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# Public Consultation Report

(Prepared for EirGrid by RPS/MMA)

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## GLOSSARY OF TERMS

EIA – Environmental Impact Assessment

EIS – Environmental Impact Statement

EMF – Electric & Magnetic Fields

ESBI – Electricity Supply Board International

FAQ – Frequently Asked Questions

FF – Fianna Fáil

FG – Fine Gael

MEP – Member of European Parliament

MMA – Mary Murphy Associates

NIE – Northern Ireland Electricity

SF – Sinn Féin

TD – Teachta Dála (Members of parliament)



# 1 INTRODUCTION

## 1.1 EXECUTIVE SUMMARY

This report, which has been prepared by RPS and MMA on behalf of EirGrid, is an account of the public consultation exercises undertaken for the EirGrid 400kV Meath-Cavan and Cavan-Tyrone power line projects.

It covers consultation exercises that have occurred from September 2007 to date as part of Phase 1 of this project, namely the Strategic Constraints Scoping Phase.

The consultation aspect of the project has been diverse, with over 11,000 members of the public engaging with the Project Team (as of March 2008).

### 1.1.1 Project Background

EirGrid is planning two overhead line projects to facilitate cross-border sharing of electricity, promote better competition, and to ensure a future secure supply of electricity throughout the North East.

The two projects are:

- 80km Kingscourt, Co. Cavan to Turleenan, Co. Tyrone 400kV Power Line; and
- 58km Woodland, Co. Meath to Kingscourt, Co Cavan 400kV Power Line.

A new 80km 400kV power line between Cavan and Tyrone will more than double the current power transfer capacity between the North and the South. Approximately 35km will be in Northern Ireland and the remaining portion will be in the Republic of Ireland, routed from a proposed new substation near Kingscourt in Co. Cavan through Co. Monaghan to a proposed new substation in Co. Tyrone. This project is being undertaken in co-operation with Northern Ireland Electricity (NIE).

The 58km Woodland, Co. Meath to Kingscourt, Co. Cavan 400kV Power Line is necessary to strengthen the existing power supply in the North East due to recent increased development in the region. This project will connect the existing sub-station in Woodland, Co. Meath to a proposed new sub-station near Kingscourt in Co. Cavan.

### 1.1.2 The EirGrid Project Team

The EirGrid Project Team consists of five key organisations, who are detailed below.

#### 1.1.2.1 EirGrid

Eirgrid plc, a state owned company, is the independent electricity Transmission System Operator in Ireland and the Market Operator in the wholesale electricity trading system. EirGrid's role is to deliver quality connection, transmission and market services to generators, suppliers and customers utilising the high voltage electricity system, and to put in place the grid infrastructure required to support the development of Ireland's economy. EirGrid develops, maintains and operates a safe, secure, reliable, economical and efficient transmission system. EirGrid has played a key role in establishment of the new All-Island Market for Electricity, as well as commencing development of the Meath-Cavan 400kV Power Line and the Cavan-Tyrone 400kV Power Line.

### **1.1.2.2 Soluziana/Tobin Consulting Engineers**

Soluziana/Tobin Consulting Engineers are involved in the project as consulting engineers for the Meath-Cavan power line. Soluziana/Tobin's key role in this project is to provide support to EirGrid in the following areas: technical and environmental assessments, identification of route corridor options, suggestion of the preferred route option, preparation of an environmental impact statement (EIS), and, ultimately, the submission of a planning application.

### **1.1.2.3 ESBI**

ESBI are involved in the project as consulting engineers for the Cavan-Tyrone power line. ESBI's key role in this project is to provide support to EirGrid in the following areas: technical and environmental assessments, identification of route corridor options, suggestion of the preferred route corridor option, preparation of an environmental impact statement (EIS), and, ultimately, the submission of a planning application.

### **1.1.2.4 Mary Murphy Associates**

Mary Murphy Associates (MMA) are involved in the project as communications consultants. For this project, MMA provide media management and overall strategic communications support and advice.

### **1.1.2.5 RPS**

The RPS Project Communications Team consists of a team of environmental scientists who are involved in the project as the stakeholder management consultants. The project role of RPS is to inform, consult, and involve stakeholders. RPS Project Communications provides project support through consultation management and stakeholder liaison.

### 1.1.3 Consultation Process

As part of Phase 1 of this project, (the 'Strategic Constraints Scoping' phase), EirGrid has been actively engaging in consultation, with members of the public, regarding the routing of the proposed power line projects, The purpose of consultation in Phase 1 Strategic Constraints Scoping has been to:

- Provide members of the public with accurate, up-to-date information on the project;
- Address directly, with appropriate experts, the issues, questions, and concerns that stakeholders have in relation to the project; and
- Provide stakeholders with the opportunity to input information which will be considered by EirGrid as part of the decision making process.

Engagement with the public is allowing the EirGrid Project Team to assess and address the key issues and primary concerns for members of the public with regard to these proposed power lines. Issues relating to health, and the possibility of placing these power lines underground, were raised. Additionally, many people are concerned about the impact of the power lines on the landscape, environment, property values, and cultural heritage of the area. Information received during the consultation process is allowing EirGrid to obtain local knowledge and specific information to augment the knowledge already established in the desktop studies and site investigations. These findings will be taken into consideration in the decision making process and will be further dealt with through the EIS.

### 1.1.4 Going Forward

EirGrid are currently entering Phase 2 of the Projects, namely the preparation of the "Constraints and Route Selection Report" and continue to engage proactively with the public, address concerns and queries, and bring issues forward that will feed into the decision making process.

As work on the projects progresses in the coming months, more updates will become available. These updates will be available to download on the EirGrid website, or can be posted, by request.

## **2 STAKEHOLDER CONSULTATION**

### **2.1 INTRODUCTION TO THE STAKEHOLDER CONSULTATION PROCESS**

The EirGrid Project Team has been actively engaging in a stakeholder consultation process as part of the Phase 1 Strategic Constraints Scoping.

The primary purpose of this phase of consultation has been to:

- Provide members of the public with accurate, up-to-date information on the project;
- Address directly, with appropriate experts, the issues, questions, and concerns that stakeholders have in relation to the project; and
- Provide stakeholders with the opportunity to input information which will be considered by EirGrid as part of the decision making process.

In total, EirGrid has been in contact with over 11,000 stakeholders since starting work on the project. This has been through phone calls, emails, letters, feedback forms, Open Days, and personal meetings.

### **2.2 STAKEHOLDER ENGAGEMENT**

Since the public consultation phase began, in October 2007, the EirGrid Project Team has engaged extensively with the interested public audience. The different stakeholders engaged with thus far include:

- General members of the public
- Elected members (MEPs, TDs, etc.)
- Local businesses
- Action groups
- Key strategic stakeholders

Prior to beginning the consultation process, draft procedures were put in place to ensure that all queries were dealt with appropriately and in a timely manner. The aim of these strict procedures is to ensure that all stakeholders have their queries answered or their concerns addressed and that all information available is provided to them.

## 2.2.1 Open Days

Part of the stakeholder engagement process involved two series of Open Days, which were hosted throughout the region affected by the proposed power lines. The main goal of these events was to:

- Provide the general public with information on the projects;
- Offer members of the public a place to ask questions;
- Clarify concerns of members of the public; and
- Allow stakeholders to provide feedback for consideration by the project team in the decision making process for the two proposed power line projects.

### Key Figures

First series: 11<sup>th</sup>, 16<sup>th</sup> & 17<sup>th</sup> October 2007 – Over 500 stakeholders in attendance.

Second series: 27<sup>th</sup> & 28<sup>th</sup> November 2007 – Over 300 stakeholders in attendance

Total number of people in attendance at both Open Days: Over 800

### 2.2.1.1 Open Days – Series One

The schedule for the first series was as follows:

- 11<sup>th</sup> October 2007, 3:00 p.m. to 8:00 p.m.: Castle Arch Hotel, Trim, Co. Meath
- 16<sup>th</sup> October 2007, 3:00 p.m. to 8:00 p.m.: Glencarn Hotel, Castleblayney, Co. Monaghan
- 17<sup>th</sup> October 2007, 3:00 p.m. to 8:00 p.m.: Cabra Castle Hotel, Kingscourt, Co. Cavan

These events catered for over 500 people and were a success. Members from the EirGrid Project Team spoke to people about the project and addressed people's questions or concerns raised. When follow up was required, the name, contact information, and query or issue of the relevant person was recorded and the Project Team processed this in the weeks after the Open Day.

A great deal of feedback on the project was conveyed to the Project Team and this information is being considered by EirGrid as part of the decision making process.

### 2.2.1.2 Open Days – Series Two

As a result of the positive reception to the Open Days and interest in more information on the project, a second round of events was planned. These took the same format as the first series of Open Days, with information materials available and the Project Team on hand to answer people's questions.

In addition to this service, small, 'Break Out' sessions on the two topics of "Health", and "Underground versus Overground power lines" were planned. These were aimed at people who had been in repeat contact with the EirGrid Project Team and had a number of specific questions in relation to these two issues that they needed to be addressed. The 'Break Out' sessions were advertised on EirGrid's website, ensuring that all interested members of the public could request a place in a session. These 'Break Out' sessions took the form of facilitated small discussion groups where attendees could have the chance to raise questions with experts on the issues of undergrounding and health. Those who had not signed up to these facilitated discussions could ask other Project Team members similar questions in the main Open Day room.

The planned schedule for these Open Days was as follows:

- 27<sup>th</sup> November 2007, 3:00 p.m. to 8:00 p.m.: Four Seasons Hotel, Monaghan Town, Co. Monaghan
- 28<sup>th</sup> November, 3:00 p.m. to 8:00 p.m.: Cabra Castle Hotel, Kingscourt, Co. Cavan
- 29<sup>th</sup> November 2007, 3:00 p.m. to 8:00 p.m.: Old Darnley Lodge, Athboy, Co. Meath

Unfortunately, Cabra Castle Hotel and the Old Darnley Lodge cancelled their events for health and safety issues and security concerns<sup>1</sup>. These cancellations occurred just 24 hours before both events and, therefore, rescheduling proved problematic. The 28<sup>th</sup> November 2007 event was relocated to the Four Seasons Hotel, Monaghan, but an alternative venue for the 29<sup>th</sup> November 2007 event could not be found at such short notice. To ensure that members of the public were informed of these changes, fliers were produced and staff were placed at both Cabra Castle Hotel and the Old Darnley Lodge to advise members of the public of the cancellations. Those people who had signed up for the Open Day 'Break-Out' sessions were informed via email or phone call. The cancellation was also publicised in various media, which is detailed in the Communications and Media section of this report.

Over 250 people attended the first Monaghan Open Day. Further numbers turned up to the Open Day, however for health and safety reasons, restrictions were placed on the number of people allowed to enter the room at any one time and thus not everyone gained access. The contact details of those people who were unable to enter the Open Day were noted so that the EirGrid Project Team could follow up on their queries and concerns. Approximately 70 people attended the relocated event in the Four Seasons Hotel, Co. Monaghan on 28<sup>th</sup> November 2007.

The Open Days resulted in a huge number of information requests from the public. The EirGrid Project Team recorded requests for information, such as maps and brochures on health and this information was sent to the stakeholders as soon as it was available. The EirGrid Project Team recorded information from nearly 300 individuals at the Series Two Open Days.

Once again, all of the information and feedback gathered from members of the public at the Open Days has been considered by EirGrid and will add to the body of studies that will feed into the decision making process for this project.

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<sup>1</sup> See Appendix A for copies of open day cancellation letters

## 2.2.2 Small Group Meetings

As a result of the cancellation of some of the Open Days and the subsequent disappointment of members of the public, EirGrid proposed to arrange small group meetings for the following people:

1. Those who had signed up for a Break-Out Discussion session at one of the Open Days, which did not take place due to last minute cancellation by the hotels.
2. Those who turned up at the Monaghan Open Day, but were unable to enter due to restrictions on entrance numbers by security for health and safety reasons.

The meetings took place between members of the public and EirGrid Project Team members. The small group meetings were a means of fulfilling EirGrid's promise to the above people to meet with the Project Team. Approximately 220 people were invited to various, small round-table meetings scheduled on the following dates and locations:

- Monday 14<sup>th</sup> January 2008, Navan, Co. Meath
- Tuesday 15<sup>th</sup> January 2008, Mullagh, Co. Cavan
- Wednesday 16<sup>th</sup> January 2008, Trim, Co. Meath
- Thursday 17<sup>th</sup> January 2008, Carrickmacross, Co. Monaghan
- Friday 18<sup>th</sup> January 2008, Castleblayney, Co. Monaghan

The Navan meetings on Monday (14<sup>th</sup> January 2008) went well, as a large number of invitees were in attendance and had lengthy discussions with EirGrid. Unfortunately, however, at the Tuesday (15<sup>th</sup> January 2008) night meeting in Mullagh, after an evening of successful meetings, a group of protestors forcibly entered the meeting room and harassed, physically intimidated, verbally threatened, and prevented members of the EirGrid Project Team from leaving the hotel. A report was made to the local Garda Station where statements were given. Due to safety concerns for staff and members of public it was felt that it would not be appropriate to continue with the rest of the week's meetings for fear of a similar incident occurring.

### 2.2.3 Strategic Stakeholders

EirGrid have been contacting key strategic stakeholders in the region to brief them about the project, issue project information, and offer an invitation to a briefing session with EirGrid. These strategic stakeholders include business groups, farming organisations, and many other groups in the area that may have an interest in the project. Information on the project has been sent to the following stakeholders and the majority have also been briefed over the phone.

- Kells Chamber of Commerce
- Navan Chamber of Commerce
- Coothill Chamber of Commerce
- Monaghan Chamber of Commerce
- Enterprise Ireland
- Foras Áiseanna Saothair (FÁS)
- Macra na Feirme Cavan
- Macra na Feirme Meath
- Macra na Feirme Monaghan
- Midlands-East Regional Tourism Authority
- North-West Regional Tourism Authority
- Small Firms Association
- Teagasc (Monaghan – Cavan)
- Teagasc (Meath)
- Industrial Development Agency
- Forfás
- Sustainable Energy Ireland (SEI)

The EirGrid Project Team have had meetings with the following strategic stakeholders:

- Chambers Ireland
- Department of Enterprise, Trade, and Employment (DETE)
- Economic and Social Research Institute (ESRI)
- Enterprise Ireland
- Forfás
- Gaelic Athletic Association (GAA)
- Irish Business and Employers Confederation (IBEC)
- Industrial Development Agency (IDA)
- Sustainable Energy Ireland (SEI)

As the project progresses, the strategic stakeholders will have further opportunities to engage with the EirGrid Project Team, as EirGrid will continue to maintain contact with these groups.

Feedback received, to date, from the strategic stakeholders is being reviewed by EirGrid and will be considered as part of the decision making process.



## 2.2.4 Lo-Call Phone Line

### Key Figures

Over 1,200 calls have been received to date.

The Lo-Call Phone Line was set up as an information line for the public to get direct access to project information and has been available since the consultation process was launched. The phone line is manned during regular working hours with a voicemail system set up to take messages outside of this time. Thus far, over 1,200 calls have been received on the phone line.

The Lo-Call phone line (1890.25.26.90) is monitored between 9:00 a.m. and 5:00 p.m. but silenced during the lunch hour. A voicemail system is set up in order to allow stakeholders to leave a message after office hours.

A 48 hour turnaround time was implemented for all calls, but typically all calls are responded to within one hour, or less. If a call is missed, the voicemail is checked and the call is returned. The EirGrid Project Team always leave a message for people, advising them that their call has been returned and that they would be happy to assist if they call back. EirGrid have been involved in speaking with stakeholders on the phone (both in English and Irish), in order to ensure the stakeholder received a complete and robust response.

The EirGrid reception and customer relations teams have also dealt with a significant number of queries on their phone lines. Whenever a call is received on one of these phone lines, the information and feedback is given to the Project Team, in order to ensure that all comments and concerns are taken into consideration on the project.

Through the phone line and the EirGrid reception and customer relations lines, EirGrid has engaged with a wide public audience and the feedback received on the phone lines will feed into the decision-making process on the project.

## 2.2.5 Feedback Forms

### Key Figures

To date, 4,410 feedback forms received and responded to.

Blank feedback forms were provided on the back of all the information brochures, which were given out at the Open Days or posted out upon request<sup>2</sup>. The feedback forms are also available to download from the EirGrid website. These feedback forms are self addressed and provide a space for members of the public to document their queries and concerns in writing as well as ask questions. To date, a total of 4,410 feedback forms have been received and responded to in writing.

From early on in the project a “template” with pre-printed issues for the feedback forms was created by members of the public and disseminated throughout the potentially affected communities. Large numbers of these standard feedback forms were signed and returned.

Feedback forms were received in both English and Irish. When a feedback form was received in Irish, one of the Project Team Irish speakers drafted a response, in order to correspond in the preferred language of the stakeholder. All feedback forms receive a response that addresses the queries or concerns raised.

Information received from the feedback forms will be considered by EirGrid as part of the decision making process.

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<sup>2</sup> See Appendix B for the ‘Meath-Cavan 400kV Power Line’ and the ‘Cavan Tyrone 400kV Power Line’ brochures - attached to the final page of both these brochures is the feedback form.

## 2.2.6 Emails

### Key Figures

To date, 939 emails have been received and responded to.

Two email addresses were set up at the onset of the project to handle incoming queries and concerns from the public. The addresses ([meathcavanpower@eirgrid.com](mailto:meathcavanpower@eirgrid.com) and [cavantyroneinterconnector@eirgrid.com](mailto:cavantyroneinterconnector@eirgrid.com)) were publicised in all information materials and press releases in order to increase the opportunities for the public to engage on these projects.

The email addresses proved to be a very popular method of communication, as clear, concise answers are provided rapidly. Often a stakeholder uses the email addresses to create a “conversation” with the EirGrid Project Team and a series of emails would go back and forth. As of Friday 7<sup>th</sup> March 2008, a total of 939 emails have been received and responded to.

Once again, the team implemented a 48 hour maximum turnaround time for queries. Most queries are responded to instantly, but as the consultation process has progressed, a number of in-depth, intricate queries requiring detailed and studied responses have been required. These often take longer to process and therefore the 48 hour turnaround time does not often apply to larger, more complex, submissions.

All email feedback received to date has been considered as part of the decision-making process and will continue to do so as the project progresses.

## 2.2.7 Letters

### Key Figures

To date, 1,009 letters received and responded to.

Many members of the public sent in letters that raised concerns or questions regarding the project. All letters have been responded to with an answer that addresses all queries and concerns brought up. Relevant information materials including the 'FAQ' and 'EirGrid Update' brochures, the 'Information on EMF' booklet, and general project information leaflets are included in letter responses, where necessary<sup>3</sup>. All letter responses are kept to a 48 hour response timeframe, as with all other correspondence.

Letters were received in both English and Irish. When a letter was received in Irish, one of the Project Team Irish speakers drafted a response, in order to correspond in the preferred language of the stakeholder.

All general feedback received in letters has been noted and information obtained will be considered by EirGrid as part of the decision making process for the projects.

## 2.2.8 Action Group Submissions

As the consultation process has progressed, many public action groups have formed in order to consolidate their opposition to the proposed power lines. Some of these action groups have made submissions to the Project Team, either in person (a representative of the organisation would meet with EirGrid) or via the post or email. The submissions that have been made to date, have often been large and detailed, with very high quality and content. Submissions have frequently contained maps, reports, costings of alternative options, presentations, petitions, and details of possible constraints. These submissions have frequently required technical detail and study on behalf of the Project Team and appropriate responses have been sent. EirGrid ensures that all issues raised by action groups in their submissions are addressed in the response in order to ensure that any information gaps are filled and misinformation amongst the public is reduced. Much of the information that has informed the EirGrid Project Team has been received through these action group submissions.

Furthermore, petitions have also been submitted on behalf of action groups as part of their submissions. A total of 2,596 individual petition signatories have been recorded from the various petitions received to date.

All feedback received from submissions will be considered by EirGrid as part of the decision making process.

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<sup>3</sup> See Appendix B for archives of all project information materials

### 3 INTRODUCTION TO THE COMMUNICATIONS AND MEDIA PROCESS

EirGrid have been actively engaging with the media, in order to support the public consultation process.

The primary purpose of this phase of consultation has been to:

- Provide members of the public with accurate, up-to-date information on the project via media outlets; and
- Address directly, with appropriate experts, the issues, questions, and concerns that stakeholders have in relation to the project and express those views through the media.

#### 3.1 PUBLIC AFFAIRS

The EirGrid Project Team introduced the project to politicians, engaging their interest at all levels and maintaining regular communications with local TDs, Senators, MEPs, and Councillors.

##### 3.1.1 National Politicians – TDs, Senators, and MEPs

The EirGrid Project Team invited all politicians in Meath, Monaghan, and Cavan to the October Open Days. Individual, personalised letters were written to all TDs, Senators, and MEPs in Ireland on 6<sup>th</sup> November 2007, introducing them to the project and inviting them to a one-to-one briefing with EirGrid.<sup>4</sup>

All MEPs, Senators, and TDs in Meath, Cavan, and Monaghan were telephoned to invite them to a meeting, either on 13<sup>th</sup> November 2007 in Buswell's Hotel, Kildare Street, Dublin 2 or on an alternative date in a venue of their choice.

Following the letters that were sent to all national, elected politicians, phone calls were received from elected members from outside of the catchment area asking for briefings and from a similar number saying they were not interested in receiving information about these projects.

Meeting rooms in Buswell's Hotel were organised for 13<sup>th</sup> November 2007 and on that day (and on subsequent days) meetings were co-ordinated between EirGrid and the TDs, Senators, and MEPs from all political party backgrounds.

The offices of all of the TDs, Senators, and MEPs in the affected three counties were contacted by telephone on Tuesday, 27<sup>th</sup> November 2007 to notify them that the venue for the Cavan Open Day to be held on 28<sup>th</sup> November 2007 had been changed (at the request of the hotel).

The offices of all of the TDs, Senators, and MEPs in the three counties on Wednesday 28<sup>th</sup> November 2007 were again contacted by telephone to notify them that the Meath Open Day, due to be held on 29<sup>th</sup> November 2007, had been cancelled at the request of the hotel.

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<sup>4</sup> See Appendix E for copy of this councillor letter

On 29<sup>th</sup> November 2007, the offices all of the TDs, Senators and MEPs in the three counties were emailed in order to ask them if they would like to be included on a media mailing list to receive all press releases and media briefings issued and a number of TDs, MEPs, and Senators advised they would like to be included

Another information pack was sent by post to all TDs, Senators, and MEPs in the three counties on 6<sup>th</sup> December 2007 containing the 'Dear Householder' leaflet and an 'FAQ' brochure<sup>5</sup>.

### **3.1.2 Councillors in Meath, Cavan, and Monaghan**

EirGrid made presentations to Meath County Council, Cavan County Council, and Monaghan County Council between 1<sup>st</sup> and 8<sup>th</sup> October 2007, introducing them to the project and outlining the public consultation process. The EirGrid Project Team circulated the project brochures to all Councillors present.

The EirGrid Project Team wrote an individually personalised letter to all County Councillors and Town Councillors in Counties Meath, Cavan, and Monaghan on 7<sup>th</sup> November 2007 following up on the presentations to the Council meetings, providing them with an update on the public information days held in mid-October, and inviting them to meet EirGrid one-to-one at their convenience.

The EirGrid Project Team then set up meetings for representatives with those Councillors who responded to the invitations and spoke to them by phone, asking those who had not made it to Buswell's to come to the Open Days.

All Councillors were notified of the additional Open Days in early November 2007. On Tuesday 27<sup>th</sup> of November 2007, all of the Councillors in the three counties were telephoned to notify them that the venue for the Cavan Open Day to be held on 28<sup>th</sup> November 2007 had been changed (at the request of the hotel). The EirGrid Project Team telephoned all of the Councillors in the three counties on Wednesday 28<sup>th</sup> November to notify them that the Meath Open Day due to be held on 29<sup>th</sup> November had been cancelled at the request of the hotel.

On 29<sup>th</sup> November 2007 all councillors in the three counties were emailed, asking them if they would like to be included in a media mailing list to receive all press releases and media briefings issued; many councillors agreed to join the mailing list.

The EirGrid Project Team posted another information pack to all Councillors in the three Counties on 4<sup>th</sup> December 2007 containing the 'Dear Householder' leaflet and the 'FAQ' brochure, which were both created in order to answer queries that arose during the Open Days<sup>6</sup>. Copies of the FAQ brochure were also sent to the County Librarians in Meath, Monaghan, and Cavan for onward distribution to the respective branch libraries.

