided that the Chairman may appeal any such request made to the Cean
Comhairle / Cathaoirleach whose decision shall be final.

APPENDIX 3

Membership of the Joint Committee on Communications, Natural Resources and Agriculture

Deputies:	Tom Barry (FG)
	Michael Colreavy (SF)
	Pat Deering (FG)
	Andrew Doyle (FG) [Chairman]
	Martin Ferris (SF)
	Noel Harrington (FG)
	Martin Heydon (FG)
	Colm Keaveney (LAB)
	Mattie McGrath (IND)
	Michael McNamara (LAB)
	Michael Moynihan (FF)
	Eamon ÓCuív (FF)
	John O'Mahony (FG) [Vice-Chairman]
	Ann Phelan (LAB)
	Thomas Pringle (IND)
Senators:	Michael Comiskey (FG)
	Paschal Mooney (FF)
	Mary Ann O'Brien (IND)
	Brian Ó Domhnaill (FF)
	Pat O'Neill (FG)
	John Whelan (LAB)