Monaghan and Cavan County Councils have subcommittees of councillors set up to review the project, as it affects their particular areas. The EirGrid Project Team organised one briefing for the Monaghan subcommittee of 10 councillors and two planning officials for Thursday 22<sup>nd</sup> December 2007. Another meeting took place with the Cavan subcommittee of 10 members in early January 2008. Over the period of November 2006 – January 2007 the EirGrid Project Team met separately with the all Electoral Area Councils in Meath, namely Ashbourne, Dunshaughlin, Kells, Slane, and Trim.

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<sup>5</sup> See Appendix B for a copy of the 'Dear Householder' leaflet & the 'FAQ' brochure

<sup>6</sup> See Appendix B for a copy of the 'Dear Householder' leaflet & the 'FAQ' brochure

## 3.2 MEDIA

### 3.2.1 Press and Media Relations

In September 2007, a list of all local media was compiled and a press release drafted. The EirGrid Project Team issued the release and press pack to media by email, fax, post, and at Council meetings on 1<sup>st</sup> October 2007<sup>7</sup> (the day that EirGrid went to County Council meetings to brief Elected Members in the catchment area). A follow up call with each local media outlet also took place.

A press release announced the project and encouraged attendance at the October Open days. This was issued to the local media on 1<sup>st</sup> and 8<sup>th</sup> October 2007. The press pack contained maps of both projects' proposed route corridors and the brochures for each project. Media were encouraged to attend the Open Days in order to have their questions and concerns clarified by the Project Team.

The EirGrid Project Team drafted and issued press releases to local media on 11<sup>th</sup> November 2007, announcing the repeat Open Days<sup>8</sup>. Interviews were lined up on the local radio stations in order to inform the public about the facts of the power lines and the health effects. These interviews had national and international health experts on air to give information to the public. The details of the interviews are as follows:

#### 27<sup>th</sup> November 2007:

- Monaghan Echo - Interview with Donal McMahon
- Monaghan Post - Interview with Clíodhna Connolly
- Anglo Celt - Interview with Sean McMahon

#### 28<sup>th</sup> November 2007:

- Cavan Post - Interview with Caroline McGarrell

On Tuesday 27<sup>th</sup> November 2007, The EirGrid Project Team telephoned and emailed editors and reporters in all the local newspapers and the two local radio stations to notify them that the venue for the Cavan Open Day to be held on 28<sup>th</sup> November 2007 had been changed at the last minute request of the hotel. Interviews were lined up, as a result of this cancellation. They took place as follows:

#### 26<sup>th</sup> November 2007:

- Northern Sound Radio 2:00 P.M.

#### 27<sup>th</sup> November 2007:

- LMFm Radio 10:30 A.M. Interview on Loose Talk

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<sup>7</sup> See Appendix D for October 1<sup>st</sup> Press Release

<sup>8</sup> See Appendix D for November 11<sup>th</sup> Press Release

The EirGrid Project Team also ensured that the change of venue was announced on all news bulletins that day on the two local radio stations.

On Wednesday 28<sup>th</sup> November 2007, The EirGrid Project Team again telephoned and emailed all of the local press and LMFM to notify them that the Meath Open Day due to be held on 29<sup>th</sup> November 2007 had been cancelled at the request of the hotel. It was again ensured that the announcements were carried on all news bulletins on LMFM that day and on the 29<sup>th</sup> November 2007.

#### Television programmes

- Ear to the Ground – Thursday 3<sup>rd</sup> January 2008

Ear to the Ground reporters attended the Open Day in Monaghan on 28<sup>th</sup> November 2007. They interviewed members of the project team, external experts and members of public. This coverage was featured on Ear to the Ground on the 3<sup>rd</sup> January 2008.

- Prime Time – Thursday 31<sup>st</sup> January 2008

Prime Time featured the proposed power lines in a programme broadcast on Thursday 31<sup>st</sup> January 2008. It included positive footage of the Open Day in Monaghan and an interview with the Project Manager as well as interviews with opponents of the proposed projects.



### 3.2.2 Press Releases<sup>9</sup>

The EirGrid Project Team have drafted and issued numerous press releases as part of the ongoing campaign to keep the local journalists aware of all aspects of the project. The details of these press releases are:

- 1<sup>st</sup> October 2007: New Electricity Lines for North East will Increase Capacity and Enable More Development and Commerce
- 17<sup>th</sup> October 2007: Cavan – Tyrone and Meath – Cavan Power Line Route Corridor Options Maps
- 11<sup>th</sup> November 2007: North East to Benefit from Major Electricity Investment Plans
- 23<sup>rd</sup> November 2007: EirGrid Announces Extension of Public information and Consultation Process
- 26<sup>th</sup> November 2007: EirGrid Announces Extension of Public Information and Consultation Process
- 28<sup>th</sup> November 2007: Eirgrid Open Day in Athboy Planned for Tomorrow Thursday Cancelled by Hotel
- 30<sup>th</sup> November 2007: Eirgrid Thanks Those who Attended
- 4<sup>th</sup> December 2007: Irish Times Letter
- 12<sup>th</sup> December 2007: The Great Pylon Debate in Meath Chronicle
- December 2007: Update for Local Media and Health and EMF Release
- December 2007: 'Dear Householder' Leaflet
- 14<sup>th</sup> January 2008 : EirGrid says Health Fears are Unfounded
- 16<sup>th</sup> January 2008: EirGrid Expresses Concern at Incidents Involving Staff at Co. Cavan Meeting
- 20<sup>th</sup> January 2008: EirGrid Welcomes Statement from Minister
- 21<sup>st</sup> January 2008: EirGrid Still Looking for Submissions
- 1<sup>st</sup> February 2008: EirGrid Statement on Fluorescent Tube / Power Line Photographs
- 25<sup>th</sup> February 2008: EirGrid Reaffirms Need for Power Lines in North East Region at Meetings with Meath County Council

By way of further informing the public, an article on the project was also published in the Meath Chronicle on 15<sup>th</sup> December 2007<sup>10</sup>. The EirGrid Project Team drafted text for the article and wrote a reply letter to the editor of the Irish Times in response to two letters (dealing particularly with one which appeared on 3<sup>rd</sup> December 2007)<sup>11</sup>.

In addition, calls from local and national journalists are answered on a daily basis and it is always ensured that journalists are responded to well within his or her deadline.

In addition to taking calls from media, the EirGrid Project Team maintain regular pro-active contact with all the local media regarding the EirGrid projects and speak to the editors and reporters from each local newspaper and to the local radio stations at least once a week.

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<sup>9</sup> See Appendix D for copies of all press releases

<sup>10</sup> See Appendix D for copy of this Meath Chronicle article

<sup>11</sup> See Appendix D for copy of this EirGrid letter

### 3.2.3 Advertising<sup>12</sup>

In September and October 2007, the EirGrid Project Team drafted text and placed advertisements promoting the October Open Days for two weeks from 2<sup>nd</sup> until 17<sup>th</sup> October 2007 in the following local newspapers:

- Meath Chronicle                    3<sup>rd</sup> - 10<sup>th</sup> October 2007
- Meath Weekender                2<sup>nd</sup> October 2007 (this is a fortnightly publication)
- Meath Echo                        8<sup>th</sup> - 15<sup>th</sup> October 2007
- Northern Standard              11<sup>th</sup> - 18<sup>th</sup> October 2007
- Anglo Celt                         10<sup>th</sup> - 17<sup>th</sup> October 2007

Ads for radio were aired on the following dates (inclusive):

- LFM – 14 x 30 second spots (2 spots per day) were run from 7:00 A.M. until 9:00 A.M. from 4<sup>th</sup> to 11<sup>th</sup> October 2007.
- Northern Sound – 14 x 40 second spots were run from 11<sup>th</sup> to 16<sup>th</sup> October 2007 (there are only 2 spots per day –they ran in morning drive time only on weekdays).

During October and November 2007, The EirGrid Project Team drafted, edited and placed three separate press ads in local newspapers and one local radio ad, as follows:

- 16<sup>th</sup> to 23<sup>rd</sup> November 2007: ½ page ad promoting the November Open Days for one week in the following newspapers:

- Anglo Celt
- Meath Chronicle
- Northern Standard
- Westmeath Examiner
- Cavan Echo
- Cavan Voice
- Monaghan Weekender
- Meath Weekender
- Cavan Post
- Meath Post
- Monaghan Post

- 23<sup>rd</sup> November 2007: Full page advertisement appeared, '*Public Information Notice: Upgrade of Vital Electricity Infrastructure in the North East*'. This ad was placed by The EirGrid Project Team.

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<sup>12</sup> See Appendix C for copies of advertisements

- 29<sup>th</sup> November 2007: Full page advertisement, *Information in Relation to Two Overhead Proposed Lines*. This ran in the following publications:

- Anglo Celt
- Meath Chronicle
- Northern Standard
- Westmeath Examiner
- Cavan Echo
- Cavan Voice
- Monaghan Echo
- Meath Weekender
- Cavan Post
- Meath Post
- Monaghan Post

- 14<sup>th</sup> December 2007: Full Page advertisement 'EirGrid Information on Health and Proposed Power Lines in North East.' This ad ran in the following media:

- Anglo Celt
- Meath Chronicle
- Northern Standard
- Westmeath Examiner
- Cavan Echo
- Cavan Voice
- Monaghan Echo
- Meath Weekender

Ads for radio were aired on 26<sup>th</sup> and 27<sup>th</sup> November 2007 on the local stations, LMFM and Northern Sound. The ad details are:

- 10 x 15 seconds ads publicised the Open Days over two days on LMFM and Northern Sound
- To announce the change of venue of the last Open Day, the ads were updated on 27<sup>th</sup> November 2007.

- 24<sup>th</sup> January 2008: EirGrid Update advertisements placed in all local papers.

### 3.2.4 Print and Web Tools

The EirGrid Project Team drafted text for the website, which was uploaded in early October 2007. EirGrid's website ([www.eirgrid.com](http://www.eirgrid.com)) has been continuously updated with project information and has proven to a very popular and accessible source of information on the project for members of the public.

Further, the EirGrid Project Team drafted and printed a 12-panel display for the Open Days, which provided maps and information on the projects.

During November 2007, the printing of the 'FAQ' booklet and the 'Dear Householder' leaflet was organised, in order to answer directly the issues, questions, and concerns of the public<sup>13</sup>. The leaflets were distributed as follows:

- Both leaflets in a press pack to all local and freelance media in the three counties
- Both leaflets to all TDs, Senators, MEPs, and Councillors in the three counties

In order to ensure the maximum distribution of the 'Dear Householder leaflet,' it was provided to the public in door-to-door drops and via a leaflet insert in all local newspapers that had availability or facility to take an insert between 26<sup>th</sup> November 2007 and 10<sup>th</sup> December 2007, namely:

- Anglo Celt – 6<sup>th</sup> December 2007
- Cavan Echo – 11<sup>th</sup> December 2007
- Meath Weekender – 8<sup>th</sup> December 2007
- Cavan Post – 11<sup>th</sup> December 2007
- Meath Post - 11<sup>th</sup> December 2007
- Monaghan Post – 13<sup>th</sup> December 2007

Furthermore, all printed material was also available to download on the EirGrid website. This ensured a maximum distribution of information to all members of the public.

### 3.3 COMMUNICATIONS AND MEDIA – SUMMARY OF PROGRESS TO DATE

- Coverage generated in local and national media;
- National and local politicians engaged and regularly communicated with;
- Ongoing contact with local media established;
- Series of advertisements drafted and placed in local papers<sup>14</sup>
- Strong public awareness of the project;
- Debate has begun and main issues are defined. These are overhead versus underground lines, and health effects of EMF, and property devaluation;
- Variety of information leaflets printed and distributed to media, politicians, and interested stakeholders<sup>15</sup>
- Radio interviews with independent experts for Irish media;
- Issue of regular press releases<sup>16</sup>
- Regular liaison with local and national politicians and other stakeholders.
- Presentations made by the EirGrid Project Team to Elected Members

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<sup>13</sup> See Appendix B for copy of the 'Dear Householder' leaflet and the 'FAQ' brochure

<sup>14</sup> See Appendix C for copies of advertisements

<sup>15</sup> See Appendix B for archive of all information materials produced to date

<sup>16</sup> See Appendix D for copies of press releases

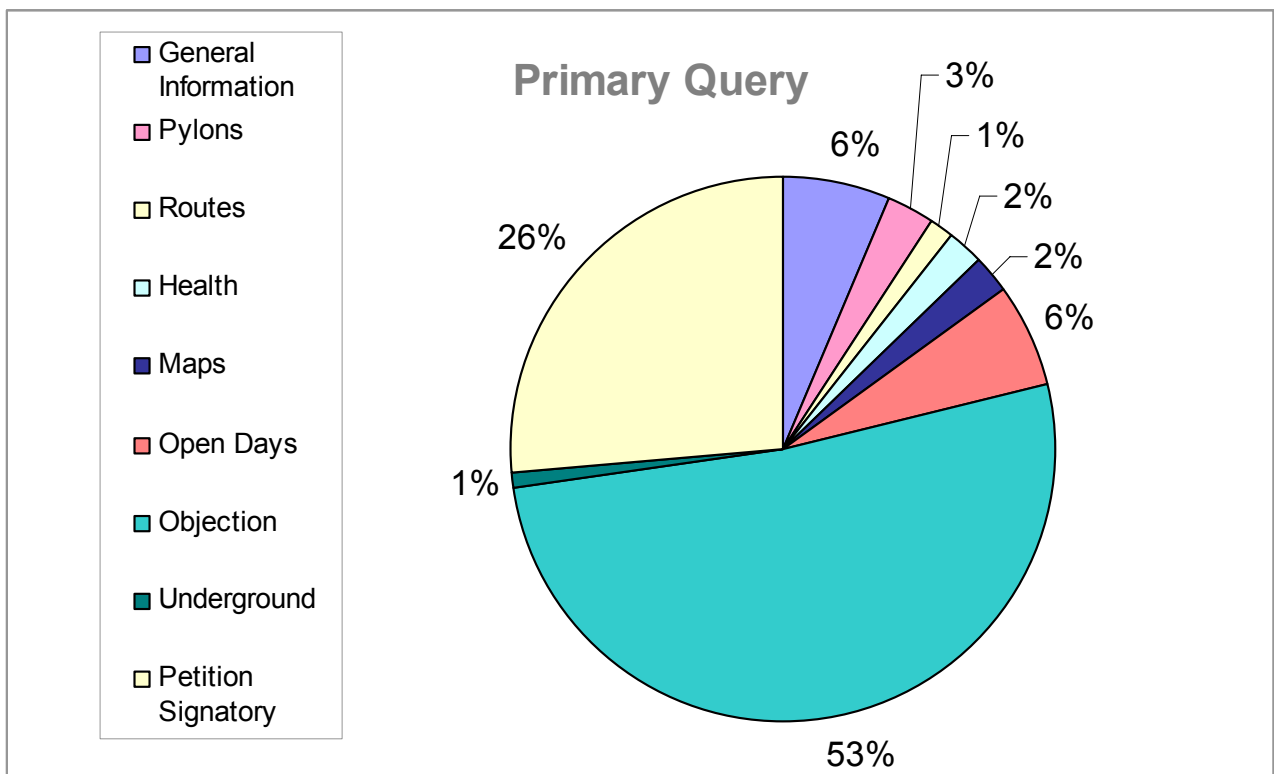
## 4 ISSUES RAISED

From continuous engagement with the public through the phone line, letters, feedback forms, emails, Open Days, and meetings, The EirGrid Project Team has been able to build up a picture of the recurrent issues for stakeholders regarding this project. Figures 4.1 and 4.2 illustrate further the key issues that emerged as a result of consultation.

### 4.1 PRIMARY QUERY

Figure 4.1 details the “primary query” raised by a member of the public when contacting The EirGrid Project Team. For example, if a stakeholder called and stated, “I would like to register my objection to the projects,” one box, for objection was ticked. In the Primary Query section, only one issue could be selected.

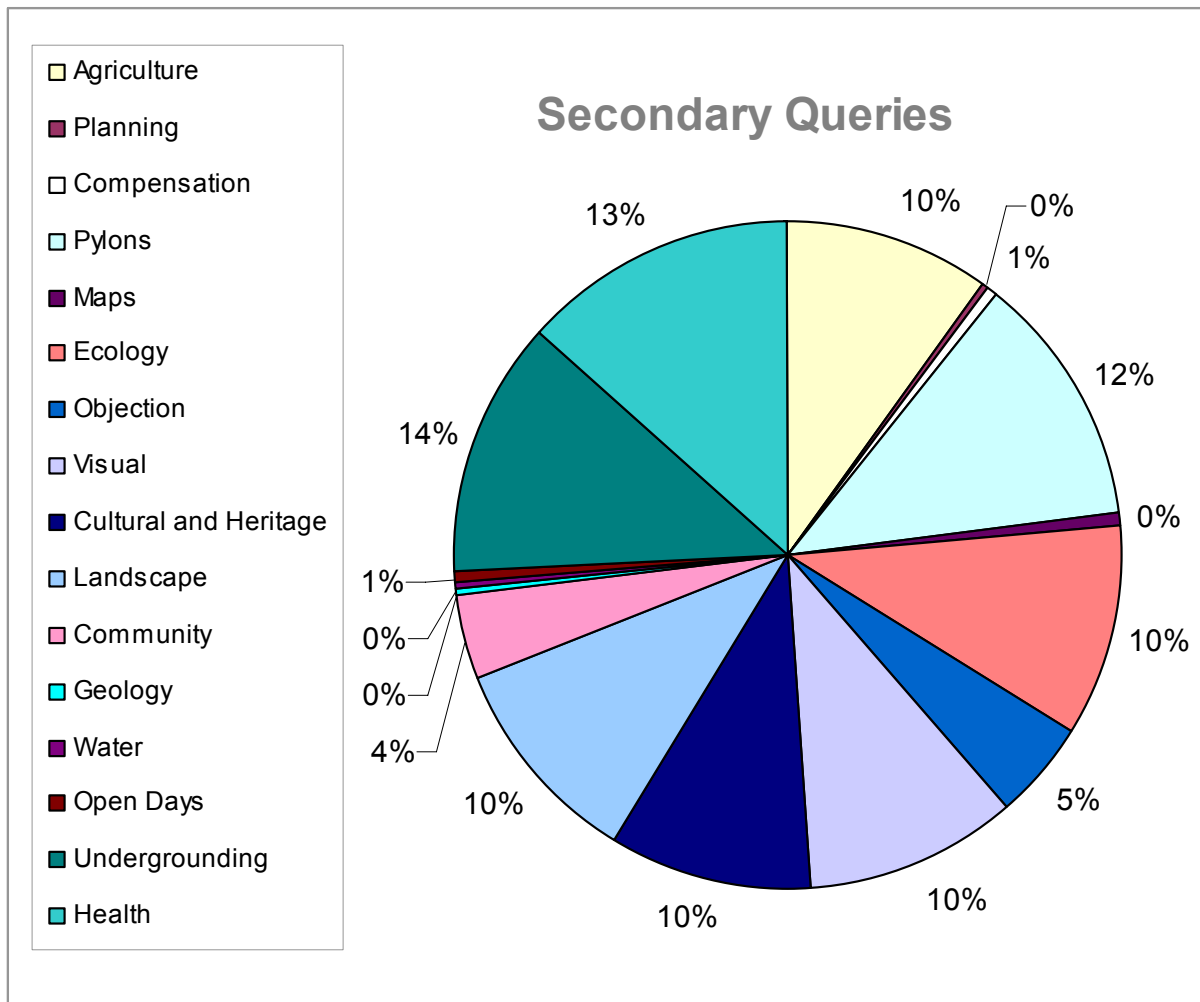
**Figure 4.1: Primary Query**



## 4.2 SECONDARY QUERIES

Figure 4.2 details the “secondary queries” raised by a member of the public when contacting The EirGrid Project Team. For example, after a stakeholder stated their primary query they often provided the rationale for their first issue. This often took the form of, “I object to the projects (Primary Query) for the reasons of health concerns, visual impact, and property devaluation.” These reasons would be the Secondary Queries. In the Secondary Query section, there was no limit to the number of boxes that could be ticked.

Figure 4.2: Secondary Queries



### 4.3 INTERPRETATION AND EXPLANATION

Figure 4.1 illustrates the main primary queries for members of the public and shows that the majority of stakeholders contacted for the purpose of lodging their objection. Others got in touch to request project information materials or to ask questions relating to either the proposed route corridors, Open Days, health impacts, or undergrounding.

From looking at the second pie chart (Figure 4.2) in conjunction with the first graph, one can get a clear picture of the broader issues that are being raised and which are causing people most concern. Many of the stakeholders who contacted The EirGrid Project Team to make an objection also raised concerns and asked questions on a number of issues. Looking at Figure 4.2 as an indicator of these issues, it can be seen that issues regarding agriculture, pylons, landscape, and ecology are of key concern.

However, underlying all of these key points are issues relating to undergrounding, property devaluation, and health. When speaking with members of the public, it was often EirGrid's experience that no matter what the objections to the project were founded upon (i.e. negative cultural impact, etc.) the majority of the stakeholders all felt as though health, undergrounding, and property devaluation concerns impacted their objection as well.

Many members of public have been keen to discuss the possibility of placing the power lines underground. The request by stakeholders for undergrounding the line has been seen as a solution to prevent the problems that may be caused by overgrounding the lines. It is generally felt by many members of the public that if the lines were placed underground, the problems with health, visual impact, land devaluation, and many of the other constraints would not be an issue. EirGrid is taking this concern into consideration. These concerns will feed into the decision making process.

Concern for property devaluation is being expressed by members of the public. Many people fear that if the power lines are built on or near their land, it will be devalued significantly and will reduce their ability to sell the property in the future. Many members of the public have expressed this concern and are also worried that the compensation may not be adequate to address the loss of value to their land.

The issue of health and electric and magnetic fields (EMF) is of primary importance for many of those in contact with EirGrid. Many people have expressed that although they are concerned about the impact the power lines would have on their community or the landscape in their area, their overriding concern is for their health. The EirGrid Project Team has engaged numerous health experts to speak with the public on this issue, in order to allay any fears that may be held and to provide scientific evidence to counter the wide array of misinformation that has been put into the public domain. In addition, The EirGrid Project Team produced a booklet on Health and EMF to help provide a greater understanding of the subject for all members of the public. The EirGrid Project Team recognise, also, that the issue of health permeates any of the other concerns. Again, these concerns will be fed into the decision making process.

Despite these negative objections, many members of the public expressed that they understood the need for the project. It was generally recognised that the projects are strategically important to Ireland. The concerns raised, therefore, were not necessarily rejecting the need for the project, but rather the methodology in which they are being implemented.

Discovering these key issues has enabled The EirGrid Project Team to produce appropriate public information leaflets to deal with these key themes.<sup>17</sup> EirGrid are aware of these key issues and they will feed into the decision making process for the projects.

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<sup>17</sup> See Appendix B for copies of all information materials produced to date.

## **4.4 KEY OBSERVATIONS AND EMERGING ISSUES**

Continuous engagement with members of the public is allowing EirGrid to examine, in partnership with the stakeholders, various constraints issues within the project area. This section provides an overview of key locations and areas of interest and segregates these into the following categories: Schools and Crèches, Ecology and Nature, Heritage and Listed Buildings, Cultural and Sport, Tourism and Development, Livestock and Racehorses, and Mining and Airfields.

### **4.4.1 Schools and Crèches**

Students, parents, and staff alike raised concerns for the proximity of the proposed lines to their schools and/or crèches. Highlighting the issues of health and children, large submissions from schools, especially those with Green Flags, were received, protesting against the power lines proposed for their area. Childcare facilities also sent in their opposition, noting the same reasons for objection.

### **4.4.2 Ecology and Nature**

Another area highlighted by some members of the public was concern for the wildlife and areas of natural beauty within the route corridors. Recognised areas of protection were identified, as were wildlife sanctuaries. Although many animals and insects were identified as species of concern with regards to this project, the two most popular were bats and Whooper Swans. Flocks of Whooper Swans of up to 200 birds inhabit the project area and there is a strong contingent of people concerned for their well-being. Specific lakes utilised by these birds were also identified as places that could be impacted by the proposed power lines.

Broader areas of concern raised by stakeholders related to woodlands. People noted that these were popular walking destinations for locals and tourists alike, and voiced concern on the potential impact of the power lines on the visual amenity of the area. Members of the public also paid particular attention to the drumlin landscape and bog lands were also highlighted as areas to avoid. Additionally, rivers were brought up as an amenity to be protected, as stressed by members from local angling clubs.

### **4.4.3 Heritage and Listed Buildings**

Many people were very concerned about the proximity of the proposed power lines to heritage houses, of which many are listed structures. A number of different heritage or listed homes in the project area were also raised as potential areas of concern. Many of the homeowners also submitted information on listed outbuildings, bogs, and endangered wildlife on their property.

Concerns were also raised about other heritage areas within and near the route corridors. These concerns included parochial houses, castles, abbeys, graveyards, and historic hills. Further concern was raised for thatched cottages.

General concerns were raised from stakeholders in the project area about the historic sites, such as ring forts and heritage woodlands, as these can be special sites of archaeological interest.



#### 4.4.4 Cultural and Sport

Key issues were raised throughout the consultation process by a number of sports organisations. In particular, GAA clubs and golf clubs noted their concerns for the proposed power lines impact on their recreational areas. Cultural organisations, including Gaeltacht groups and healing centres, were also notable contacts in this category. Most of these groups had similar concerns and were particularly worried about the possibility of the power lines preventing their organisations from continuing their current activities or from carrying out proposed expansion plans.

Notable complaints from golf clubs raised concern that power lines in the golf course could be a hindrance to play and some were concerned that erection of power lines could lead to a decrease in membership. GAA clubs raised concerns about the possible negative visual and health impacts of the power lines on their clubs. Additionally, members of Gaeltacht community groups also actively opposed the power lines on the grounds of disruption to natural and cultural heritage in the area.

A very significant number of contacts were received from people voicing their concern over the possibility of power lines being built near healing centres in the area. There is concern that power lines could ruin unspoilt landscape and cultural richness. Members of the public also drew attention to cultural activities and attributes of their localities. Harvest festivals and street fairs were both mentioned. Some communities were distressed and felt that the building of power lines in their locality would destroy the possibility of winning a 'Pride of Place Award,' which is an all-island competition that recognises positive and lasting community initiatives.

#### 4.4.5 Tourism and Development

Property developers highlighted their concerns about the possible detrimental effects the proposed power lines would have on them. They raised concerns about the impact the proposed power lines may have on their current and future developments, as they felt there would be negative visual impact to the land.

Tourist locations also sent in their objections, as it was felt that the negative visual impact of the power lines could possibly result in the reduction of the number of tourists to the area in the future.

#### 4.4.6 Livestock and Racehorses

In addition to concerns over wildlife, impacts on domestic animals were raised as another area of concern. Issues raised relating to impacts on racehorses and cattle were common, the welfare of poultry and other animals, such as greyhounds, were also mentioned.

Some parts of the proposed route corridors are located close to popular areas for the breeding of racehorses. Breeders were very concerned about the health of their animals, citing potential miscarriages as a huge loss of income. Stakeholders also raised the issue that their staff would not be willing to work near the lines, thereby resulting in a two-fold loss to the business. Fears were expressed that rumours would surround the stables based in the area and other breeders would not buy horses raised on these farms.

Cattle and dairy farmers also voiced their opinions with regard to the health of their herds if the proposed power lines are built in their area. Some pedigree herds are located near the proposed route corridors and beef cattle farms were also noted as areas to be considered as part of the decision making process. Health considerations for livestock were widespread. Research centres also contacted The EirGrid Project Team with regard to concerns over beef research. Concerns were raised regarding potential threats to the health of the study herd and how this may affect research results.

#### **4.4.7 Mining and Airfields**

A small number of stakeholders contacted The EirGrid Project Team to draw attention to mining operations in the project area, as it is felt the blasting could affect the power lines.

Airfields and flying clubs were identified by members of the public as being potentially affected, with the main issue for these stakeholders relating to potential flight path interruption by erection of power lines.

## 5 GOING FORWARD

Consultation activities, to date, have highlighted and helped quantify the issues and concerns that stakeholders have in relation to the proposed projects. These activities have helped inform the Project Team in relation to how the projects should move forward.

Ongoing public and stakeholder consultation will assist in establishing public confidence in, and acceptance of, the overall projects. This consultation will be ongoing. The nature of the consultation will be continuously monitored and modified to best suit the ongoing needs of the projects and the stakeholders at that time. It is noted that ongoing public and stakeholder consultation is also likely to be a requirement of the pre-application and application process under the Strategic Infrastructure Act; for these reasons, among others, the EirGrid Project Team will continue to proactively engage with stakeholders in relation to the proposed projects.

In line with the above, as the projects progress in the coming months more updates will become available. These updates will be available to download on the EirGrid website, or can be posted by request. Other forms of interaction will take place in formats that are deemed most effective and may include:

- Face to face meetings with individuals and groups;
- Email correspondence;
- Telephone calls;
- Written correspondence;
- Newspaper articles and advertisements; and
- Update leaflets and booklets.

It is intended that the result of the above and other activities undertaken by the EirGrid Project Team will help compile planning applications, which will ultimately result in projects that meet the needs of those projects in an optimum manner.

## **APPENDIX A**

### **[OPEN DAY CANCELLATION LETTERS]**



**CABRA CASTLE**

Kingscourt, Co. Cavan, Ireland.

Telephone: (042) 9667030 Fax: (042) 9667039

Email: sales@cabracastle.com

www.cabracastle.com

Monday 27<sup>th</sup> November 2007

TO WHOM IT MAY CONCERN:

Following on communications throughout the last week and particularly further to today's consultations with the local Garda Superintendent and Ms. Elizabeth Arnett of RPS Group, I hereby wish to confirm that Cabra Castle are cancelling the conference booking made by RPS Group for Eirgrid plc, scheduled at the hotel for Wednesday 28<sup>th</sup> November, 2007.

I regret this course of action and up until today was making every effort to facilitate this booking in every way possible. However, due to the health and safety concerns which have emerged, (as also highlighted by our own Insurers) we feel that Cabra Castle and Golf Course would be unable to safely accommodate the volume of numbers expected to attend the scheduled event.

Yours faithfully

HOWARD CORSCADDEN

Director



Kingscourt Castle Ltd.

Directors: A. Corscadden; P. Corscadden; H. Corscadden





Main Street, Athboy, Co. Meath. Tel.: (046) 9432283 Fax: (046) 9432255

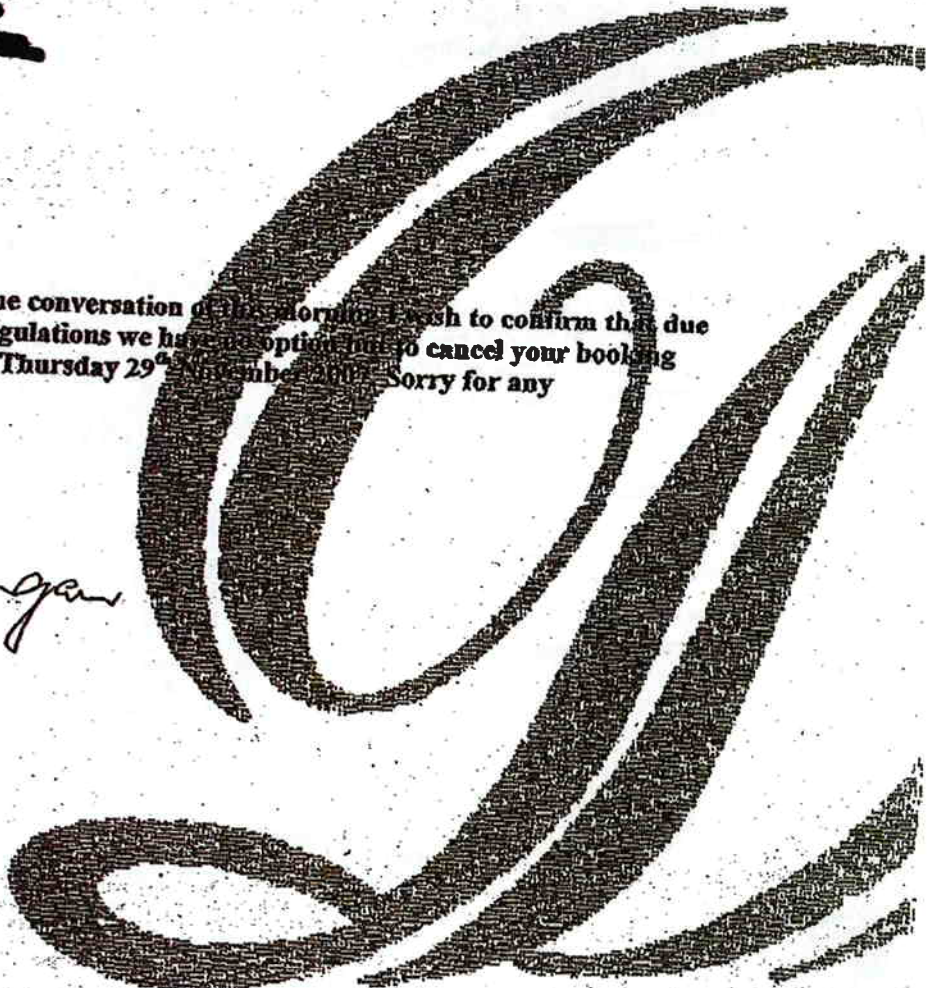
[REDACTED]

Dear [REDACTED]

Further to our telephone conversation of this morning I wish to confirm that due to Health and Safety regulations we have no option but to cancel your booking for your conference on Thursday 29<sup>th</sup> November 2007. Sorry for any inconvenienced cause.

Yours faithfully

*Sean Mangan*  
Sean Mangan  
General Manager



## **APPENDIX B**

### **[PROJECT INFORMATION MATERIALS]**



## MEATH-CAVAN 400KV POWER LINE

### **Proposed Route Corridor Options, Public Consultation**

October 2007



Part funded by  
EU TEN-E Initiative



# Who is EirGrid?

EirGrid plc, a state owned company, is the independent electricity Transmission System Operator in Ireland and the Market Operator in the wholesale electricity trading system. EirGrid's role is to deliver quality connection, transmission and market services to generators, suppliers and customers utilising the high voltage electricity system, and to put in place the grid infrastructure required to support the development of Ireland's economy. EirGrid develops, maintains and operates a safe, secure, reliable, economical and efficient transmission system. EirGrid is playing a key role in establishment of the new All-Island Market for Electricity, as well as developing a second North-South Interconnector.

## What's Happening?

EirGrid is planning two projects to facilitate cross-border sharing of electricity, promoting better competition and to ensure a future secure supply of electricity throughout the North East. The 2 projects are:

- 80km long 400kV Interconnector between Cavan and Tyrone
- 58km Woodland (Co Meath) to Kingscourt (Co Cavan) 400kV Power Line.

The 58km Woodland, Co Meath to Kingscourt, Co Cavan 400kV Power Line is necessary to strengthen the existing power supply in the North East due to recent increased development in the region. This project will connect the existing sub-station in Woodland, Co Meath to a proposed new sub-station near Kingscourt in Co Cavan.

Following extensive studies, route corridor options have been developed and are presented overleaf.

## Benefits

- Provide high quality bulk power supply for the North East
- Support growth in the region and ensure continuing reliability of supply.
- Boost existing industry in the North East when competing for business and inward development in the area.
- Guarantee security of supply for future decades - if nothing is done now, by 2012/13 there is likely to be insufficient network capacity required to supply demand in the North East
- Increase competition and therefore reduce the cost of electricity to customers.
- Increase reliability for the local network in the North East and for all electricity customers.

# How were the route corridors decided upon?

Seven key criteria were taken into account by the consultants when choosing possible route corridors for the power lines:

**Visual Impact:** An assessment of the of the visual impact of the proposal on the environment was carried out in order to minimise the impact

**Community:** an assessment of the local villages and communities was undertaken to reduce the proximity of the power lines to them and ensure minimal impact on lifestyles of those living and working in nearby communities.

**Ecology:** A review of conservation designated areas, including Special Areas of Conservation (SACs), Special Protection Area (SPAs) and Natural Heritage Areas (NHAs) was completed.

**Cultural Heritage:** Architectural and archaeological heritage sites, including recorded archaeological monuments and places, protected structures, and national monuments, were assessed in an attempt to minimise any impact.

**Landscape:** A review of County Development Plans was undertaken in order to assess the numbers of scenic views, scenic routes, and vulnerable landscapes in the area.

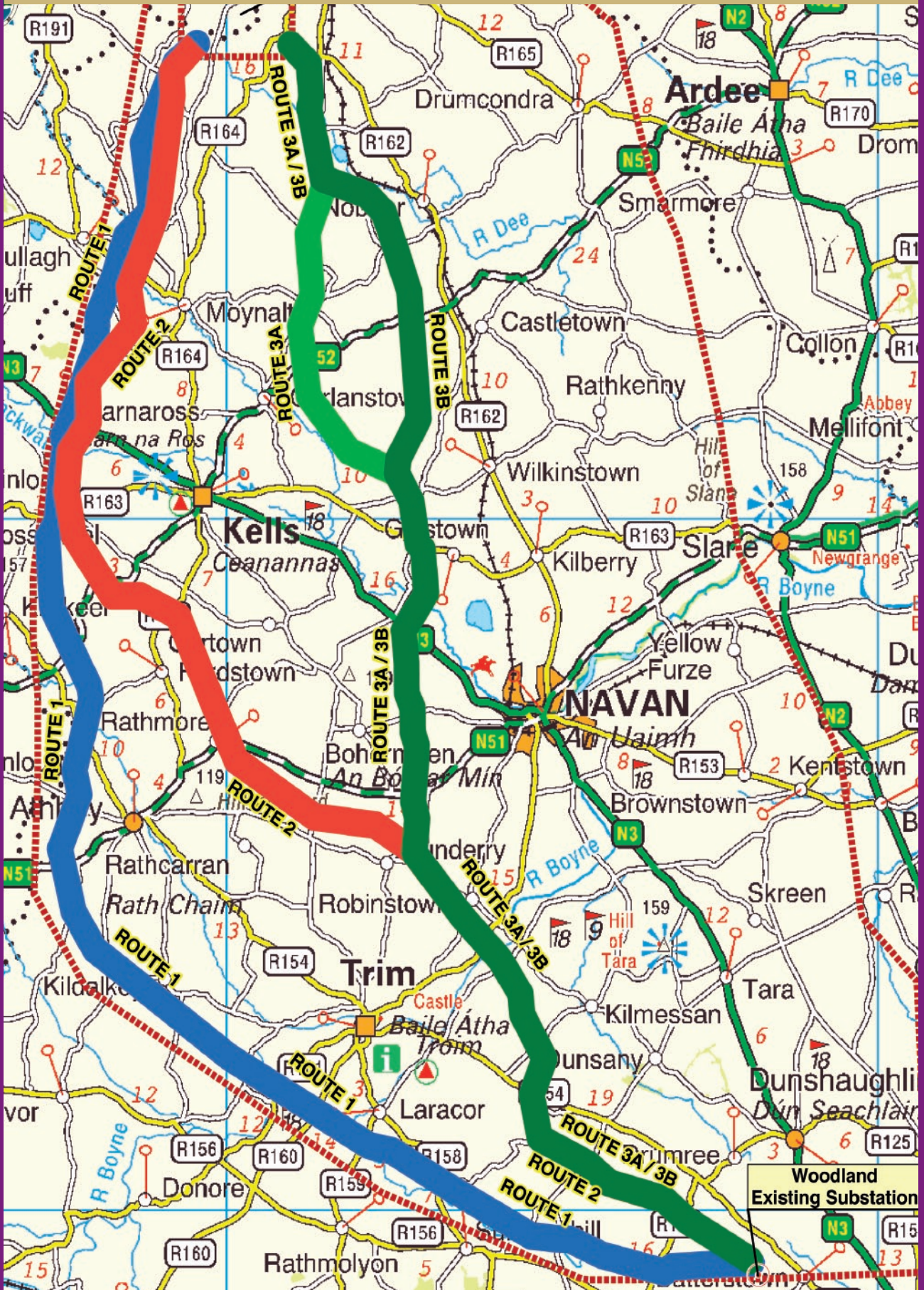
**Geology:** Soil, subsoil and bedrock was used to determine significant types and their benefits and drawbacks.

**Water:** The surface water features were reviewed, as lakes are to be avoided and river crossings minimised.

All of the above constraints were taken into account in order to ensure that the route options were sited in the best possible location.



# Proposed Route Corridor Options for Meath – Cavan 400 kV Power Line







# Route Corridor Options

## **Meath-Cavan** **Route Option 1**

Route Option 1 runs to the western part of the study area, staying to the west of the towns of Trim, Athboy and Kells and approximately 5km north of the town of Ballivor and approximately 1km east of the town of Mullagh.

## **Route Option 2**

Route Option 2 runs between the central and western section of the study area, staying to the east of the town of Trim and Athboy, west of the town of Kells and then runs parallel to Route Option 1, running approximately 2.5km to the east of the town of Mullagh

## **Route Option 3**

Route Option 3 follows Route Option 2 initially before running in a due north direction, running to the west of the town of Navan and to the east of the town of Kells. Approximately 6km north of the N3, this route option splits into two options 3A and 3B, before joining together west of Whitewood Lough.

# Your views are important to us

We welcome all suggestions and queries. All submissions made and feedback collected during the public consultation on route selection will be used by the technical project teams to inform their decision on selecting the most appropriate route. All queries and submissions made will be dealt with in a confidential manner.

Please study the maps and tell us your views on the proposed route corridor options—you may use the enclosed feedback form or additional pages if you wish. All correspondence will be dealt with confidentially.

## What Happens Next?

- Following public consultation in October 2007, submissions made by the public, businesses and other organisations will be taken into account, and along with further technical and other studies, will help to determine a Preferred Route.
- It is hoped that a Preferred Route will be ready for presentation to the public in early 2008, after which it will likely undergo further studies before a planning application is prepared.
- The planning application will include preparing an Environmental Impact Statement (EIS) and consultation with landowners and the local community. The Environmental Impact Assessments (EIA) will assess the impact of the project on the local areas as it is a process for anticipating and, possibly, preventing, negative effects on the environment that may be caused by a proposed development or project.

## Keep informed

EirGrid is committed to ensuring that all members of the public are fully aware of the project and encourage you to participate in public consultation. If you would like to discuss the project or to meet with a member of the project team, please contact us by either telephone or email. Otherwise, keep an eye on the website for regular updates.

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# CAVAN-TYRONE 400KV POWER LINE

## New North-South Interconnector

**Proposed Route Corridor Options,  
Public Consultation**  
October 2007



Part funded by  
EU TEN-E Initiative





# Who is EirGrid?

EirGrid plc, a state owned company, is the independent electricity Transmission System Operator in Ireland and the Market Operator in the wholesale electricity trading system. EirGrid's role is to deliver quality connection, transmission and market services to generators, suppliers and customers utilising the high voltage electricity system, and to put in place the grid infrastructure required to support the development of Ireland's economy. EirGrid develops, maintains and operates a safe, secure, reliable, economical and efficient transmission system. EirGrid is playing a key role in establishment of the new All-Island Market for Electricity, as well as developing a second North-South Interconnector.

## What's Happening?

EirGrid is planning two projects to facilitate cross-border sharing of electricity, promote better competition and to ensure a future secure supply of electricity throughout the North East. The 2 projects are:

- 80km long Cavan Tyrone 400kV Power Line – the new North-South Interconnector
- 58km Woodland (Co Meath) to Kingscourt (Co Cavan) 400kV Power Line.

A new 80km long 400kV Interconnector between Cavan and Tyrone will more than double the current power transfer capacity between the North and the South, 35km approximately will be in Northern Ireland and the remaining 45km approximately will be in the Republic of Ireland, routed from a proposed new substation near Kingscourt in Co Cavan, through Co Monaghan to a proposed new substation in Co Tyrone. This project is being undertaken in co-operation with Northern Ireland Electricity (NIE).

Following extensive studies, route corridor options have been developed and are presented overleaf.

## Benefits

- Support growth and development
- Boost existing industry in Cavan, Monaghan and N. Ireland when competing for business and inward development in the area.
- Ensure security of supply for the future
- Comply with European Union policy which states that links between electricity systems are a key way of ensuring secure and competitively priced electricity markets into the future.
- Facilitate the Single Electricity Market due to come into effect in Ireland later this year.
- Promote competition and better sharing of generation resources between North and South
- Fuel savings
- Fewer emissions
- Facilitate integration of wind generated energy
- Make more bulk high quality power available for the North East

# How were the route corridors decided upon?

Seven key criteria were taken into account by the consultants when choosing possible route corridors for the power lines:

**Visual Impact:** An assessment of the of the visual impact of the proposal on the environment was carried out in order to minimise the impact

**Community:** an assessment of the local villages and communities was undertaken to reduce the proximity of the power lines to them and ensure minimal impact on lifestyles of those living and working in nearby communities.

**Ecology:** A review of conservation designated areas, including Special Areas of Conservation (SACs), Special Protection Area (SPAs) and Natural Heritage Areas (NHAs) was completed.

**Cultural Heritage:** Architectural and archaeological heritage sites, including recorded archaeological monuments and places, protected structures, and national monuments, were assessed in an attempt to minimise any impact.

**Landscape:** A review of County Development Plans was undertaken in order to assess the numbers of scenic views, scenic routes, and vulnerable landscapes in the area.

**Geology:** Soil, subsoil and bedrock was used to determine significant types and their benefits and drawbacks.

**Water:** The surface water features were reviewed, as lakes are to be avoided and river crossings minimised.

All of the above constraints were taken into account in order to ensure that the route options were sited in the best possible location.









# Route Corridor Options

## **Cavan - Tyrone** **Route Corridor A**

- Route corridor option A connects with the NIE proposal east of Clontibret
- From this point it crosses the N2 north of Annayalla and proceeds to cross the R183 west of the village of Doohamlet
- It continues in a south-easterly direction and crosses the R180 northwest of Lough Egish
- It then crosses the R181 between Lough Egish and Shantonagh to circumvent Shantonagh Lough
- It crosses the R178 approximately 3 kilometers east of Shercock to navigate around the lakes at Northlands and to cross the Cavan County Boundary
- Once it crosses the County Boundary along the R162, it travels in a southerly direction to finally cross the R165 and navigate towards the proposed 400kV substation to the west of Kingscourt Co. Cavan.

## **Route Corridor B**

- Route corridor option B travels in a north-south direction crossing the N2 to meander around Laragh Lough
- It proceeds in a southerly direction to cross the R183 and R161 approximately 3km west of Castleblayney
- It then passes to the east of Lough Egish, Laragh and west of Lisdoonan.
- It crosses the R180 approximately 4 km from Carrickmacross and travels southwesterly to cross the R178 to reconnect with the proposed route corridor Option A, east of Northlands.

## **Route Corridor C**

This proposed corridor deviates from the proposed route corridor A and B and traverses in the south-easterly direction around Lough Muckno to cross the N53 west of Crossmaglen

It would then cross the N2 before reconnecting with the proposed route corridor B option, south of Lisdoonan

# Your views are important to us

We welcome all suggestions and queries. All submissions made and feedback collected during the public consultation on route selection will be used by the technical project teams to inform their decision on selecting the most appropriate route. All queries and submissions made will be dealt with in a confidential manner.

Please study the maps and tell us your views on the proposed route corridor options—you may use the enclosed feedback form or additional pages if you wish. All correspondence will be dealt with confidentially.

## What Happens Next?

- Following public consultation in October 2007, submissions made by the public, businesses and other organisations will be taken into account, and along with further technical and other studies, will help to determine a Preferred Route.
- It is hoped that a Preferred Route will be ready for presentation to the public in early 2008, after which it will likely undergo further studies before a planning application is prepared.
- The planning application will include preparing an Environmental Impact Statement (EIS) and consultation with landowners and the local community. The Environmental Impact Assessments (EIA) will assess the impact of the project on the local areas as it is a process for anticipating and, possibly, preventing, negative effects on the environment that may be caused by a proposed development or project.

## Keep informed

EirGrid is committed to ensuring that all members of the public are fully aware of the project and encourage you to participate in public consultation. If you would like to discuss the project or to meet with a member of the project team, please contact us by either telephone or email. Otherwise, keep an eye on the website for regular updates.

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# Feedback

Name \_\_\_\_\_

Address \_\_\_\_\_

Telephone \_\_\_\_\_

Email \_\_\_\_\_

**The Project Manager**  
**Cavan-Tyrone 400kV Power Line**  
EirGrid  
27 Lower Fitzwilliam St  
Dublin 2, Ireland

## What are your views?

A large rectangular area with a light beige background, containing 20 horizontal lines for writing feedback.



### CAVAN - TYRONE 400kV POWERLINE - New North-South Interconnector MEATH - CAVAN 400kV POWERLINE

## NEED FOR THE PROJECT & COST

### What's happening?

EirGrid is planning two projects to facilitate cross-Border sharing of electricity, promote better competition and to ensure a future secure supply of electricity throughout the North East.

The two projects are:

- The Cavan-Tyrone 400kV Power Line - the new North-South Interconnector, approximately 80km in length.
- The Woodland (Co Meath) to Kingscourt (Co Cavan) 400kV Power Line, approximately 58km in length.

### Why are these new Power lines needed?

- To increase the security and reliability of electricity supply to all households, businesses and other customers throughout the island of Ireland. To support growth and boost existing industry in the region and ensure continuing reliability of supply.
- To facilitate the use of even more renewable energy such as from wind farms, wave, tidal and biomass, to connect to the electricity network. The Irish government has set out an ambitious target of 33% renewable generation by 2020.
- The North-South Interconnector (Cavan-Tyrone 400kV line) will allow the new all-island wholesale electricity market to work efficiently. This will allow for increased competition in electricity supply thereby offering consumers choice and competitive prices.
- The Meath-Cavan 400kV Power Line is necessary to strengthen the existing power supply in the North East due to recent increased development in the region, and to ensure there is enough capacity to transmit bulk supplies of power in order to meet energy demand in the coming years. Demand is growing on average 4% per year so if nothing is done in the next number of years there will not be enough high voltage infrastructure to bring power to these areas.



## NEED FOR THE PROJECT & COST (Continued)

### How much will these projects cost?

- 1) The Cavan-Tyrone Interconnector will cost approximately €180 million.
- 2) The Meath-Cavan Power Line will cost approximately €100 million.

These approximate figures are initial estimates for the total project.

### Who pays for the project?

- 1) The European Union Trans-European Network for Energy has funded 50% of the stage 1 phase (i.e. to Planning) for both the Meath-Cavan Power Line and the Cavan-Tyrone Interconnector.
- 2) The remainder of the cost of the stage 1 phase for the Meath-Cavan Power Line will be funded by EirGrid and is ultimately funded by the electricity consumer.
- 3) The remainder of the cost of the stage 1 phase for the Cavan-Tyrone Interconnector will be funded jointly by EirGrid and Northern Ireland Electricity and is ultimately funded by the electricity consumer in both jurisdictions.

ESB is the Transmission Asset Owner (TAO), while EirGrid is responsible for the development of the transmission

system. These activities are funded ultimately by all electricity customers through transmission use of system charges to generators and suppliers. The amount that EirGrid and ESB (TAO) can recover is regulated by the Commission for Energy Regulation (CER) through five yearly price controls that determine appropriate levels of capital and operating expenditure.

### What is EirGrid's role?

EirGrid plc, a state owned company, is the independent electricity Transmission System Operator in Ireland and the Market Operator in the wholesale electricity trading system.

- EirGrid's role is to deliver quality connection, transmission and market services to those who generate electricity, suppliers and customers utilising the high voltage electricity system, and to put in place the grid infrastructure required to support the development of Ireland's economy.
- EirGrid develops, maintains and operates a safe, secure, reliable, economic and efficient system to transmit electricity.
- EirGrid is playing a key role in establishing the new All-Island Market for Electricity, as well as developing a second North-South Interconnector.

## ROUTE CORRIDOR OPTIONS

### How were route corridors decided upon?

Seven key criteria were taken into account when choosing possible route corridors for the power lines:

- *Visual Impact:* An assessment of the visual impact of the proposal on the environment was carried out in order to minimise the impact
- *Community:* an assessment of the local villages and communities was undertaken to reduce the proximity of the power lines to them to ensure minimal impact

on the lifestyles of those living and working in nearby communities

- *Ecology:* A review of conservation designated areas, including Special Areas of Conservation (SACs), Special Protection Areas (SPAs), and Natural Heritage Areas (NHAs) was completed
- *Cultural Heritage:* Architectural and archaeological heritage sites, including recorded archaeological monuments and places, protected structures, and national monuments, were assessed in order to minimise any impact

## ROUTE CORRIDOR OPTIONS (Continued)

- *Landscape:* A review of County Development Plans was undertaken in order to assess the numbers of scenic views, scenic routes, and vulnerable landscapes in the area
- *Geology:* Soil, subsoil, and bedrock were used to determine significant types and their benefits and drawbacks
- *Water:* The surface water features were reviewed, as lakes are to be avoided and river crossings minimised

### What is the preferred route?

All of the route corridors that have been prepared are possibilities. EirGrid will announce the preferred routes early in 2008 and the public will have further opportunities to consider and comment on them.

### What is the length of the Meath-Cavan 400kV Powerline?

The route from Kingscourt to Woodland is approximately 58km; the line connects an existing substation at Woodland to a proposed new substation at Kingscourt.

### What will happen at the new substation in Kingscourt?

The main purpose of a substation is to connect together various transmission lines. This includes converting (transforming) voltage from the powerlines into a lower voltage that ultimately is supplied, via other substations, to customers' homes, businesses, etc.

### What is the length of the North-South Interconnector?

The route length from Kingscourt to the Border crossing point near Clontibret, Co. Monaghan, is approximately 45km in the Republic of Ireland.

### Where will the substation be located?

A substation will be located near Kingscourt, Co. Cavan close to the existing Flagford-Louth 220kV line. EirGrid is presently trying to acquire a site in this area. The station size will be approximately 240m x 220m (approximately 13 acres) in size and additional lands will be used for access and landscaping purposes.

### What impact will these projects have on the environment?

An Environmental Impact Assessment will be undertaken by EirGrid and this is an essential requirement of planning law and must accompany the application for planning permission.

There will be some impact on the environment but EirGrid will keep this to a minimum through a careful route selection process which takes into account all of the environmental and technical constraints.

## HIGH VOLTAGE TRANSMISSION LINES

### What is the function of the overhead powerlines?

The power lines carry electricity from the generators (such as Moneypoint, Poolbeg, Huntstown, wind farms etc.) into a substation where the electricity is transformed into a lower voltage that ultimately is supplied to customers' homes, businesses, etc. The power lines are supported by pylons.

### How were route corridors decided upon?

- The high voltage transmission system in Ireland is composed of 110kV, 220kV and 400kV lines, cables and substations.
- There are approximately 6,000km of high voltage lines in Ireland at present.
- It is proposed that the new transmission lines for these projects in the North East will be operated at a voltage of 400kV.
- There are currently 439km of 400kV lines in Ireland, running from Moneypoint in Co. Clare to Woodland in Co Meath and Dunstown in Co. Kildare.
- There are four existing 400kV substations - Moneypoint, Oldstreet, Dunstown and Woodland.

### Why use 400kV transmission lines?

These projects will link into the existing 400kV system. Demand for electricity is growing at 4% per annum and so significant additional electricity transmission capacity is needed to meet this demand. Given the required volume of power transfer required, a 400kV line was chosen because it:

- Can carry large quantities of power and so is more efficient than lower voltage lines
- Has strategic benefits and the ability to best meet technical and economic criteria
- Provides additional capacity that can be exploited at a later date by other users, thus avoiding the need for further expansion in future planning horizons

- Shows potential developers and industrialists that there is room for generator capacity in this area, which will enable and encourage further local development
- Will maximise power transfer in the Dublin to Louth corridor and therefore fully leverage interconnection with Northern Ireland, increasing the amount of power that can be accessed by either system operator on both sides of the border
- Opens up the network to competition, allowing producers in Northern Ireland and the UK to access to the Irish electricity supply market

### Where will the power come from?

The power ultimately comes from the generators i.e. the power generation stations and renewable energy sources such as wind, wave, biomass, etc. Generators are located throughout the island of Ireland such as in Poolbeg and Moneypoint.

### Will powerlines and pylons be built over my house?

No, power lines will not be built over houses. The pylons will be kept as far as possible from houses for amenity reasons i.e

- Visual Impact
- Community
- Ecology
- Cultural Heritage
- Landscape
- Geology
- Water.

### What are the standards for pylon/line distances from towns, villages, schools, etc?

One of the main constraints in route selection of overhead lines is avoiding existing residential developments such as houses, schools and hospitals, especially in light of extensive recent development. EirGrid aims to build the powerlines a minimum distance of 50 to 60 metres from existing dwellings to the centre of the line. In the vast majority of cases a much greater distance than 50-60 metres is achieved.

## HIGH VOLTAGE TRANSMISSION LINES (Continued)

### What type of support structures are being used to carry the power lines?

EirGrid is looking at using a variety of new steel lattice pylons with a view of choosing one which has a low visual impact on the environment. They will range from 28-43 metres high.

### What size is a pylon?

The pylons have a foot print (ground area) of about 10m x 10m up to 16m x 16m and range from 28 - 43 metres high.

### How far apart are the pylons spaced?

The maximum distance between 400kV pylons is 500 metres. On average 400kV lines are spaced an average of 350 metres from each other.

### What is the clearance above ground of the lines?

- Generally speaking the clearance (smallest distance) between the line and the ground is more than 11 metres.
- In the very worst case the clearance between the line and the ground is no more than 9 metres, and no more than 10 metres over major roads/railways, based on the maximum line operating temperature of 80 degrees Celsius coinciding with the least favourable weather case.

### Is there any noise from the lines?

There will be some noise from the line; however for the most part the noise will be below the existing level of background noise even in houses near the line. Projected noise levels will be included in the Environmental Impact Statement (EIS) being prepared for the planning application.

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## OVERHEAD V UNDERGROUND

### Why not build underground lines for these projects?

Undergrounding all or part of a Transmission Network presents problems for the secure and reliable operation of that network. The location and repair of faults on underground cables can take a number of weeks, depending on the type of fault and its location. For such an integral part of the transmission system, such a compromise to the security of supply would be unacceptable.

Industries are attracted to a region for many reasons, one of them being a dependable supply of electricity. New industries locating in Ireland discuss with EirGrid the terms, conditions, security of supply and the quality of the power being delivered. A Transmission System based

on circuits of underground cable would not provide the continuity or quality of supply necessary to attract the high quality type of industry being sought by the local development agencies such as the IDA.

### Are there any underground lines in Ireland?

In line with utilities worldwide, Ireland's transmission system is predominantly based on overhead lines. At present, the transmission system in Ireland is an AC (alternating current) system and comprises about 6,000km of overhead line and 100km of underground cable (of short individual lengths).

## OVERHEAD V UNDERGROUND (Continued)

### Why are the majority of powerlines in Ireland overhead?

There are a number of reasons why the transmission system is predominantly based on overhead lines. These include:

- An overhead line has several advantages compared with an underground cable, as an overhead line is faster and easier to maintain and repair plus it is not subject to damage from digging activities.
- Underground cable circuits are also more vulnerable to outside construction activities such as local building/road works and farming activities, which can result in excavation damage.
- An underground cable fault can take significantly longer to repair. Firstly, if the fault is not caused by a third party - or the third party has left the scene - the location of the fault has to be identified. An underground cable fault can therefore take weeks to repair as it can be difficult to locate the position of the fault and the repair process itself is slow. Such a situation could not be tolerated on major high voltage systems.
- If cables are laid under agricultural land or cross-country, the trench for the cables has an environmental and agricultural impact. Farming activities would be impeded and habitats across which the cable was laid would be disrupted. It would also be necessary to maintain permanent year round access for the heavy machinery needed to facilitate emergency fault repair. Even so access would be difficult when cables are under waterlogged fields in wintertime and this would further increase the repair time.
- There are two methods of connecting an overhead line section to an underground AC (alternating current) cable section - interface compounds or direct mounting on special interface towers.

Interface compounds would consist of large fenced compounds, with a ground-mounted electrical plant, such as cable sealing ends, surge arresters, high-frequency line traps and communications coupling equipment. Large portal structures would also be

required to take the connections from the overhead line end masts. These compounds would be far more visually intrusive than an overhead line mast.

- In certain cases it is possible to mount all of the cable interface hardware as described above on the overhead line pylon itself. Nonetheless, this still leads to a greater visual impact than the normal overhead line structures.
- If underground cables are laid along existing roadways instead of cross-country, traffic delays can occur due to construction during the trenching process and afterwards if repairs are required. After installation, high voltage underground cables cannot be disturbed and this could make it more difficult for road widening or other works.
- Underground high voltage AC (alternating current) cables are typically many times more expensive than the equivalent overhead line and electrically they present many technical difficulties. Maintenance costs are higher for an underground cable than an overhead line. Large amounts of AC underground cable would require reactive compensation to be installed to prevent excessive system voltages.

### What are the implications for the system of using underground cables?

Industrial and domestic customers require that the transmission system operates to very high levels of availability. One of the ways that EirGrid achieves this on our overhead line networks is by High Speed Auto Reclosing.

### What is High Speed Auto Re-closing?

- In case of overhead lines, the majority of faults (over 90%) are of a transient nature usually caused by lightning. In the event of a lightning strike, protection schemes at both ends of the line detect the fault and open the switches (breakers) to clear the fault. The breakers are then re-closed and the circuit switched back into service. All of this takes place in less than half a second and is called High Speed Auto Re-closing.

## OVERHEAD V UNDERGROUND (Continued)

- If the fault remains when the circuit is re-closed then the switches open again and stay open until the line is patrolled and the cause of the fault is identified and repaired.
- With underground cables all faults are permanent and the majority of faults are caused by third party activity usually somebody digging into the cable.
- Therefore when a fault is detected on an underground cable, the breakers open the circuit as in the case of overhead lines but do not re-close i.e. no attempt is made to return the cable to service. This is to prevent further damage and for safety reasons - EirGrid do not want to apply full voltage to somebody who may be in contact with the cable.
- Therefore in the case of any underground cable fault, EirGrid switch out the circuit and do not switch it back again until the circuit has been patrolled, the cause of the fault identified and repairs carried out.

In Dublin there are a number of 220kV underground transmission cables connecting the generation stations on the Poolbeg peninsula to the rest of the system. Reclosing as described above is not allowed on these circuits and if a fault does occur the circuit stays out of service until the fault has been found and repaired. Repairs to underground transmission system cables are highly specialised work and it is not uncommon for faulted circuits to be unavailable for several weeks. Similar situations apply in Cork.

### When and why are underground cables installed?

EirGrid uses underground cables where there is no other option e.g. in built-up areas or where it is the only practical option, for example on the proposed East-West (Ireland-Wales) undersea connection.

Under certain conditions EirGrid permit short underground cable sections at the end of an overhead transmission line, such as when one end of the underground cable must terminate in a transmission station. While this does have an impact on the circuit availability, the impact is limited because if the underground cable is at one end and a fault occurs on the circuit (the connection between transmission substations), modern protection equipment can be

programmed to discriminate whether the fault is on the line or on the underground cable section. For a fault on the overhead line section reclosing is permitted while if it is on the underground cable section reclosing is blocked.

### Is there an EU Directive banning overhead lines of this nature due for introduction in 2008?

No plans for any EU Directive banning overhead line construction have been announced or proposed by the European Commission. The reason why an overhead line is proposed here is because it will deliver the most reliable and economic method of transporting power for electricity customers. Overhead lines are the method used for 97 per cent of on-shore high voltage electricity transmission lines in Europe.

### What is the Ireland-Wales East-West project?

It is a link between two separate power systems, from Ireland to Wales under the Irish Sea using DC (direct current) technology. This will involve very expensive pieces of infrastructure, called converter stations, at both ends as well as the use of submarine cables.

### Why is EirGrid planning AC Overhead lines for the North East projects?

The proposed Meath-Cavan and Cavan-Tyrone 400kV projects will be integral to the All Ireland transmission system. Overhead line AC technology is used everywhere in the world. AC underground is not technically feasible for the length of 400kV line proposed for these projects and would cost many times more.

Direct Current technology would not be appropriate for these projects because it doesn't fulfil the function required; DC technology is not suitable for future system development and is expensive.

Given that the costs of completing these projects is ultimately borne by the consumers, EirGrid is responsible for ensuring that these projects are implemented in the most technical, economical, and reliable means possible taking into account the criteria mentioned detailed elsewhere in this document (see Route Corridors Options section).



## HEALTH & EMF

### What is EirGrid's position on health and power lines?

A debate about the possible effect on human and animal health of electric and magnetic fields (EMF) has continued since the 1970s. Since then, many thousands of studies have been undertaken all over the world to assess any potentially harmful effects from power lines, electrical appliances and domestic wiring.

EirGrid is satisfied from the totality of studies and the views of international authoritative agencies that the balance of evidence is that extremely low frequency (ELF) electromagnetic fields (EMF) do not have any adverse effect on health. The Irish network is in full compliance with the most up-to-date international and EU guidelines and recommendations relating to public and staff EMF exposure. The proposed new lines will also be in full compliance.

### What independent research has been carried out about EMF?

- Extensive worldwide research (at a cost of over €440m) has found no conclusive evidence to date proving that electric and magnetic fields from power lines [i.e. extremely low frequency (ELF) EMF] are harmful.
- A study carried out by the World Health Organisation (WHO) EMF Task Group concluded in 2007 that there are no substantive health issues related to Extremely Low Frequency (ELF) Electro Magnetic Fields (EMFs) at levels generally encountered by members of the public.
- The Irish Department of Communications reported independently on this issue and its conclusions were consistent with the above independent bodies.

### Are the guidelines used by WHO ten years old and therefore out of date?

The guidelines by WHO are reviewed regularly by that organisation's International Committee on Non-Ionising Radiation and no change has been made to the guidelines. See [www.who.int](http://www.who.int) for further information. All Irish power lines comply with the WHO levels and, in fact,

the levels of EMF from power lines in Ireland are far lower than those levels from appliances commonly used in homes throughout the country.

### The Draper Report is being quoted as conclusive proof that electromagnetic fields cause serious health risk. Is this true?

International research reviewed by the World Health Organisation, EU and Irish Government has shown that the levels of EMF which anyone in Ireland could be exposed to are safe. The researchers who produced the Draper Study in England and Wales stated that their results indicating a higher risk of childhood leukaemia were not supported by convincing laboratory data or any accepted biological mechanisms. No change in international EMF limits has been implemented as a result of the Draper Report.

### What is EirGrid doing about EMF?

EirGrid recognises that some individuals are genuinely concerned about issues regarding EMF and health and we are committed to addressing these concerns by continuing to:

- Design and operate the transmission system in accordance with the most up-to-date recommendations and guidelines of the various expert and independent international bodies.
- Closely monitor engineering and scientific research in this area.
- Provide advice and information to staff and the general public on this issue.

### Where can I find out more about EMF?

For more information you can download our brochure 'Information on Electric and Magnetic Fields' from [www.eirgrid.com](http://www.eirgrid.com).

## THE PLANNING PROCESS

### Who will EirGrid apply to for planning permission for these projects?

Applications for planning approval for both projects with accompanying Environmental Impact Statements will be made directly to An Bord Pleanála in 2008, under the Strategic Infrastructure Act 2006.

Everybody, including state and semi-state bodies, seeking permission for strategic infrastructure projects of national importance must first apply to the Strategic Infrastructure Division of An Bord Pleanála for a decision on whether the particular project is of strategic importance. EirGrid has already held pre-application consultations with the Strategic Infrastructure Division of An Bord Pleanála in respect of these projects and they have confirmed that they are of strategic importance and fall under the remit of the Strategic Infrastructure Act. Therefore EirGrid will apply to An Bord Pleanála for this approval.

### Will the public be consulted before a planning application is made?

The public, the local authorities and interested stakeholders are being consulted and their views will be taken into account in respect of the application that is submitted.

A preferred route for each project will be chosen in early 2008. Public consultation will continue on these projects until planning applications are made later in 2008 to the independent planning authorities who will in turn examine all issues.

### Has EirGrid already applied for planning permission to build these overhead lines?

We will not be applying for planning permission until later in 2008, so all concerned people will have information to enable them to make submissions or objections as a part of the independent planning permission process.

### Can the public make submissions to the planning authorities?

Members of the public have seven weeks to make submissions to the planning authority from the date of the application. More information on the planning process is available on [www.pleanala.ie](http://www.pleanala.ie) or at [www.eirgrid.com](http://www.eirgrid.com).

### What is the Strategic Infrastructure Act?

The Strategic Infrastructure Act 2006 amended the Planning and Development Act 2000 to provide for the introduction of a 'strategic consent process' for strategic infrastructure of national importance provided by statutory bodies and private promoters. The Act provides a service for all stakeholders, infrastructure providers, state bodies and general public through:

- a single stage process of approval of projects
- a rigorous assessment of all projects including their environmental input
- full public consultation

The application must be made by way of the full completion of the application form to An Bord Pleanála. The sequencing of the application process and the content of the public notice as set out at section 182A of the Planning and Development Act 2000 and article 214 of the Planning and Development Regulations, 2006.

### Will the public be able to make submissions to An Bord Pleanála?

- An Bord Pleanála requires as a minimum that the public notice of the application would be in two newspapers circulating in the area to which the proposed development relates.
- The documentation relating to the application is to be available for public inspection at the offices of the relevant public authority, the offices of An Bord Pleanála and the offices of the applicant.



## THE PLANNING PROCESS (Continued)

- An Bord Pleanála also requires the prospective applicant (EirGrid) to provide a stand alone website containing all of the application documentation. The documentation on the website should be in a read only format whereby members of the public can download/view information in relation to the application.
- The time period for making submissions by the public is to be at least seven weeks from the date the documents become available for inspection. An Bord Pleanála requires that the public notice must indicate the time and date deadline for making submissions to them

### Where can I find out more information about the planning process?

More information on the planning process is available on [www.pleanala.ie](http://www.pleanala.ie)

### What permission does EirGrid need to enter land?

As agreed for transmission system reinforcements, ESB carries out the construction works in accordance with the planning approval obtained by EirGrid. ESB's entry onto lands is covered by the Irish Electricity Supply Acts (1927 and subsequent amendments). These acts contain a legal right for ESB to enter onto lands to erect overhead lines subject to a requirement to inform the landowner in advance of construction by a statutory wayleave notice giving ESB's intention to erect an overhead line across their lands. The right of landowners for compensation and access to the Property Arbitration Court was confirmed in the 1985 amendment.

### What process will be followed if the proposed route goes through my land?

- In practice, landowners are made aware of the proposed line during the consultative/planning process and the survey/design stage.
- Wayleave notices and a six inch map of the area showing structure locations are formally issued to landowners following receipt of a final grant of planning approval for the overhead line project.
- The wayleave notice must be served on every landowner and on every occupier of land crossed by the proposed line, even if there is no structure on their land.

### What compensation will I receive?

Compensation is paid to landowners on whose property the overhead line is erected. This is done in accordance with long established agreements with the Irish Farmers Association.

All agreements with landowners are negotiated individually since the effect of the transmission line on each landowners' property will vary from landowner to landowner. EirGrid will endeavour to complete negotiations with each landowner prior to construction.

## PUBLIC CONSULTATION PROCESS

EirGrid would not be making an overhead line proposal for these projects if it was not convinced that this method was the best way to ensure supplies of safe, reliable, secure and economic power for many years ahead in the North East. The proposal is subject to public consultation and the final decision on the project will be made - not by EirGrid - but by independent planning authorities who will examine all issues.

There are many ways for any interested individual or group to raise their concerns and EirGrid is committed to ensuring that all members of the public are fully aware of the project. We encourage everyone to participate in public consultation. There are a number of methods available:

### Website

Up-to-date information on both projects is available on EirGrid's website, [www.eirgrid.com](http://www.eirgrid.com). This site will be updated regularly to keep everyone informed of the progress of the project.

### Email & Phone

Dedicated email addresses ([meathcavanpower@eirgrid.com](mailto:meathcavanpower@eirgrid.com) and [cavantyroneinterconnector@eirgrid.com](mailto:cavantyroneinterconnector@eirgrid.com)) and a phone line (1890.25.26.90) have been set up to deal with any queries or issues people may have.

### Feedback Form

Fill out the feedback form (available at the Open Days or at [www.eirgrid.com](http://www.eirgrid.com)) and return it, highlighting your queries / concerns.

### Meetings

If you would like to talk directly to the project team regarding either project, we would be happy to arrange such a meeting. Please use any of the above communication methods to make such an appointment.

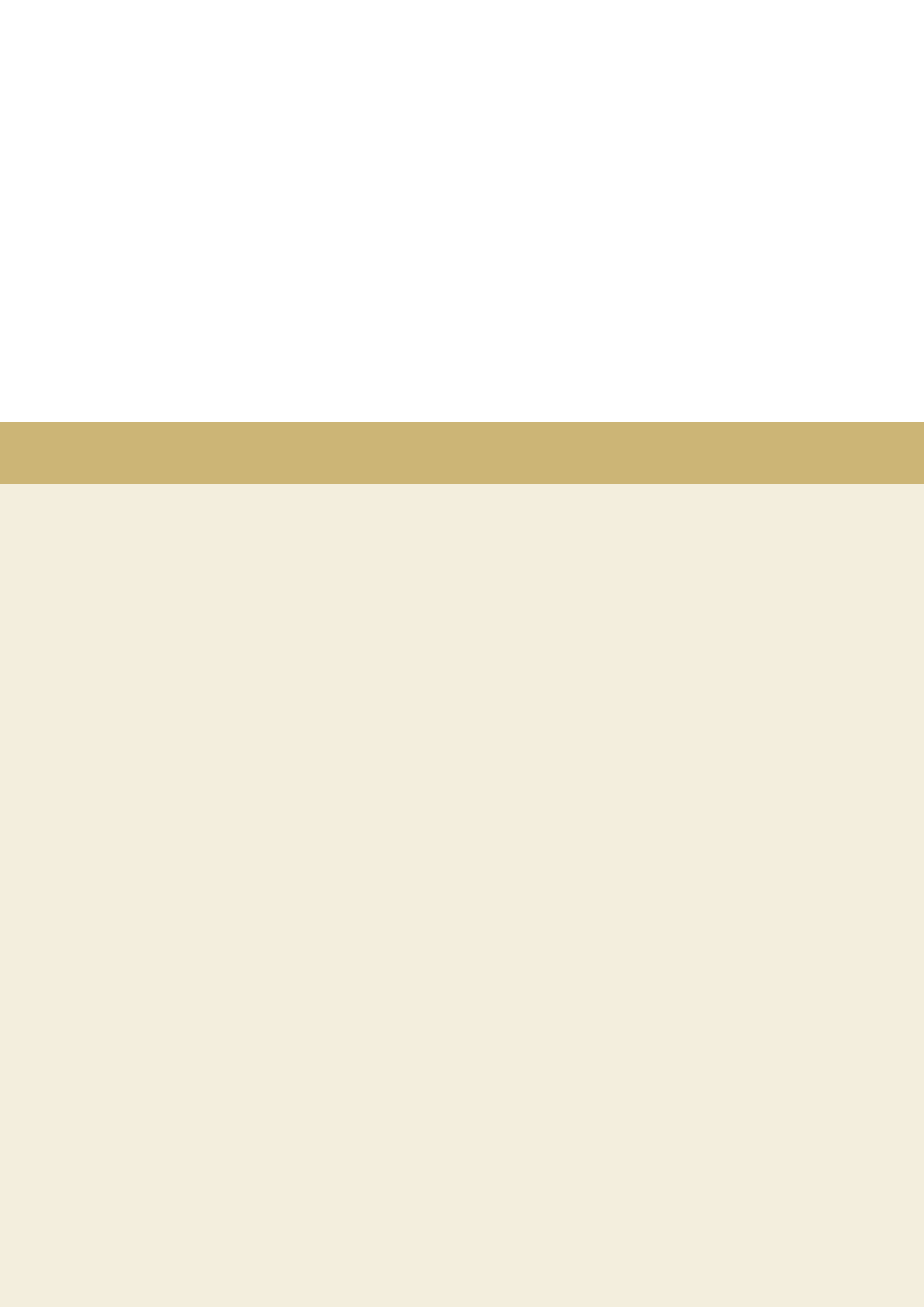
### Elected Members Meetings

EirGrid has made a series of presentations with the elected members of Meath, Cavan, and Monaghan. This was an opportunity for the local representatives to be made fully aware of the project, after which they were able to advise their local stakeholders on the benefits and drawbacks of the projects.

We are keeping in regular contact with Elected Members are providing briefings and information/materials to them as required.

### Planning Process

A preferred route for each project will be chosen in early 2008. Public consultation will continue on these projects until planning applications are made later in 2008 to the independent planning authorities who will in turn examine all issues. Subject to planning permission, construction would not take place until 2009. Members of the public have seven weeks to make submissions to the planning authority from the date of the application. More information of the planning process is available on page 9 of this leaflet or visit [www.pleanala.ie](http://www.pleanala.ie)





# INFORMATION ON ELECTRIC AND MAGNETIC FIELDS

## Contents

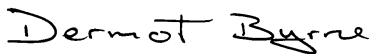
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### Introduction

**E**irGrid regards the protection of the health, safety and welfare of its staff and the general public as a core company value. It is EirGrid's policy to design and operate the transmission network to the highest safety standards and to comply with the most up-to-date international guidelines and recommendations.

A debate about the possible health effects of electric and magnetic fields associated with electric power systems on humans and animals has continued over the last number of decades. Despite extensive worldwide research, international review bodies have found no conclusive evidence that exposure to electric and magnetic fields encountered in normal living and working conditions are harmful to public health.

EirGrid continues to review new developments and research findings and is satisfied from the totality of studies and the views of authoritative bodies that the balance of evidence is that electric and magnetic field emissions from electric power systems do not cause adverse effect on health.



Dermot Byrne, Chief Executive, EirGrid

However, EirGrid recognises that some individuals are genuinely concerned about issues regarding electric and magnetic fields and health. The quality of you and your family's living and working environment, along with the welfare of livestock and farm crops is of the utmost importance to us at all times.

We are committed to addressing your concerns in an open manner. To assist in this process we are providing you with this booklet on electric and magnetic fields. We hope you find it useful and that it provides answers to questions currently being asked on this issue.

We acknowledge the obvious health, social and economic benefits that electric power brings to society and reaffirm our commitment to design and operate the electricity transmission system that facilitates these benefits in a safe, reliable and economic manner.



### What is a field?

A field describes the influence of an object on its surrounding space. For example, a temperature field may exist around a hot object. Within nature, a number of electric and magnetic fields occur. The earth is itself an immense natural magnet with magnetic poles near the north and south poles

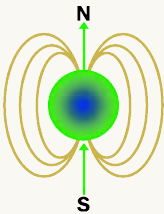


Fig 1 Earth's magnetic field

(Fig 1 *Earth's magnetic field*). This permits the use of a compass for accurate direction finding.

Electricity is a natural

phenomenon which occurs as lightning and within the human body as electric fields and currents which allow information to flow within cells and tissues. Apart from these natural phenomena, electric and magnetic fields are produced wherever electric power is in use.

In Ireland, electricity varies at a power frequency of 50Hz (i.e. alternating back and forth 50 times each second) and produces characteristic electrical and magnetic fields. At home and at work, similar fields are produced by wiring and by electrical appliances in everyday use.

### What is an electric field?

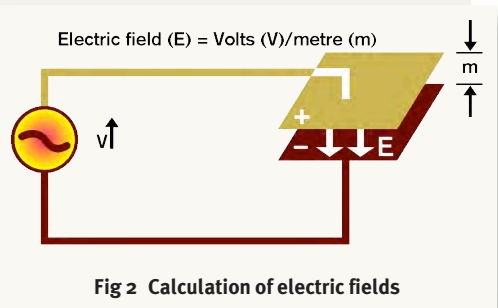


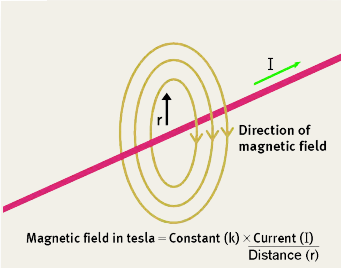
Fig 2 Calculation of electric fields

An electric field is produced within the surrounding area when voltage is applied to a conductor (or wire). Just as the area around a hot-water pipe is affected by the temperature of the pipe, the area surrounding an electrical conductor is influenced by the conductor voltage. The strength of an electric field at a given location depends on two factors — the level of voltage applied to the conductor and the distance from it. The magnitude of an electric field is measured in volts (or thousands of volts – kilovolts) per metre. This is written as V/m or kV/m (see Fig 2 *Calculation of electric fields*).



### What is a magnetic field?

Magnetic fields are produced where electric current is present. The strength of a magnetic field at a given location depends on the level of current flowing in the conductor or wire and the distance from it.



Magnetic fields are normally expressed in terms of a quantity called the magnetic flux density, expressed in terms of tesla (T).

Fig 3 Calculation of magnetic fields

$$\text{Magnetic field in tesla} = \text{Constant } (k) \times \frac{\text{Current } (I)}{\text{Distance } (r)}$$

This relatively large unit is often expressed in submultiples such as microtesla ( $\mu\text{T}$  – one millionth T) (see Fig 3 *Calculation of magnetic fields*).

### Fields within the electromagnetic spectrum

There are many different sources of electric and magnetic fields and radiation. The sun heats the earth using electromagnetic radiation, vision is possible because of electromagnetic radiation, watching television and listening to radio are pastimes made possible by modern telecommunications and the ingenious use of electromagnetic fields. Not all these fields are the same, they are distinguished by their frequency which is measured in cycles per second or Hertz (Hz) (see Fig 4 *The electromagnetic spectrum*).

At the extremely low-frequency (ELF) end of the electromagnetic spectrum we find electric and magnetic fields typical of those associated with power lines.

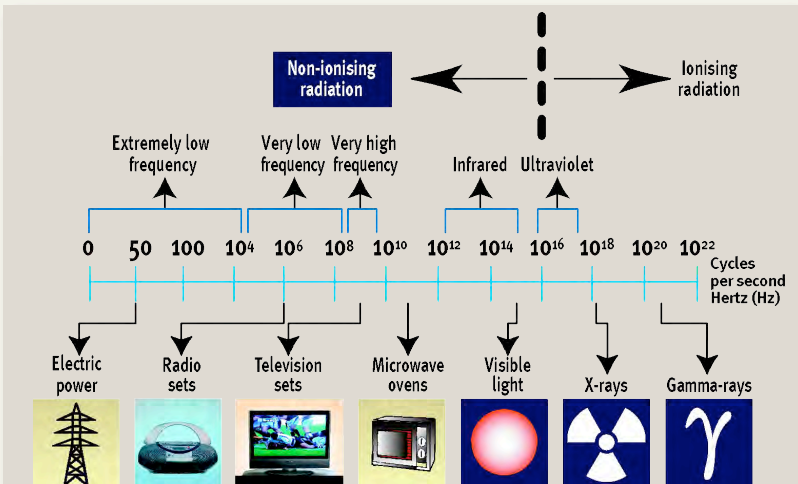


Fig 4 The electromagnetic spectrum



Because these fields operate at extremely low frequency, they contain very little energy and cannot directly break apart molecules.

Because of the characteristics of power lines, no electromagnetic energy radiates from the lines as a result of the surrounding electric and magnetic fields.

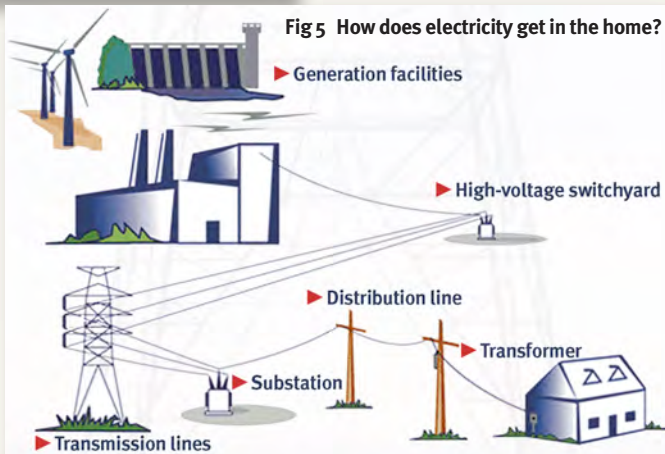
Moving up the spectrum we pass through radio, TV and microwave



frequencies into visible light. Further up, in the ultraviolet region of the frequency spectrum, electromagnetic radiation becomes 'ionising radiation'. Ultraviolet light, X-rays and gamma rays are ionising radiation and have sufficient energy to break apart the molecules which make up genes. Excessive exposure to these forms of radiation is dangerous and can lead to cell mutations and cancer.

### Electricity transmission infrastructure used in Ireland

EirGrid uses high-voltage transmission lines to transmit electric power to demand centres throughout the country. For over 75 years, 110kV lines have been used in Ireland, while 220kV lines are in operation for about 50 years. For the past 20 years, 400kV lines have also been in use. Internationally, 220kV transmission lines have been widely used since the 1920s.



### ELF EMF levels from overhead power lines

The electric field to which members of the public may be exposed from a power line is strongest directly under the line where the conductors are nearest the ground. This is usually near the middle of the span between two adjacent support structures. By moving away from a power line the strength of the electrical field decreases rapidly.

The normal maximum electric field

strength at ground level 30m from the centre of the lines ranges from 0.08kV/m for a 110kV line to 1.29kV/m for a 400kV line as shown in Table 1.

Magnetic fields produced by power lines are strongest directly under the line where the conductors are nearest the ground.

Typical magnetic flux densities at 30m from transmission lines in Ireland are shown in Table 1 and range from 0.2 $\mu$ T for a 110kV line to 1.81 $\mu$ T for a 400kV line.

**Table 1** Typical electric field strength and magnetic flux density at 30 metres from overhead transmission lines in Ireland

Type of line	Electric field strength (kV/m)	Magnetic flux density ( $\mu$ T)
<b>110kV single circuit</b>	<b>0.08</b>	<b>0.2</b>
<b>110kV double circuit</b>	<b>0.043</b>	<b>0.1</b>
<b>220kV single circuit</b>	<b>0.359</b>	<b>0.71</b>
<b>220kV double circuit</b>	<b>0.219</b>	<b>0.41</b>
<b>400kV single circuit</b>	<b>1.29</b>	<b>1.81</b>
<b>EU/ICNIRP guideline</b>	<b>5</b>	<b>100</b>



### ELF EMF levels from underground cables

The method of construction of underground cables means that they do not produce external electric fields.

An underground high-voltage cable will produce a greater magnetic field directly above it than an overhead line will produce at ground level.

The magnetic fields fall more rapidly with distance to the sides. Typical magnetic flux densities at 5m from underground cables in Ireland are  $0.5\mu\text{T}$  for a 110kV cable and  $1.5\mu\text{T}$  for a 220kV cable.



### ELF EMF levels from substations

Transmission substations produce small fields with the maximum values generally occurring where the line(s) and/or cable(s) enter and exit the substation. Typical values are as per the values referenced above for transmission lines and cables.



### Baseline environmental conditions

As highlighted in a previous section, there are many different sources of EMF both naturally occurring and those generated wherever electric power is used.

The earth's magnetic field, which is due mainly to currents circulating in the outer layer of the earth's core, varies between approximately  $30\mu\text{T}$  at the equator to about  $60\mu\text{T}$  at the poles. This field may be distorted locally by ferrous minerals or by steelwork such as in buildings.

At the earth's surface there is also a natural electric field, created by electric charges high up in the

ionosphere, and varying between 100 and 150V/m in fine weather. Below a storm cloud containing large quantities of electric charge, the field may reach intensities up to 20kV/m over flat surfaces, while above hillocks or other irregularities or near the tops of objects such as trees, the field strength can be considerably higher. In mountains, for instance, the presence of these fields produces electrical discharges and crackling noises on sharp ridges and on the ends of icepicks.

Such electric and magnetic fields occurring naturally in the earth generally move in the same direction and are referred to as static or DC fields.

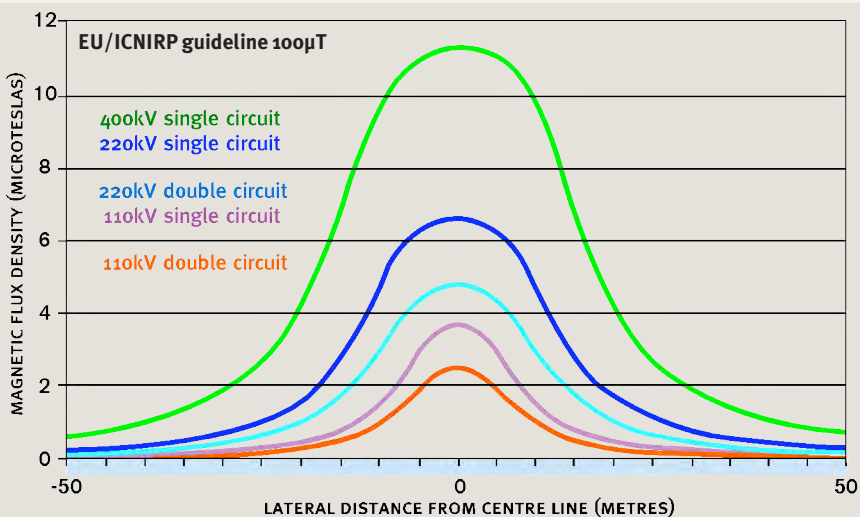


Fig 6 Typical magnetic field profile

### Other sources of EMF

In Ireland, the electric and magnetic fields produced wherever electric power is present vary at a power frequency of 50Hz (i.e., alternating back and forth 50 times each second). Such fields are referred to as alternating or AC fields and are classed as extremely low frequency (ELF).

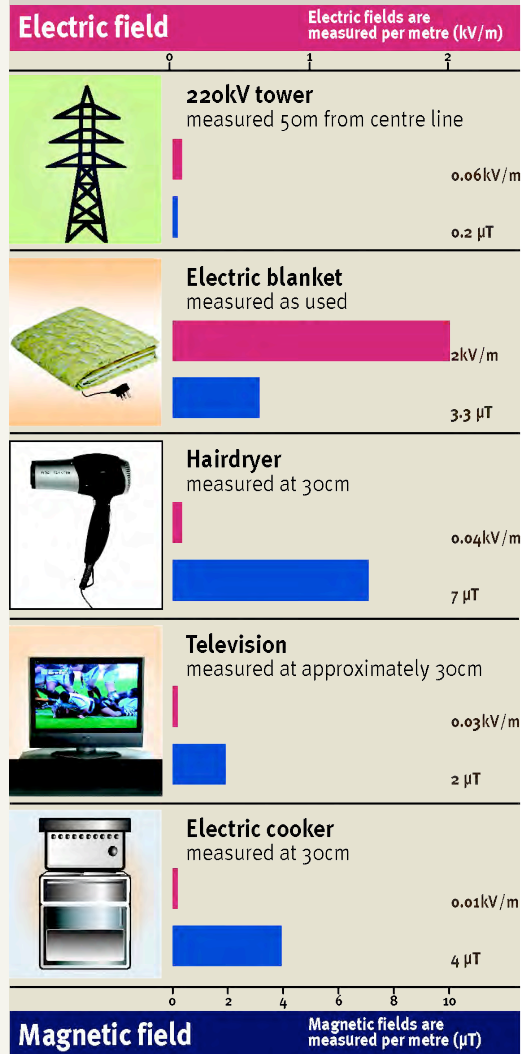
EMFs are produced in everyday situations by electrical wiring and electrical appliances. In many cases domestic electrical appliances and tools can generate much higher EMF levels in their close proximity than transmission lines at a nominal 50m distance away.

A comparison of the EMF levels from a 220kV transmission line and the fields generated by domestic appliances is shown in Table 2.

A difference between the magnetic fields produced by power lines and electrical appliances is that the magnitude of the fields produced by appliances falls off very rapidly with distance. The fall off from power lines is less rapid. The fields from power lines tend to be constant over time while the magnetic fields produced by appliances only arise when they are in use.

These ‘profiles’ in Figure 6 (see page 9) show the magnetic field near the ground for some typical overhead lines.

**Table 2** Typical value of electric and magnetic fields in the environment





### Investigations of EMF effects

A debate about the possible effect of electric and magnetic fields on human and animal health has continued since the 1970s. Since then, many thousands of studies have been undertaken all over the world to assess any potentially harmful effects from power lines, electrical appliances and domestic wiring.

Despite this extensive worldwide research (at a cost of over €440m) no conclusive evidence has been found to date proving that

electric and magnetic fields are harmful.

EirGrid is fully aware of the questions currently being raised and it is EirGrid's policy to design and operate the network to the highest safety standards and to continually review and update standards in the light of new developments and research findings. The following is a brief guide to the body of research undertaken worldwide.



### Human studies

Human volunteers have assisted in international studies. These detailed and thorough programmes exposed volunteers to electric and magnetic fields under strictly controlled laboratory conditions. The strengths employed were much stronger than people normally experience in their day-to-day lives – ranging up to 20kV/m and 5,000 $\mu$ T, with exposures of several hours. These presented much greater levels of exposure than the levels from transmission lines shown in Table 1 (see page 7). Under these conditions, a wide range of performance and blood tests were carried out.

No marked ill-effects of these very high levels of exposure were observed. Small physiological changes were seen, such as changes in heart rate. But these changes were well within the normal range of variation. Such temporary physiological changes are not regarded as adverse to health.

### Epidemiological studies

Epidemiology is the study of the distribution of disease in populations and of factors that influence the occurrence.

Substantial epidemiological investigations relating to exposure or presumed exposure to power-frequency electric and magnetic fields as a possible threat to health have been conducted and published in various parts of the world. Such studies are statistical in nature and require large sample populations. They have not been undertaken in Ireland because of this country's relatively small population.

Many external factors can influence an illness and it is generally not possible to make allowance for all of these factors. Epidemiological study results attempt to indicate to what extent some factor is statistically associated with the occurrence of an illness and can also indicate the strength of this association.

Association does not, however, prove cause. To establish cause – particularly when the association is relatively weak – scientists generally require a consistency in results between independently conducted epidemiological studies, a clear 'dose/response' relationship (i.e. as the dose gets stronger the response gets bigger), supporting evidence from animal studies and preferably an understanding of the underlying biological mechanism. Some epidemiological studies suggested possible associations.



Most of the concern about power lines and cancer stems from earlier epidemiological studies of people living near power lines. Results have not been consistent and have not been backed by laboratory studies.

**Despite extensive scientific research, none of these requirements have been met in any substantive form to allow any definite conclusions be made in the case of ELF EMFs.**

### **Recent major studies include**

■ The United Kingdom Childhood Cancer Study (UKCCS) was one of the world's largest epidemiological studies of childhood cancer, examining over 2,000 cases, and looked at a number of suggested causes for the cancer, including EMFs. The UKCCS was completed in 2000 and found no evidence that EMFs cause cancer.

■ In 2000, Professor Anders Ahlbom from Sweden led a pooled analysis of nine separate epidemiological studies and found that children living in homes with 24-hour average magnetic fields greater than or equal to  $0.4\mu\text{T}$  have an elevated risk of leukaemia.

The author of the report stated that 'the explanation for the elevated risk is unknown, but selection bias may have accounted for some of the increase.' None of the authoritative bodies responsible for EMF policy or exposure guidelines considered it necessary to reduce the exposure guidelines in light of this study on the basis that there is evidence to suggest that selection bias may account for some of the increase in risk in the study.

High-voltage power lines are only one source of these fields: earlier discussions highlighted the field levels from normal household appliances.

■ In 2005, a study (Draper *et al*) of childhood cancer in relation to distance from high-voltage power lines in England and Wales found that children who live within 200m of power lines had a higher relative risk of leukaemia. The report stated that the results of this study were not supported by convincing laboratory data or any accepted biological mechanisms.

The authors stated that: 'We have no satisfactory explanation for our results in terms of causation by magnetic fields or association with other factors.' They also stated that their results may be due to 'chance or confounding'. Confounding means that even if a statistical association is found between EMF and certain cancers, the cancer may be caused by some other factor that also happens to be associated with EMFs. Residential EMFs, for example, are also associated with socioeconomic status and lifestyle factors.





### Animal studies

Through the use of animals in carefully monitored laboratory conditions, it is possible to achieve good control of the exposure to EMF. Such studies are very valuable in the investigation of effects on human health. However, difficulties remain in determining the relevance of these studies to human exposure. Generally, animal studies have concentrated on the effects on the nervous system. Again, the results of such studies are inconsistent, showing wide variations. Some have reported effects, for example on behaviour and on the levels of certain hormones, such as melatonin (a hormone produced in the pineal gland of the brain), but with inconsistent results. No disease-causing effects have been established.

Extensive studies have also been carried out on farm animals in relation to reproduction and development. No harmful influences have been proven from exposure to EMF.

### Cell studies

Studies of cell and tissue cultures in the laboratory are often described as *in vitro* (in glass), while the term *in vivo* (in live state) is applied to



animal studies. *In vitro* research studies on electric and magnetic fields are numerous and results have been reported as producing both positive and negative results, making the overall picture both complex and inconclusive. As an added difficulty, it is not possible to predict by merely observing cell cultures whether effects if found will occur in animals or people. It is even more difficult to establish whether effects observed at the cell level would have any health implications. This matter is further complicated by the presence in whole organisms of control and repair mechanisms which are generally lacking in cell cultures and whose effect can not be studied in individual cell studies.

Certain reported effects appear to occur only within particular ranges or 'windows' of frequency, time or field strength – although no specific windows have yet been confirmed. However, under these conditions higher field exposures do not produce a greater effect.



It has also been shown that static magnetic fields comparable to the Earth's have also been reported to influence some cell experiments.

Although individual scientific studies may appear to be very convincing, it is important to remember that such studies only become an accepted part of science when they have been replicated in several laboratories and related to current understanding.

Few of the many reported *in vitro* effects of extremely low-frequency fields have been independently replicated. There is agreement in the scientific community that these fields do not cause cells to become cancerous.

A characteristic of agents such as ionising radiation, which do initiate cancer, is their ability to produce changes in the genetic material of the cell, either visible damage to chromosomes or genetic mutations.

Laboratory studies with electric and magnetic fields have not demonstrated such health risks.

There has been some speculation that electric or magnetic fields might accelerate or promote the development of cancers in cells which are or have become otherwise predisposed to cancer.

Despite extensive scientific research, this hypothesised promotion effect has not been established.

### Interaction mechanisms

Power-frequency electric and magnetic fields are incapable of disrupting molecules by ionisation or of causing any significant heating in tissue.

The only established mechanisms of action by these fields is via induced currents. Large induced currents can, for example, stimulate nerve and muscle cells. The international guidelines in place employ very large safety factors to ensure that these effects are not possible in individuals exposed to EMF levels at or significantly beyond the guideline levels.

Other research mainly centres on the effects at the cell surface or on the transport of ions which can act as biochemical 'messengers' across the cell membrane.

Several theoretical explanations of mechanisms have been proposed and it seems that more than one mechanism may exist. But such explanations are speculative and no comprehensive theory has been proposed which may be confirmed by laboratory experiment.

Laboratory studies have also failed to establish any mechanism whereby ELF EMFs could cause any form of ill-health effect. Despite extensive research scientists have been unable to determine a biophysical mechanism by which ELF EMF could cause cancer.

EirGrid and other national and international bodies are continuing to monitor research developments and to keep society fully informed.



Independent international medical and scientific bodies are continuing to review and monitor the possibility of health effects from exposure to extremely low-frequency electric and magnetic fields. The findings of these bodies carry considerable weight, as they reflect the judgements of groups of experts rather than the views of individuals.

### **International Agency for Research on Cancer**

In 2001, the International Agency for Research on Cancer (IARC) which is an agency of the World Health Organization (WHO), classified ELF magnetic fields as ‘possibly carcinogenic’ on the basis of ‘inadequate’ epidemiological evidence for most types of cancer and ‘inadequate’ evidence in animals, but ‘limited’ epidemiological evidence for childhood leukaemia. It was noted that no plausible biological explanation of the association can be obtained from experiments with animals or from cellular and molecular studies.

IARC said that the evidence on ELF electric fields was ‘inadequate’.

### **WHO EMF Task Group**

In October 2005, the WHO convened an international panel of experts to form the EMF Task Group. The EMF Task Group’s main objective was to review the scientific literature on the biological effects of exposure to ELF fields in order to assess any health risks from exposure to these fields and to use this health risk assessment to make recommendations to national authorities on health protection programs. The group published an Environmental Health Criteria (EHC) monograph of its findings in June 2007.

**The Task Group concluded that there are no substantive health issues related to ELF electric fields at levels generally encountered by members of the public.**

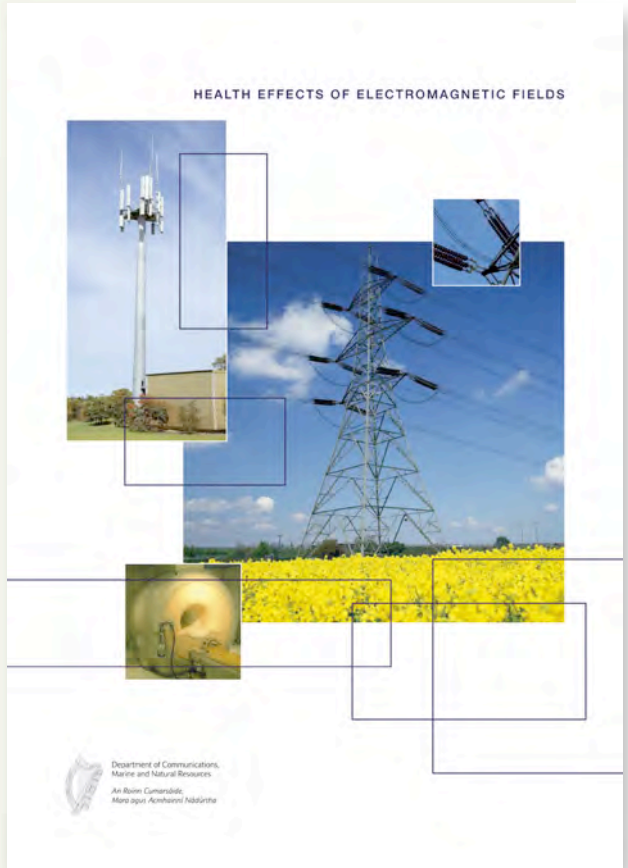
The monograph recommended that policymakers should establish guidelines for ELF field exposure for both the general public and workers. It stated that the best source of guidance for exposure levels are the international guidelines and cites the guidelines from the International Commission on Non-Ionising Radiation Protection (ICNIRP).



**Dept of Communications,  
Marine & Natural Resources**

In March 2007, the Department of Communications, Marine and Natural Resources published a report entitled *Health Effects of Electromagnetic Fields*, compiled by an international expert group. In relation to ELF EMF, the group state: 'There is limited scientific evidence of an association between ELF magnetic fields and childhood leukaemia. This does not mean that ELF magnetic fields cause cancer, but the possibility cannot be

excluded. However, considerable research carried out in laboratories has not supported this possibility, and overall the evidence is considered weak, suggesting it is unlikely that ELF magnetic fields cause leukaemia in children. Nevertheless, the evidence should not be discounted and so no or low-cost precautionary measures to lower people's exposure to these fields have been suggested.'



**A**ny guidelines for restricting the exposure of people to certain agents must rest on a solid scientific basis. The induction of currents in the human body is the only certain interaction of power frequency electric and magnetic fields.

The World Health Organisation, in its 1987 Environmental Health Criteria review of magnetic fields, stated that up to an induced current density of  $10\text{mA}/\text{m}^2$  is acceptable. Naturally occurring current densities within the body, caused, for example, by the action of heart



muscles, are also of similar value. No new evidence has warranted a change in this  $10\text{mA}/\text{m}^2$  threshold.

### ICNIRP Guidelines

In 1998, ICNIRP (International Commission on Non-Ionising Radiation Protection) issued guidelines for exposure to time varying EMF (up to 300GHz) which included power frequency exposure limits. These guidelines were adopted by the EU in 1999 and EirGrid fully comply with them.

In determining their guidelines, ICNIRP reviewed the body of scientific literature which existed on EMF and set the basic restriction for the induced current density in the body for occupational and general public exposure as  $10\text{mA}/\text{m}^2$  and  $2\text{mA}/\text{m}^2$ , respectively, based on avoiding known effects of high EMF levels on the body.

ICNIRP produced reference levels for both electric and magnetic field exposure because it is not possible to measure induced current density in the human body. For the general



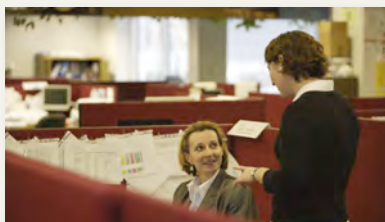
public the reference levels are 5kV/m and 100 $\mu$ T for electric and magnetic fields respectively.

If the EMF exposure level is less than the reference level then compliance with the basic restriction is assumed.

However, if exposure is greater than the reference level, this does not necessarily mean that the basic restriction is exceeded. The circumstances of the exposure need to be examined more closely and compliance should be investigated using the most up-to-date methods. The evaluation needs to determine whether the EMF levels are likely to induce a current density of 2mA/m<sup>2</sup>, i.e. to produce the basic restriction in the body.

Calculations from Dimbylow, published and peer-reviewed in

2005, and endorsed by the UK's Health Protection Agency (HPA), show an electric field level of approximately 9kV/m and a magnetic field level of 360 $\mu$ T corresponds to an induced current density of 2mA/m<sup>2</sup>. These figures can be considered to represent the basic restriction levels for EMF exposure and compliance with the ICNIRP restrictions can be assumed at those levels.





## MITIGATION MEASURES

In response to concern about the results of some epidemiological studies, some countries (e.g. regions of Italy, Switzerland, Netherlands) have reduced the magnetic field exposure limits (from the standard ICNIRP/EU guidelines) at some installations as a precautionary approach in relation to childhood cancer.

However, international authoritative bodies such as ICNIRP (on which the EU recommendations are based) continue to monitor the EMF research and have not considered it necessary to revise their exposure guidelines. The WHO EMF Task Group 2007 monograph commented on the costs of precautionary approaches to limiting ELF EMF exposure. 'These exposure limits should be based on a thorough examination of all the relevant scientific evidence' and refers to the ICNIRP guidelines as being designed to protect against the established effects.

With regards to having reduced exposure levels as a precautionary approach to the limited evidence for a link between ELF magnetic fields and childhood leukaemia, the WHO Task Group states that: '...it is not



recommended that the limit values in exposure guidelines be reduced to some arbitrary level in the name of precaution.'

The Task Group noted that: '...electric power brings obvious health, social and economic benefits, and precautionary approaches should not compromise these benefits. Furthermore, given both the weakness of the evidence for a link between exposure to ELF magnetic fields and childhood leukaemia, and the limited impact on public health if there is a link, the benefits of exposure reduction on health are unclear. Thus, the costs of precautionary measures should be very low.' The Department of Communications, Marine and Natural Resources report entitled *Health Effects of Electromagnetic Fields* published in March 2007 commented on precautionary measures and stated that: 'As a precautionary measure future power lines and power installations should be sited away from heavily populated areas to keep exposures to people low. The evidence for 50Hz magnetic fields causing childhood leukaemia is too weak to require re-routing of existing lines, and so these measures should only apply to new lines.'

EirGrid's standard route planning criteria complies with all authoritative international and national guidelines for ELF EMF exposure and generally seeks to avoid heavily populated areas on visual and amenity grounds as far as is reasonably possible.

**E**irGrid regards the protection of the health, safety and welfare of its staff and the general public as a core company value in all its activities. It is EirGrid's policy to design and operate the network to the highest safety standards and to continually review and update standards in the light of new developments and research findings.

Independent and authoritative international and national review panels of scientific experts have reviewed studies on possible health effects. These have found that it has not been established that power frequency electric and magnetic fields encountered in normal living and working conditions cause adverse health effects in humans. Having reviewed the research, EirGrid will continue its policy of adhering to the international and national standards and guidelines with which the entire network complies.

However, EirGrid recognises that some individuals are genuinely concerned about issues regarding

electric and magnetic fields and health. EirGrid is committed to addressing these concerns by continuing to:

- Design and operate the transmission system in accordance with the most up-to-date recommendations and guidelines of the various expert and independent international bodies.
- Closely monitor and support engineering and scientific research in this area.
- Provide advice and information to staff and the general public on this issue.

EirGrid hopes that this booklet has been informative and that it provides a greater understanding of electric and magnetic fields.





## GLOSSARY OF TERMS USED IN THIS BOOK

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<b>AC</b>	Electrical circuits where the voltage and current alternate direction, in Ireland at 50 times per second 50 Hertz (Hz)
<b>Carcinogenic</b>	Causing cancer
<b>Chromosomes</b>	The part of a cell involved with cell division and hereditary characteristics
<b>Current</b>	The movement of an electrical charge analogous to the rate of fluid flow in a pipeline
<b>Electric fields</b>	Invisible fields of force where voltage is present
<b>Electricity</b>	A form of energy created by the flow of current or the presence of voltage
<b>Epidemiology</b>	A type of research that tries to find statistical links between the occurrence of specific diseases and people's exposure to possible causes
<b>Extremely Low Frequency (ELF)</b>	Frequencies found at the end of the electromagnetic spectrum that contain very little energy and cannot directly break molecules apart, i.e., non-ionising. Electric power operates at ELF levels
<b>Frequency</b>	The number of repetitions per unit time of a complete waveform
<b>Induced current</b>	Current which flows in a body as a result of an interaction with an electric or magnetic field
<b>Ionising radiation</b>	Radiation, such as X-rays, which has sufficient energy to break molecular chemical and electrical bonds
<b>Magnetic fields</b>	Invisible fields of force found where electric current is present
<b>Melatonin</b>	A hormone produced in the pineal gland in the brain
<b>Molecule</b>	The smallest particle of a substance that retains the properties of that substance
<b>Power frequency</b>	The type of electric power that is used in Ireland is 50Hz, which current alternates back and forth 50 times per second
<b>Radiation</b>	Any of a variety of forms of energy propagated through space
<b>Voltage</b>	The measure of potential strength of electricity. Voltage in a power line is analogous to pressure on a pipeline

## ADDITIONAL REFERENCES

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Further information on EMF can be found on the following Internet sites:

**EirGrid web site**

<http://www.eirgrid.com>

**WHO EMF web site**

<http://www.who.int/mediacentre/factsheets/fs322/en/index.html>

[www.cie.iarc.fr/htdocs/indexes/vol80index.html](http://www.cie.iarc.fr/htdocs/indexes/vol80index.html)

**International Commission on Non-Ionising Radiation Protection**

<http://www.icnirp.de/>

**IARC**

<http://monographs.iarc.fr/ENG/Monographs/vol80/volume80.pdf>



EirGrid hopes that this booklet has been informative and that it provides a greater understanding of electric and magnetic fields

### **Further information**

If you require further information please contact:

**EirGrid plc**

27 Lower Fitzwilliam St,  
Dublin 2, Ireland

Telephone +353-1-702 6642  
(Customer Relations)

Fax +353-1-661-5375

Email [info@eirgrid.com](mailto:info@eirgrid.com)

October 2007

# Who is EirGrid?

EirGrid plc is a state owned company and is responsible for managing the national electricity transmission grid/system. Electricity is transported in bulk to all regions via the transmission system from power generators (ESB, wind-farms etc). EirGrid develops, maintains and operates a safe, secure, reliable, economical and efficient system to transmit electricity.

## What are the two projects:

- The Cavan Tyrone 400kV Power Line (80km)
- The Woodland (Co Meath) to Kingscourt (Co Cavan) 400kV Power Line, (58km)

## Why are these projects necessary:

1. To increase the security and reliability of electricity supply: increase capacity to avoid future shortages; support growth and boost existing industry in the region.
2. To facilitate the use of even more renewable energy such as from wind farms, waves, tidal and biomass etc.
3. The Cavan Tyrone line will contribute to the all island wholesale market, increase competition in electricity supply and will result in more consumer choice and competitive prices.



## Contact Us:

To give us your feedback on the new power lines, there are a number of methods available to you:

### Telephone

Lo call 1890 25 26 90

You can contact us on this information line between 9am-5pm (Monday-Friday).

If the line is busy please leave your name and number and you will be called back within 24hrs or on the next business day

### Email addresses

MeathCavanPower@eirgrid.com

CavanTyroneInterconnector@eirgrid.com

### Website

Visit [www.eirgrid.com](http://www.eirgrid.com)

This website is regularly updated to keep you informed of the progress of the project

Dear Householder,

EirGrid is planning two vital power line projects in the North East of Ireland. This leaflet is to help answer questions you may have and direct you to further information should you need it.



Part funded by  
EU TEN-E Initiative

## Health and electricity

Many thousands of studies have been undertaken all over the world to assess any potentially harmful effects from power lines.

The view of international authoritative agencies is that extremely low frequency (ELF) electromagnetic fields (EMF) do not have any adverse effect on health.

### What independent research has been carried out about EMF?

- Extensive worldwide research, at a cost of over €440m has found no conclusive evidence to date proving that electric and magnetic fields from power lines [i.e. extremely low frequency (ELF) EMF] are harmful.
- The Irish Department of Communications recently reported independently on this issue and their document is available on their website ([www.dcmnr.gov.ie](http://www.dcmnr.gov.ie)).
- Since it issued its Guidelines in 1998, the WHO has continued to monitor developments in electric and magnetic fields (EMF) but has not considered it necessary to revise the exposure guidelines.

Comprehensive information is available from the EirGrid EMF leaflet which you can download from [www.eirgrid.com](http://www.eirgrid.com) or use the contact details on this leaflet to order a copy to be sent out to you.

## Why not use underground lines for these projects?

### 1. Reliability

Both of these planned power lines are an integral part of the transmission system, long delays on repairs that can occur with underground cable could not be tolerated as it could result in power cuts in the region.

### 2. Security of supply

A dependable supply of electricity is necessary to attract the high quality type of industry being sought by development agencies and thus the risk of long delays on repairs would be a deterrent.

### 3. Cost

Given that the cost of completing these projects is ultimately borne by the consumers, EirGrid is responsible for ensuring that these projects are implemented in the most technically reliable and economical way possible.

EirGrid uses underground cables in specific circumstances such as for short distances in heavily built-up areas or, where it is the only practical option as in the proposed East-West Interconnector (Ireland – Wales) which is an undersea connection.

## Public Consultation

EirGrid are continuing a major consultation process. Check out [www.eirgrid.com](http://www.eirgrid.com) for details.

### Timing:

A preferred route for each project will be chosen in early 2008. Public consultation will continue on these projects until planning applications are made later in 2008 to the independent planning authorities who will in turn examine all issues. Subject to planning permission, construction would not take place until 2009.

### Can the public make submissions to the planning authorities?

Members of the public have seven weeks to make submissions to the planning authority from the date of the application.

More information on the planning process is available on [www.pleanala.ie](http://www.pleanala.ie) or in the FAQ on [www.eirgrid.com](http://www.eirgrid.com)

### Facts about electricity:

- A fluorescent tube will light up when held under a power line; this is a natural scientific phenomena demonstrating the presence of an electric field.
- No time restrictions exist for employees working in the vicinity of overhead lines since the EirGrid network is designed and operated in compliance with international and EU guidelines for EMF exposure.
- Ireland's first 400kV line was built over 20 years ago and there are currently 439km of 400kV overhead lines installed in Ireland to date.
- The high voltage transmission system (which comprises voltages of 400kV, 220kV and 110kV) can be seen in all counties throughout Ireland bringing electricity to homes, businesses and industries.
- 97 per cent of onshore high voltage lines in Europe are overhead lines and this is also true of other developed nations such as the US.
- We are not aware of any plans for any EU Directive banning overhead line construction.
- There is no evidence that EMF from these transmission lines has any adverse effects on flora or fauna.



## **APPENDIX C**

### **[ADVERTISEMENTS]**

# PUBLIC NOTICE

A new electricity power line is currently being planned for the North East, between Woodland in Co Meath and Kingscourt in Co Cavan. Proposed route and design options have been drawn up by EirGrid, following extensive studies over recent months.

The proposed options will be on public display in

- **Castle Arch Hotel, Trim, Co Meath**
- **on Thursday 11th October 2007**
- **from 3pm to 8pm.**

Members of the public are encouraged to come along to view the route and design options and maps, talk to the EirGrid project team and our consultants, and to tell us your views.

For further information visit [www.eirgrid.com](http://www.eirgrid.com)



Tel: 1890 252 690

email: [meathcavanpower@eirgrid.com](mailto:meathcavanpower@eirgrid.com)

# PUBLIC NOTICE

A new North-South electricity power line is currently being planned between Cavan and Tyrone. Proposed route and design options have been drawn up by EirGrid, following extensive studies over recent months.

The proposed options will be on public display in

- **Glencarn Hotel, Castleblaney, Co Monaghan**
- **on Tuesday 16th October 2007**
- **from 3pm to 8pm**

Members of the public are encouraged to come along to view the route and design options and maps, talk to the EirGrid project team and our consultants, and to tell us your views.

For further information visit [www.eirgrid.com](http://www.eirgrid.com)



Tel: 1890 252 690

email: [cavantyroneinterconnector@eirgrid.com](mailto:cavantyroneinterconnector@eirgrid.com)





# ELECTRICITY POWER LINE FOR THE NORTH EAST INFORMATION DAY

A new electricity power line is currently being planned between Cavan and Tyrone and it will cross the Border near Clontibret, Co Monaghan. The preferred route will be determined in early 2008, following extensive studies.

EirGrid is repeating its series of meetings to inform people about the project and you are invited to come along to have your queries answered by EirGrid's project team, either on a one-to-one basis or in discussion groups:

**ON: Tuesday, 27th November 2007**

**AT: 3pm - 8pm.**

**IN: The Four Seasons Hotel, Monaghan Town.**

## Open Day

Experts will be available to discuss the project and specific issues on a one-to-one basis, including:

- Health and Electricity (EMF)
- Why go overhead instead of underground?
- Proposed route corridors
- What next – the planning process
- Landowner compensation
- Any other issues

## Discussion Groups on EMF and Undergrounding

In response to requests from the public, focused discussions will be facilitated on the issues of Health and Electricity (EMF) and Overhead v Underground Powerlines.

These discussion groups will be held at 4pm, 5.30pm and 7pm.

Should you wish to participate, please register by emailing [CavanTyroneInterconnector@eirgrid.com](mailto:CavanTyroneInterconnector@eirgrid.com) or lo-call 1890 25 26 90.

**For further information:**

**Visit:** [www.EirGrid.com](http://www.EirGrid.com) **Lo-call:** 1890 25 26 90

**Email:** [CavanTyroneInterconnector@eirgrid.com](mailto:CavanTyroneInterconnector@eirgrid.com)

# PUBLIC NOTICE

Two major infrastructural projects are currently underway for Kingscourt and the surrounding areas:

- North-South electricity power line between Kingscourt and Tyrone
- new power line for the North East between Woodland, Co Meath and Kingscourt.

Proposed route and design options for both projects have been drawn up by EirGrid, following extensive studies over recent months.

The proposed options will be on public display in

- **Cabra Castle Hotel, Kingscourt, Co Cavan**
- **on Wednesday 17th October 2007**
- **from 3pm to 8pm.**

Members of the public are encouraged to come along to view the route and design options and maps, talk to the EirGrid project team and our consultants, and to tell us your views.

For further information visit [www.eirgrid.com](http://www.eirgrid.com)



Tel: 1890 252 690

email: [meathcavanpower@eirgrid.com](mailto:meathcavanpower@eirgrid.com)

email: [cavantyroneinterconnector@eirgrid.com](mailto:cavantyroneinterconnector@eirgrid.com)



# ELECTRICITY POWER LINE FOR THE NORTH EAST INFORMATION DAY

Two major infrastructural projects are currently underway for the Kingscourt area:

- North-South interconnector powerline between Kingscourt and Tyrone
- New powerline for the North East between Woodlands, Co Meath and Kingscourt, Co Cavan with a new sub-station at Kingscourt.

The preferred route for each project will be determined in early 2008, following extensive studies.

EirGrid is repeating its series of meetings to inform people about the project and you are invited to come along to have your queries answered by EirGrid's project team, either on a one-to-one basis or in discussion groups:

**ON: Wednesday, 28th November 2007**

**AT: 3pm - 8pm.**

**IN: Cabra Castle Hotel, Kingscourt, Co Cavan**

## **Open Day**

Experts will be available to discuss the project and specific issues on a one-to-one basis, including:

- Health and Electricity (EMF)
- Why go overhead instead of underground?
- Proposed route corridors
- What next – the planning process
- Landowner compensation
- Any other issues

## **Discussion Groups on EMF and Undergrounding**

In response to requests from the public, focused discussions will be facilitated on the issues of Health and Electricity (EMF) and Overhead v Underground Powerlines.

These discussion groups will be held at 4pm, 5.30pm and 7pm.

Should you wish to participate, please register by emailing [MeathCavanPower@eirgrid.com](mailto:MeathCavanPower@eirgrid.com) or lo-call 1890 25 26 90.

**For further information:**

**Visit:** [www.EirGrid.com](http://www.EirGrid.com) **Lo-call:** 1890 25 26 90

**Email:** [MeathCavanPower@eirgrid.com](mailto:MeathCavanPower@eirgrid.com)



# ELECTRICITY POWER LINE FOR THE NORTH EAST INFORMATION DAY

A new electricity power line is currently being planned for the North East, between Woodlands in Co Meath and Kingscourt in Co Cavan. The preferred route will be determined in early 2008, following extensive studies.

EirGrid is repeating its series of meetings to inform people about the project and you are invited to come along to have your queries answered by EirGrid's project team, either on a one-to-one basis or in discussion groups:

**ON: Thursday, 29th November 2007**

**AT: 3pm - 8pm**

**IN: Old Darnley Lodge, Athboy, Co Meath**

## Open Day

Experts will be available to discuss the project and specific issues on a one-to-one basis, including:

- Health and Electricity (EMF)
- Why go overhead instead of underground?
- Proposed route corridors
- What next – the planning process
- Landowner compensation
- Any other issues

## Discussion Groups on EMF and Undergrounding

In response to requests from the public, focused discussions will be facilitated on the issues of Health and Electricity (EMF) and Overhead v Underground Powerlines.

These discussion groups will be held at 4pm, 5.30pm and 7pm.

Should you wish to participate, please register by emailing [MeathCavanPower@eirgrid.com](mailto:MeathCavanPower@eirgrid.com) or lo-call 1890 25 26 90.

**For further information:**

**Visit:** [www.EirGrid.com](http://www.EirGrid.com) **Lo-call:** 1890 25 26 90

**Email:** [MeathCavanPower@eirgrid.com](mailto:MeathCavanPower@eirgrid.com)



# EIRGRID INFORMATION IN RELATION TO TWO PROPOSED OVERHEAD POWER LINES

A number of questions have been raised with us about the proposed 400kV power line projects from Woodland to Kingscourt, and from Cavan to Tyrone. EirGrid is currently undertaking a consultation process on a number of possible routes, with a view to lodging a planning application in 2008.

There may be incorrect information in circulation in relation to these projects and EirGrid wishes to clarify a number of points:

- We wish to emphasise that EirGrid has not already applied for planning permission for any portion of these projects. A preferred route for each project will be chosen in early 2008. Public consultation will continue on these projects until planning applications are made later in 2008 to the independent planning authorities, who will in turn examine all issues.
- It has been stated that other countries in Europe do not use overhead lines or have banned overhead lines. This is not the case. Overhead lines are the main form of electricity transmission in Europe and approximately 97% of all electricity transmission in Europe is overhead lines.
- It has been stated that the voltage at which these lines will operate is unprecedented in Ireland and would be the highest voltage level in Europe. In fact there are 439km of 400kV lines operating in Ireland for over twenty years. Internationally transmission lines at 700kV are in use in a number of countries.
- EirGrid aims to build the power lines a minimum distance of 50 to 60 metres from existing dwellings to the centre of the line and not 25 m as has been claimed. In many cases the distance will be much greater than 50 to 60 metres.
- No time restrictions exist for employees working in the vicinity of overhead lines. The EirGrid network is designed and operated in compliance with international and EU guidelines for EMF exposure.
- No plans for any EU Directive banning overhead line construction have been announced or proposed by the European Commission, to our knowledge.

The overhead power line projects will bring economic benefits to counties Meath, Monaghan and Cavan. The lines involve an investment of over €200 million and will facilitate more competitive and reliable power, servicing all customers – household, farming, commercial and industrial. The proposed new lines will play a major role in keeping the north east region on a level playing field in its ability to attract and retain high tech industries. EirGrid would encourage people who have questions to contact us. You can do so in a number of ways:

**Website:** [www.eirgrid.com](http://www.eirgrid.com).  
**Email:** [meathcavanpower@eirgrid.com](mailto:meathcavanpower@eirgrid.com) or  
[cavantyroneinterconnector@eirgrid.com](mailto:cavantyroneinterconnector@eirgrid.com)  
**Phone:** Lo call 1890.25.26.90



# EIRGRID INFORMATION ON HEALTH AND PROPOSED POWERLINES IN NORTH EAST

## What do the experts say about overhead power lines and health?

Hundreds of international studies have been conducted on health and power lines since the 1970's. It is important to focus on the authoritative scientific sources. The 2007 view of World Health Organisation (WHO) is that "that there are no substantive health issues related to ELF electric fields at levels generally encountered by members of the public".

## What are the most authoritative reports on electromagnetic fields and health?

- The World Health Organisation (WHO) EMF Task Group report published in June 2007 is the most authoritative report. For full details you can visit the WHO website on <http://www.who.int/mediacentre/factsheets/fs322/en/index.html>
- Our own Department of Communications, Marine and Natural Resources (DCMNR) published a report in March 2007. The conclusions of the international expert authors were consistent with those of similar international reviews. This document is available on their website at <http://www.dcmnr.gov.ie>

## What regulations do EirGrid comply with?

- International guidelines for EMF exposure were set by the International Commission on Non-Ionizing Radiation Protection (ICNIRP) who advise the WHO.
- In its 2007 Report, the WHO confirmed these guidelines are sufficient to protect public health.
- The Irish network is in full compliance with these most up-to-date international guidelines.
- Neither EirGrid, nor any other power company in Ireland, has any time restrictions for employees working in the vicinity of overhead lines.

## Where can I find out more about EMF?

Visit our website to download our brochure **Information on Electric and Magnetic Fields**. Or you can get in touch with us and we will post you out a copy.

**Website:** [www.eirgrid.com](http://www.eirgrid.com).

**Email:** [meathcavanpower@eirgrid.com](mailto:meathcavanpower@eirgrid.com) or [cavantyroneinterconnector@eirgrid.com](mailto:cavantyroneinterconnector@eirgrid.com)

**Phone:** Lo call 1890.25.26.90



# EIRGRID UPDATE

As previously communicated, EirGrid intends to announce the preferred route for the Cavan Tyrone/Meath Cavan proposed power lines early in 2008.

EirGrid has been engaged in an extensive consultation process with the people of Meath, Cavan and Monaghan on three proposed routes since October 2007. Over the last 15 weeks, EirGrid has been in communication with more than 5,000 people in advance of making a decision on the preferred route for these vital electricity power lines. The public consultation has taken the form of open days, face to face meetings, as well as thousands of communications via the telephone information line, email and in writing.

EirGrid invites anyone who has not yet submitted information as part of the public consultation process on the proposed power lines for Cavan/Tyrone and Meath/Cavan and who wishes to do so, to email or post their views to the following addresses by the 11th of February, 2008: [MeathCavanPower@eirgrid.com](mailto:MeathCavanPower@eirgrid.com) or [CavanTyroneInterconnector@eirgrid.com](mailto:CavanTyroneInterconnector@eirgrid.com) or EirGrid Plc, 27 Lower Fitzwilliam St, Dublin 2.

EirGrid and its consultants will process all the information received in order to determine a preferred route. The consultation process will continue with landowners, residents and other stakeholders in relation to the preferred route before a planning application is made to An Bord Pleanala, later in 2008, who will examine all issues.

An Environmental Impact Statement (EIS) will be prepared to deal with all relevant issues, including health concerns and undergrounding versus overhead lines. The EIS will be submitted with the planning application and will be available to the public. Members of the public have seven weeks to make submissions to the planning authority from the date of application to An Bord Pleanala.

EirGrid emphasises the critical need for these new transmission lines for the delivery of high quality power in sufficient quantities for the needs of all customers in the region. EirGrid strongly believes that its present proposal for the upgrading of the transmission system is the best one.

**Website:** [www.eirgrid.com](http://www.eirgrid.com)

**Email:** [meathcavanpower@eirgrid.com](mailto:meathcavanpower@eirgrid.com) or [cavantyroneinterconnector@eirgrid.com](mailto:cavantyroneinterconnector@eirgrid.com)

**Post:** EirGrid Plc, 27 Lower Fitzwilliam St, Dublin 2.

## **APPENDIX D**

### **[PRESS RELEASES]**



## **NEW ELECTRICITY LINES FOR NORTH EAST WILL INCREASE CAPACITY AND ENABLE MORE DEVELOPMENT AND COMMERCE**

**Monday, 1<sup>st</sup> October 2007:**

EirGrid, the organisation responsible for putting in place major electricity transmission infrastructure to support all regions and the economy nationally, has launched two projects in the North East.

The two projects will;

- Ensure a future secure supply of electricity throughout the North East.
- Facilitate cross-border sharing of electricity
- Help promote better competition
- Facilitate use of renewable energy
- Upgrade existing electricity supplies.

The two projects are;

- The first project is a new 400kV Interconnector between Cavan and Tyrone that will more than double the current power transfer capacity between the North and the South. The new interconnector will span approximately 45km in the Republic of Ireland, will cost in the region of €180 million and will be routed from a proposed new substation near Kingscourt in Co Cavan, through Co Monaghan and onwards to Co Tyrone. This project is being undertaken in co-operation with Northern Ireland Electricity (NIE).
- The second project is the Woodland (Co Meath) to Kingscourt (Co Cavan) 400kV Power Line. It is approximately 58km long and will cost in the region of €100 million. This power line will reinforce the power system in the North East, facilitating competition and secure supplies of power for all customers.

A number of route corridor options for both projects are currently being investigated and a shortlist of proposed route corridors will be presented to the Elected Members of Counties Cavan, Meath and Monaghan in early October.

Maps and details about each of the proposed route corridor options for both projects will be presented at Public Open Days in early October in Trim, Castleblaney and Kingscourt. All stakeholders will have an opportunity to make their views known at that stage, before route option studies are completed and a final route is chosen.

The Public Open Days will be as follows

Thursday 11<sup>th</sup> October, Castle Arch Hotel, Trim Co Meath

Tuesday, 16<sup>th</sup> October, Glencarn Hotel, Castleblaney, Co Monaghan

Wednesday, 17<sup>th</sup> October, Cabra Castle Hotel, Kingscourt, Co Cavan

“These proposed new lines are vital in order to facilitate security of supply, facilitate competition benefiting existing customers, and also to supply the needs of the new householder and commercial customers who have connected in recent years”, says Aidan Corcoran, Project Engineer, EirGrid. “Both projects will be subject to the full planning processes. EirGrid will provide ample opportunities for the public to make their views known, so that the best route options are chosen for these projects.”

“The extensive design and route option studies will continue until 2008, when a preferred route will be chosen. The studies will take into account input from a wide range of stakeholders, as well as environmental and economical impacts,” continues Aidan Corcoran.

The network strengthening in Cavan, Monaghan, and Meath will support growth in the region and ensure continuing reliability of supply as well as giving existing industries a major boost

when competing for business and inward development in the area. It will also complement the proposed additional Interconnector between Kingscourt and Tyrone.

“The Irish Economy has grown strongly during the past decade leading to unprecedented growth in electricity demand countrywide. The average annual increase in peak demand nationally has been around 4% and this growth has led to a need for a major reinforcement of the electricity infrastructure in the North East,” says Aidan Corcoran.

It is European Union policy that links between electricity systems are a key way of ensuring secure and competitively priced electricity markets into the future. A Single Electricity Market for Ireland is due to come into effect later this year. The increased capacity provided by this Interconnector will help promote competition and better sharing of generation resources, for the benefit of all customers. It will lead to fuel savings, result in fewer emissions and facilitate integration of wind generated energy. In addition to the benefits on an all island basis, the strengthening of the high voltage network in Counties Monaghan, Cavan and Meath will add to the availability of bulk high quality power in the North East.

For more information and public consultation updates, visit [www.EirGrid.com](http://www.EirGrid.com)  
Map available - contact Mary Murphy Associates, 01-284 6338

ENDS.

FOR MEDIA QUERIES:  
Mary Murphy, 087-233 6415

## **MEATH – CAVAN & CAVAN TYRONE ROUTE CORRIDOR OPTIONS**

**17<sup>TH</sup> October Press Release - Maps attached**

### **Route Option 1**

Route Option 1 runs to the western part of the study area, staying to the west of the towns of Trim, Athboy and Kells and approximately 5km north of the town of Ballivor and approximately 1km east of the town of Mullagh.

### **Route Option 2**

Route Option 2 runs between the central and western section of the study area, staying to the east of the town of Trim and Athboy, west of the town of Kells and then runs parallel to Route Option 1, running approximately 2.5km to the east of the town of Mullagh

### **Route Option 3**

Route Option 3 follows Route Option 2 initially before running in a due north direction, running to the west of the town of Navan and to the east of the town of Kells. Approximately 6km north of the N3, this route option splits into two options 3A and 3B, before joining together west of Whitewood Lough.

## **NORTH EAST TO BENEFIT FROM MAJOR ELECTRICITY INVESTMENT PLANS**

**11<sup>th</sup> November 2007**

“The overhead power line projects which are currently the subject of a major public consultation process, will bring economic benefits to counties Meath, Monaghan and Cavan”, the independent transmission system operator EirGrid said today. “All route corridor options being consulted on are being actively considered and no decision will be made on the final preferred route until the public consultation process has terminated and a planning application has been made”.

The lines involve an investment of over €200 million and will facilitate more competitive and reliable power, helping keep the north east region on a level playing field in its ability to attract and retain high tech industries, EirGrid pointed out.

### **PUBLIC CONSULTATION**

EirGrid has asked people who have comments on the proposals to take part in the four-month consultation process which commenced last month – and which is additional to the statutory planning process which commences in 2008. In excess of 500 people have attended open days in counties Monaghan, Cavan and Meath and many more have contacted Eirgrid on Lo-call: 1890 25 26 90, visited the website [www.EirGrid.com](http://www.EirGrid.com) or emailed Eirgrid at: [MeathCavanPower@eirgrid.com](mailto:MeathCavanPower@eirgrid.com) or [CavanTyroneInterconnector@eirgrid.com](mailto:CavanTyroneInterconnector@eirgrid.com)

A repeat of the Open Days will take place again this month - (27 November, 3–8pm, Four Seasons Hotel, Monaghan Town; 28<sup>th</sup> November, 3-8pm, Cabra Castle Hotel, Kingscourt, Co. Cavan; 29 November, 3-8pm, Old Darnley Lodge, Athboy, Co. Meath).

In response to requests from the public, focused discussions will be facilitated at these open days on 27, 28 and 29 November on the issues of EMF and also discussions on factors relating to overhead and underground power transmission during the Open Days. These discussion groups will be held at 4pm, 5.30pm and 7pm. Anyone wishing to participate can register by emailing [MeathCavanPower@eirgrid.com](mailto:MeathCavanPower@eirgrid.com) or [CavanTyroneInterconnector@eirgrid.com](mailto:CavanTyroneInterconnector@eirgrid.com) or lo-call 1890 25 26 90.

Following completion of the consultation process, a planning application will be submitted early in the new year. After the planning application has been lodged, the independent planning process will also present a seven week opportunity for people to make submissions, comments or objections.

### **‘BROADBAND’ POWER**

The new power lines will bring the equivalent of ‘broadband power’ to the region – that is, the power lines will help ensure the delivery of high quality and highly reliable services. These proposed new lines are vital in order to facilitate competition as part of the All Island Market, and also to ultimately supply the needs of new householders and commercial customers who have connected in recent years. The new lines are needed because transmission lines in the region will reach full capacity in the near future.

The key to the benefits of the new networks is the use of the standard international technology for delivery of high voltage power – overhead lines.

The lines will comply with all international standards and are of the same type as the two lines already in place between Moneypoint in Co Clare and Co Meath and, between Moneypoint and Co Kildare, which total 440km.

### **INVESTMENT WILL HELP ATTRACT AND RETAIN INDUSTRY**

Undergrounding all or part of a Transmission Network presents problems for the secure and reliable operation of that network. The location and repair of faults on underground cables can take a number of weeks, depending on the type of fault and its location. For such an

integral part of the transmission system, such a compromise to the security of supply would be unacceptable.

Industries are attracted to a region for many reasons, one of them being a dependable supply of electricity. New industries locating in Ireland discuss with EirGrid the terms, conditions, security of supply and the quality of the power being delivered. A Transmission System depending on circuits of underground cable would not provide the continuity or quality of supply necessary to attract the high quality type of industry being sought by the local development agencies such as the IDA. As an example of this, EirGrid also pointed out that the highly reliable and economic power lines which have helped attract major IT manufacturing to North Dublin and Co Kildare are linked by overhead high voltage lines. 97 per cent of onshore high voltage lines in Europe are overhead lines and this is also true of other developed nations such as the US.

### **INTERNATIONAL BODIES DO NOT FIND ADVERSE HEALTH EFFECT**

EirGrid is satisfied from the totality of studies and the views of international authoritative agencies that the balance of evidence is that electric and magnetic fields do not have any adverse effect on health. (Information available at [www.eirgrid.com](http://www.eirgrid.com))

Following extensive worldwide research, involving expenditure of over €440m, no conclusive evidence has been found that extremely low frequency (ELF) EMF's from power lines are harmful to public health. Research has been reviewed by international bodies including the WHO. It was also reviewed earlier this year by the Department for Communications, Energy and Natural Resources.

For further information visit [www.eirgrid.com](http://www.eirgrid.com) or [MeathCavanPower@eirgrid.com](mailto:MeathCavanPower@eirgrid.com) or [CavanTyroneInterconnector@eirgrid.com](mailto:CavanTyroneInterconnector@eirgrid.com) or lo-call 1890 25 26 90.

### **Note to Editors:**

The two projects are;

- A new 400kV Interconnector between Cavan and Tyrone that will more than double the current power transfer capacity between the North and the South. The new interconnector will span approximately 45km and 35km in the North in the Republic of Ireland, will cost in the region of €180 million and will be routed from a proposed new substation near Kingscourt in Co Cavan, through Co Monaghan and onwards to Co Tyrone. This project is being undertaken in co-operation with Northern Ireland Electricity (NIE).
- The Woodland (Co Meath) to Kingscourt (Co Cavan) 400kV Power Line. It is approximately 58km long and will cost in the region of €100 million. This power line will reinforce the power system in the North East, facilitating competition and secure supplies of power for all customers.

A number of route corridor options for both projects are currently being investigated and a shortlist of proposed route corridors were presented to the Elected Members of the local authorities in Counties Cavan, Meath and Monaghan in early October and at three public open days. In routing overhead lines EirGrid aim to keep as far away from communities and houses. In any case a minimum clearance of 50 metres is our routing aim.

Public Open Days were held in the Castle Arch Hotel, Trim, the Glencarn Hotel, Castleblaney, and the Cabra Castle Hotel, Kingscourt on the 11<sup>th</sup> 16<sup>th</sup> and 17<sup>th</sup> October respectively and over 500 people attended these open days: An enormous amount of feedback was received from these open days and this will feed into the process of selecting the preferred route corridor.

**Further open days** are being planned towards the end of this month. Dates and venues are as follows:

27 November 2007  
3:00 – 8:00 PM  
Four Seasons Hotel, Monaghan, Co. Monaghan

28 November 2007  
3:00 – 8:00 PM  
Cabra Castle Hotel, Kingscourt, Co. Cavan

29 November 2007  
3:00 – 8:00 PM  
Old Darnley Lodge, Athboy, Co. Meath

ENDS.

Media queries: Mary Murphy, 087-233 6415 / 01-284 6338

## **EIRGRID ANNOUNCES EXTENSION OF PUBLIC INFORMATION AND CONSULTATION PROCESS**

### **Friday 23<sup>rd</sup> November 2007:**

- After Open Days in coming week, further opportunities will be available to meet project team and experts
- People attending Open Days this week are asked to co-operate on organisation for health and safety and so there is room for everyone.

EirGrid, which has announced proposals for two power line projects in the North East, has today said that the public information and consultation process on the projects will continue until 2008. A preferred route will be announced in January as part of the initial phase of consultation and detailed consultation will continue into 2008. No planning application will be lodged until next year.

EirGrid has asked people attending the Open Days on the proposed two projects to be aware of the fact that, while the venues have significant space, as is normal for any premises, they can only hold a limited number of people at one time. This is to ensure health and safety for all attending and also to enable people attending to have time to ask questions.

However, it is emphasised that further opportunities for groups and individuals are being organised over the coming weeks.

EirGrid is aware of the major interest in these projects and will be providing further opportunities in all of the three counties for people to seek information and to inform us of their views.

The new lines are needed because transmission lines in the region will reach full capacity in the near future. The lines will facilitate more competitive and reliable power, helping keep the north east region on a level playing field in its ability to attract and retain high tech industries. The lines will comply with all international standards and are of the a similar type as the two lines already in place between Moneypoint in Co Clare and Co Meath and, between Moneypoint and Co Kildare, which total 440km in length.

The open days are being held in:

- The Four Seasons Hotel, Monaghan Town; 27 November, 3–8pm,
- Cabra Castle Hotel, Kingscourt, Co. Cavan; 28<sup>th</sup> November, 3-8pm,
- Old Darnley Lodge, Athboy, Co. Meath. 29 November, 3-8pm.

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The two projects are :

- A new 400kV Interconnector between Cavan and Tyrone that will more than double the current power transfer capacity between the North and the South.
- A Woodland (Co Meath) to Kingscourt (Co Cavan) 400kV Power Line. This power line will reinforce the power system in the North East, facilitating competition and secure supplies of power for all customers.

People can contact the project on Lo-call: 1890 25 26 90, visit the website [www.EirGrid.com](http://www.EirGrid.com), or they can email Eirgrid at: [MeathCavanPower@eirgrid.com](mailto:MeathCavanPower@eirgrid.com) or [CavanTyroneInterconnector@eirgrid.com](mailto:CavanTyroneInterconnector@eirgrid.com)

### **UNDERGROUND VERSUS OVERGROUND LINES**

These lines have to go over ground. Nowhere in the world are lines as long as these two lines (80km and 58km) put underground. The primary reason is because it takes too long to locate and repair faults on underground cables – weeks versus hours for over ground cables. Security of electricity supply over such a huge area of the North East means over ground lines are essential. Throughout Europe, 97% of lines like these are over ground. Only short stretches of powerlines in cities and built up areas, where there is literally no room for pylons, are laid underground.

Industries are attracted to a region for many reasons, one of them being a dependable supply of electricity. New industries locating in Ireland discuss with EirGrid the terms, conditions, security of supply and the quality of the power being delivered.

### **HEALTH CONCERNS**

People have concerns about health and Eirgrid is anxious to meet with people and ease those concerns in a straightforward manner, as well as dispel some of the myths associated with electricity transmission.

The fact is that extensive worldwide research, involving expenditure of over €440m, has found NO conclusive evidence that extremely low frequency (ELF) EMF's from power lines are harmful to public health. This research has been reviewed by international bodies including the WHO. It was also reviewed earlier this year by the Department for Communications, Energy and Natural Resources.

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In March 2007, the Department of Communications, Marine and Natural Resources (DCMNR) published a report entitled Health Effects of Electromagnetic Fields, compiled by an international expert group. This document is available on their website, [www.dcmnr.gov.ie](http://www.dcmnr.gov.ie). The conclusions were consistent with those of similar reviews conducted by authoritative national and international agencies. In relation to ELF EMF, the report clearly states that, "No adverse health effects have been established below the limits suggested by international guidelines."

EirGrid is satisfied from the totality of studies and the views of international authoritative agencies that the balance of evidence is that electric and magnetic fields do not have any adverse effect on health. (Information available at [www.eirgrid.com](http://www.eirgrid.com)).

The World Health Organisation (WHO) issued guidelines in 1998 that were adopted by EU in 1999. We comply with the guidelines. These guidelines are continually monitored and reviewed and they have not had to be changed. A study carried out by the World Health Organisation (WHO) EMF Task Group and concluded this year says that there are no substantive health issues related to ELF EMFs at levels generally encountered by members of the public.

For further information visit [www.eirgrid.com](http://www.eirgrid.com) or [MeathCavanPower@eirgrid.com](mailto:MeathCavanPower@eirgrid.com) or [CavanTyronelnterconnector@eirgrid.com](mailto:CavanTyronelnterconnector@eirgrid.com) or lo-call 1890 25 26 90.

Mary Murphy 087 233 6415 01 284 6338



## **EIRGRID ANNOUNCES EXTENSION OF PUBLIC INFORMATION AND CONSULTATION PROCESS**

### **Monday 26th November 2007:**

- After Open Days in coming week, further opportunities will be available to meet project team and experts
- People attending Open Days this week are asked to co-operate on organisation for health and safety and so there is room for everyone.

EirGrid, which has announced proposals for two power line projects in the North East, has today said that the public information and consultation process on the projects will continue until 2008. A preferred route will be announced in January as part of the initial phase of consultation and detailed consultation will continue into 2008. No planning application will be lodged until next year.

EirGrid has asked people attending the Open Days on the proposed two projects to be aware of the fact that, while the venues have significant space, as is normal for any premises, they can only hold a limited number of people at one time. This is to ensure health and safety for all attending and also to enable people attending to have time to ask questions.

However, it is emphasised that further opportunities for groups and individuals are being organised over the coming weeks.

EirGrid is aware of the major interest in these projects and will be providing further opportunities in all of the three counties for people to seek information and to inform us of their views.

The new lines are needed because transmission lines in the region will reach full capacity in the near future. The lines will facilitate more competitive and reliable power, helping keep the north east region on a level playing field in its ability to attract and retain high tech industries. The lines will comply with all international standards and are of the a similar type as the two lines already in place between Moneypoint in Co Clare and Co Meath and, between Moneypoint and Co Kildare, which total 440km in length.

The open days are being held in:

- The Four Seasons Hotel, Monaghan Town; 27 November, 3–8pm,
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The two projects are :

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Industries are attracted to a region for many reasons, one of them being a dependable supply of electricity. New industries locating in Ireland discuss with EirGrid the terms, conditions, security of supply and the quality of the power being delivered.

### **HEALTH CONCERNS**

People have concerns about health and Eirgrid is anxious to meet with people and ease those concerns in a straightforward manner, as well as dispel some of the myths associated with electricity transmission.

The fact is that extensive worldwide research, involving expenditure of over €440m, has found NO conclusive evidence that extremely low frequency (ELF) EMF's from power lines are harmful to public health. This research has been reviewed by international bodies including the WHO. It was also reviewed earlier this year by the Department for Communications, Energy and Natural Resources.

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EirGrid is satisfied from the totality of studies and the views of international authoritative agencies that the balance of evidence is that electric and magnetic fields do not have any adverse effect on health. (Information available at [www.eirgrid.com](http://www.eirgrid.com)).

The World Health Organisation (WHO) issued guidelines in 1998 that were adopted by EU in 1999. We comply with the guidelines. These guidelines are continually monitored and reviewed and they have not had to be changed. A study carried out by the World Health Organisation (WHO) EMF Task Group and concluded this year says that there are no substantive health issues related to ELF EMFs at levels generally encountered by members of the public.

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Mary Murphy 087 233 6415 / 01 284 6338

**EIRGRID'S OPEN DAY IN ATHBOY PLANNED FOR TOMORROW, THURSDAY HAS  
BEEN CANCELLED BY THE HOTEL**

**28<sup>th</sup> November, 2007**

The Old Darnley Lodge hotel in Athboy has cancelled tomorrow Thursday's EirGrid Open Day. EirGrid would like to apologise for the inconvenience and is extremely disappointed that the hotel decided to cancel the event especially in the light of the recent successful Open Day in the Four Seasons Hotel in Monaghan.

'We would like to emphasize there will be further opportunities for people in Meath to take part in consultation with EirGrid and that this consultation is an ongoing process' says Aidan Corcoran, Project Engineer, EirGrid.

In the past few weeks, EirGrid has met with or been in contact with well over a thousand people in relation to the proposed power lines in the North East region. People wishing to get in touch can contact EirGrid through their email addresses MeathCavanPower@eirgrid.com or [CavanTyronelnterconnector@eirgrid.com](mailto:CavanTyronelnterconnector@eirgrid.com)

ENDS

For further information please call Mary Murphy 01 2846338/ 087 2336415

**EIRGRID THANKS THOSE WHO ATTENDED AT OPEN DAYS AND CONFIRMS THEY WILL CONTINUE TO CONSULT ON ROUTE CORRIDOR OPTIONS FOR PROPOSED NORTH EAST POWERLINES**

**30<sup>th</sup> November 2007:**

More than 250 people attended at the EirGrid public consultation day on the two proposed powerlines at the Four Seasons Hotel in Monaghan on the 27<sup>th</sup> November to ask questions and give feedback in relation to the need for and the benefits of the proposals from members of the Eirgrid Project team. A panel of experts, including the two firms of consultants working on the powerline projects, an independent scientist from the US who spoke about health concerns and two specialists from the UK on overground and underground powerlines talked with people individually and in small groups so everyone's opinion could be heard.

"We were delighted so many people came to meet us and we listened very carefully to their concerns", said Aidan Corcoran, Project Manager, Eirgrid. "We were able to answer a lot of questions on the day and give people maps and written information to take away with them, as well as introducing them to the independent experts who talked with them about overground versus underground powerlines and electromagnetic fields (EMF) and any health concerns."

Eirgrid's website [www.eirgrid.com](http://www.eirgrid.com) has been visited by large numbers of people and the company has received received hundreds of phone calls on 1890 25 26 90 as well as emails to [CavanTyronelInterconnector@eirgrid.com](mailto:CavanTyronelInterconnector@eirgrid.com). All correspondence is being responded to and Eirgrid will continue to consult with listen to people while work continues on picking the preferred route corridor for the powerlines. No decision will be made on the routes until the New Year and Eirgrid will apply for planning permission in 2008.

Eirgrid expressed regret to people from Co Cavan and Co Meath who were unable to attend the planned consultation evenings in Kingscourt and Athboy, due to late cancellations by hotels in both counties. EirGrid is giving careful consideration to how to hold further opportunities in a safe and accessible way for people in those counties, after the cancellations.

The experts on powerlines who attended the open days confirmed that 97% of powerlines in Europe are situated overhead. Nowhere in the world is there an underground line of the length of the proposed powerlines ( 80km and 58km). These are strategic lines, providing electricity to a wide area. Faults, when they occur in overhead lines, can be identified and fixed in hours - essential to meet the need of modern industry, domestic, commercial and farming customers. Faults on underground lines can take far longer to find and can take weeks to repair. Lengthy power outages which could result would not be sustainable for any customers – domestic, commercial, farming or industrial – in the region.

In relation to Electric and Magnetic Fields (EMF), the most recent Task Group report of the World Health Organisation (WHO) was published in June 2007. The Task Group's main objective was to review the scientific literature on the biological effects of exposure to Electric and Magnetic Fields in order to assess any health risks from exposure to these fields and to use this health risk assessment to make recommendations to national authorities on health protection programs. The Task Group concluded that there are no substantive health issues at EMF exposure levels generally encountered by members of the public.

For more information, please contact [www.eirgrid.com](http://www.eirgrid.com) or [MeathCavanPower@eirgrid.com](mailto:MeathCavanPower@eirgrid.com) or [CavanTyronelInterconnector@eirgrid.com](mailto:CavanTyronelInterconnector@eirgrid.com) or lo-call 1890 25 26 90.  
ENDS

For further information: Mary Murphy 087 233 6415 01 284 6338



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# Letters to the Editor

## Concerns over new power lines

Madam, - I would be grateful for the opportunity to respond to recent letters in relation to EirGrid's proposal for essential new 400 kilovolt (kV) electricity lines in Meath, Cavan and Monaghan, currently the subject of public consultation.

The proposed power lines are vital to ensure reliable and economic electricity supplies to homes, farms, small businesses and industries, as well as facilitating competition in the electricity market. Without this upgrade, the region would not in future be assured of the high quality bulk electricity supply so necessary for all aspects of modern life and business.

The 400kV electricity lines proposed are the same as the existing 400kV lines that run from Moneypoint in Co Clare to Kildare and Meath. Those have been in operation since the 1980s. They are similar to lines which are standard

throughout Europe and internationally. Some 97 per cent of high-voltage lines in Europe are carried overhead and no 400kV power line of the length and type needed in the north-east has ever been placed underground anywhere in the world.

All Irish power lines comply with the standard guidelines of the EU and the International Commission of Non-Ionising Radiation Protection (ICNIRP) for electric and magnetic field (EMF) exposure levels. The World Health Organisation, in its most recent EMF report (June 2007), having reviewed the relevant research, confirmed that compliance with ICNIRP standards was sufficient to protect public health. In fact the levels of EMF from power lines in Ireland are generally much lower than ICNIRP levels, and are lower than levels from appliances commonly used in homes throughout

the country.

In relation to some of the specific points raised, I can assure your readers that neither EirGrid nor any other power company in Ireland has any 15-minute limit on working with power lines. In fact there is no time limit in place for employees of electricity companies in Ireland for such work.

More than 2,500 people have attended open days or received information via telephone, email or letter over the past two months. EirGrid is continuing to consult all stakeholders on route options for these two new lines. Anyone can phone us on 1890 25 26 90. We strongly believe that our present proposal for upgrading the transmission system is the best one, both for this region and for all electricity customers in the State. Under the planning system, the independent planning authorities will make the decision on these two lines and people can submit any observations or objections to the planning authorities when a planning application is made next year. - Yours, etc,

**MICHAEL KELLY,**  
Communications Manager,  
EirGrid,  
Dublin 2.

## MEATH CHRONICLE ARTICLE

12<sup>th</sup> December

### The Great Pylons Debate

EirGrid says lines must go underground

#### ***The case for***

PEOPLE living and working in counties Meath, Monaghan and Cavan urgently need the two new overhead power line projects being proposed by EirGrid. Existing supplies in the area are likely not to be able to meet future demands for electricity as early as 2012/2013.

The new power lines are needed to provide a future reliable and secure supply of electricity. The new power lines will increase competition and help reduce the cost of electricity to customers, and will help keep the north-east region on a level playing field in its ability to attract and retain high-tech industries. The new power lines also will facilitate the use of renewable energy in future.

This is the reason EirGrid has produced what it believes is the best possible proposal and why it has been consulting on route options since early October. More than 2,500 people have received information either via telephone, e-mail, letter, or at open days over the past two months, and no application will be made for planning permission until at least next spring. EirGrid's policy of putting power lines overhead is in line with what happens all over Europe, where overhead lines are the norm. Practically all (97 per cent) of all European power lines are overhead. Nowhere in the world are there lines underground as long as the two proposed lines (80km and 58km approx).

It's better from a technical point of view to have the lines overhead. Based on international experience, an underground electricity cable would not provide the reliable, secure or economic service needed in the region. This is because long delays on repairs that can occur with underground cable could not be tolerated as it could result in power cuts in the region. In contrast, the standard international method for power lines, which is overhead construction, results in fault-finding and repair generally measured in hours. These lines have to go underground. The primary reason is because it takes too long to locate and repair faults on underground cables - weeks versus hours for over-ground cables. Security of electricity supply over such a huge area of the north-east means over-ground lines are essential. Only short stretches of power lines in cities and built-up areas, where there is literally no room for pylons, are laid underground. Industries are attracted to a region for many reasons, one of them being a dependable supply of electricity. New industries locating in Ireland discuss with EirGrid the terms, conditions, security of supply and the quality of the power being delivered. People have concerns about health and EirGrid is anxious to meet with people and ease those concerns in a straightforward manner, as well as dispel some of the myths associated with electricity transmission.

The fact is that extensive worldwide research, involving expenditure of over €440m, has found no conclusive evidence that extremely low frequency (ELF) EMFs from power lines are harmful to public health. This research has been reviewed by international bodies including the WHO. It was also reviewed earlier this year by the Department for Communications, Energy and Natural Resources. In March 2007, the Department of Communications, Marine and Natural Resources (DCMNR) published a report entitled 'Health Effects of Electromagnetic Fields', compiled by an international expert group. This document is available on their website, [www.dcmnr.gov.ie](http://www.dcmnr.gov.ie). The conclusions were consistent with those of similar reviews conducted by authoritative national and international agencies. In relation to ELF EMF, the report clearly states that "no adverse health effects have been established below the limits suggested by international guidelines". EirGrid is satisfied from the totality of studies and the views of international authoritative agencies that the balance of evidence is that electric and magnetic fields do not have any adverse effect on health.

EirGrid is setting up meetings with groups and individuals who are concerned about possible adverse health impacts from overhead power lines, so they can reassure them. The company is satisfied that there is no reason why the two proposed lines should have any adverse effect on people's health or should be laid underground. People often quote individual studies when they voice their concerns about health. EirGrid advises anyone who is concerned to look at the totality of the research that is available and not just at any one study. The World Health Organisation (WHO) has looked at all the research and its most recent report, published in June 2007, states clearly that "the balance of evidence is that extremely low frequency electric and magnetic fields, at the levels to which members of the public are exposed from power lines, do not have adverse effect on health".

EirGrid is encouraging everyone with concerns or queries in relation to the proposed power lines to make contact through the advertised channels so that we can work together on getting these very important and beneficial projects underway.

For further information, visit [www.eirgrid.com](http://www.eirgrid.com) or e-mail [meathcavanpower@eirgrid.com](mailto:meathcavanpower@eirgrid.com) or lo-call 1890 25 26 90.

Leukaemia may result from EMF exposure

### ***The case against***

A SIGNIFICANT body of research over the years has been performed in relation to the health effects of electric and magnetic fields associated with EHV lines. Current scientific data now confirms that exposure to electromagnetic fields above 0.4 microteslas increases the risk of leukaemia, particularly for children. Additionally, increasing evidence shows that it is associated with an increased risk of miscarriage, brain tumours and motor neurone disease. The World Health Organisation (WHO) is currently undertaking a large programme of research on the health effects of EMF and, in 2003, released a public advisory saying that there was now sufficient evidence for regulatory bodies to take a precautionary approach to actively prevent or reduce exposure.

In 2006, an influential paper by UK scientists, Draper and colleagues, was published in the British Medical Journal confirming that EMF was associated with childhood leukaemia, and more importantly, that the effects of EMFs were seen over a greater distance than previously reported. This has led to the suggestion that the easement for any pylon corridor be at least 600m (300m each side).

In the UK, the government formed SAGE, which is a stakeholder advisory group on EMFs. This group comprises industry, public and scientific advisors. In May 2007, they released their interim report which confirms that there is sufficient evidence to suggest a relationship between low levels of EMF and health problems and that there must be government action to reduce public exposure.

They note that their recommendations on minimum safe distances and exposure levels (0.4microteslas) will have a significant impact on property values. The SAGE report notes that the minimum distance from 400kV power lines is 60m to get an exposure of 0.4 microteslas. They note that, consistent with WHO findings, a public exposure of 0.1 microteslas is desirable and minimum distances are then over 100m. They warn that the highest potential currents on existing cable technology means that the minimum safe distance (0.4 microtesla exposure) from 274 to 400kV lines would be up around 280m each side (560 metres total). In June 2007, the European Commission published an opinion report of the scientific committee on Emerging and Newly Identified Health Risks (SCENIHR) on the possible health risks of electromagnetic fields. The opinion by SCENIHR focuses primarily on whether health effects occur at low exposure levels, and in particular, in relation to long-term exposure. The opinion concludes that, for extremely low frequency (ELF) fields (ie, nearby power lines) that ELF magnetic fields are possibly carcinogenic, mostly based on occurrence of childhood leukaemia. In view of the gaps in knowledge identified in the opinion, the SCENIHR proposes further and appropriate research to be conducted.

There is a body of evidence which points to a real threat to health caused by an overhead line of this scale. These findings heighten concerns at public level. So also does the apparent desire by Eirgrid to take the minimum precautions necessary. For example, the statement by Eirgrid of a minimum proximity of 25 metres from the proposed overhead lines to existing houses is very concerning. In the UK, the minimum level is 60 metres. In other European countries, such as Denmark, this increases to 160 metres.

The erection of extremely large pylon towers and overhead lines has a major and immediate negative impact on land and property valuations. It also significantly affects the ability to obtain planning permission for new houses/developments within a large distance from the unsightly pylons. There is no compensation that will be adequate enough to cover property and land intrusion and devaluation to land owners who will have the pylons on their land, or for adjacent landowners who do not have the pylons on their land, but whose land and property values will be significantly impacted.

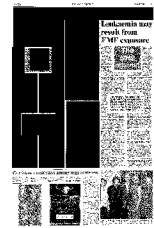
The option of under-grounding transmission lines is consistent with the objectives of not only protecting our environment, but also the cultural, social and economic aspects of our communities. While the visual impact will be greatest along the line corridor, it is no more acceptable to those within more distant sight of the giant pylons or to tourists, local or visiting, on roads. These pylon towers will detract from beautiful landscapes which have high amenity and economic value for communities.

According to Eirgrid, a review of the development plans was taken in order to assess the number of scenic views, scenic routes, and vulnerable landscapes in the area. However, upon closer inspection of Meath County Development Plans 2007-2013 and of Eirgrid's proposed route corridors, there are a number of cases where there is a direct contradiction to many policies and recommendations in the county development plan.

The code of practice between ESB National Grid and the Minister of the Environment, Heritage and Local Government in relation to archaeological heritage highlights that ESB National Grid is fully committed to ensuring that these transmission developments are carried out in an environmentally sensitive manner which will protect our archaeological heritage and national monuments.

ESB National Grid state that they are fully committed to operating within the guidelines outlined within the code of practice. The development of such a network has potential archaeological implications, which must be addressed given that archaeological heritage is a non-renewable resource.





**The Great Pylons Debate:** Few issues in recent years in Meath have stirred as much controversy and seen such large attendances at protest meetings across large swathes of the county than the proposal by EirGrid, the electricity transmission system operator, to construct 400kV over-ground cables from the Woodland sub-station near Batterstown to Kingscourt. EirGrid says the project is crucial to secure future electricity supplies in the region while opponents are deeply fearful of the health implications on communities living in close proximity to the pylons. Here, EirGrid and Meath Pylon Pressure air their opposing views

# EirGrid says lines must go underground

The  
case  
for

**PEOPLE** living and working in counties Meath, Monaghan and Cavan urgently need the two new overhead power line projects being proposed by EirGrid.

Existing supplies in the area are likely not to be able to meet future demands for electricity as early as 2012/2013.

The new power lines are needed to provide a future reliable and secure supply of electricity. The new power lines will increase competition and help reduce the cost of electricity to customers, and will help keep the north-east region on a level playing field in its ability to attract and retain high-tech industries. The new power lines also will facilitate the use of renewable energy in future

This is the reason EirGrid has produced what it believes is the best possible proposal and why it has been consulting on route

options since early October. More than 2,500 people have received information either via telephone, e-mail, letter, or at open days over the past two months, and no application will be made for planning permission until at least next spring.

EirGrid's policy of putting power lines overhead is in line with what happens all over Europe, where overhead lines are the norm. Practically all (97 per cent) of all European power lines are overhead. Nowhere in the world are there lines underground as long as the two proposed lines (80km and 58km approx).

It's better from a technical point of view to have the lines overhead. Based on international experience, an underground electricity cable would not provide the reliable, secure or economic service needed in the region. This is because long delays on repairs that can occur with underground cable could not be tolerated as it could result in power cuts in the region.

In contrast, the standard international method for power lines, which is overhead construction, results in fault-finding and repair generally measured in hours.

These lines have to go over-ground. The primary reason is because it takes too long to locate and repair faults on underground cables - weeks versus hours for over-ground cables. Security of electricity supply over such a huge area of the north-east means over-ground lines are essential. Only short stretches of power lines in cities and

built-up areas, where there is literally no room for pylons, are laid underground.

Industries are attracted to a region for many reasons, one of them being a dependable supply of electricity. New industries locating in Ireland discuss with EirGrid the terms, conditions, security of supply and the quality of the power being delivered.

People have concerns about health and EirGrid is anxious to meet with people and

ease those concerns in a straightforward manner, as well as dispel some of the myths associated with electricity transmission.

The fact is that extensive worldwide research, involving expenditure of over €440m, has found no conclusive evidence that extremely low frequency (ELF) EMFs from power lines are harmful to public health. This

research has been reviewed by international bodies including the WHO. It was also reviewed earlier this year by the Department for Communications, Energy and Natural Resources.

In March 2007, the Department of Communications, Marine and Natural Resources (DCMNR) published a report entitled 'Health Effects of Electromagnetic Fields', compiled by an international expert group. This document is available on their website, [www.dcmnr.gov.ie](http://www.dcmnr.gov.ie)

The conclusions were consistent with those of similar reviews conducted by authoritative national and international agencies. In relation to ELF EME, the report clearly states that "no adverse health effects have been established below the limits suggested by international guidelines".

EirGrid is satisfied from the totality of studies and the views of international authoritative agencies that the balance of evidence is that electric and magnetic fields do not have any adverse effect on health.

EirGrid is setting up meetings with groups and individuals who are concerned about possible adverse health impacts from overhead power lines, so they can reassure

them. The company is satisfied that there is no reason why the two proposed lines should have

any adverse effect on people's health or should be laid underground.

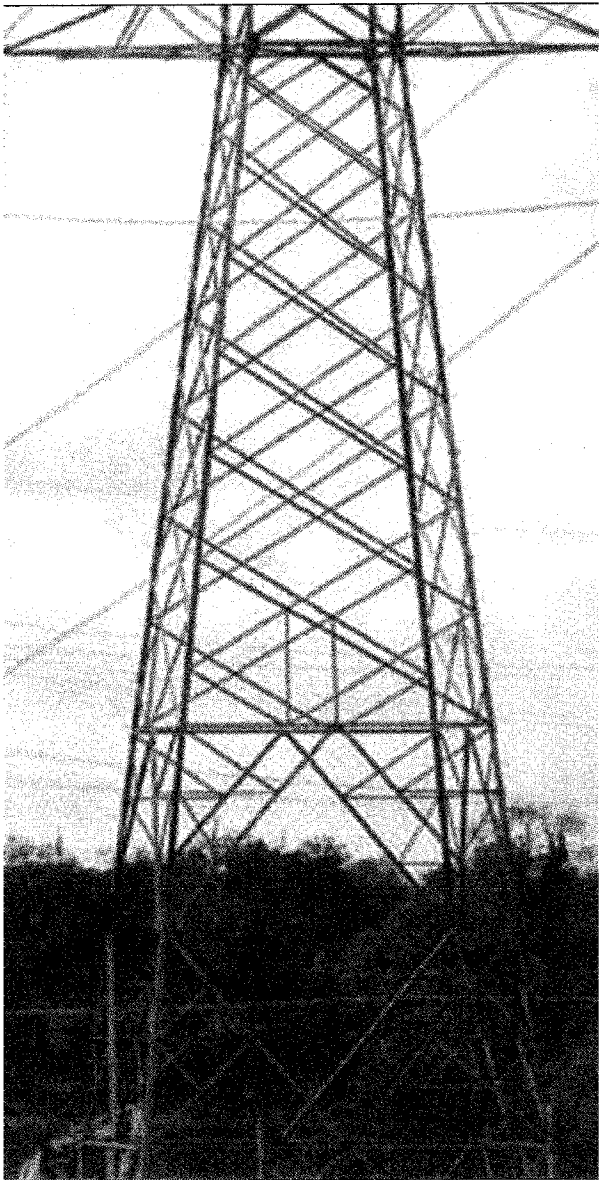
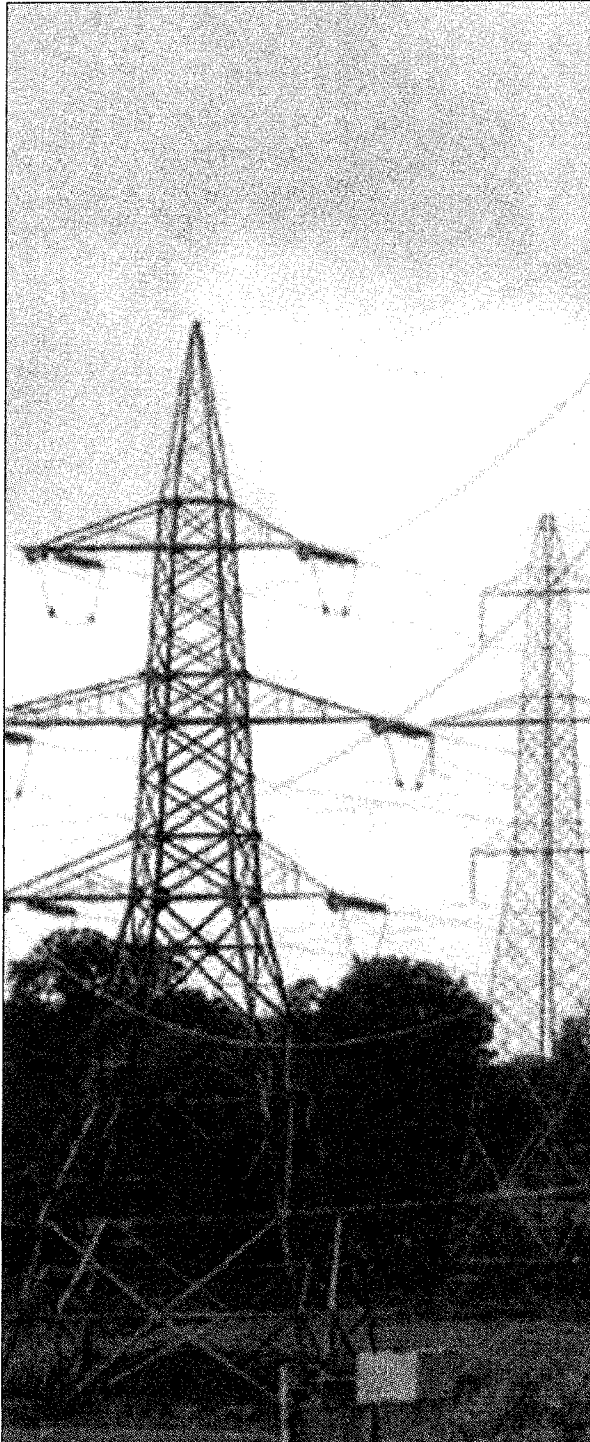
People often quote

individual studies when they voice their concerns about health. EirGrid advises anyone who is concerned to look at the totality of the research that is available and not just at any one study. The World Health Organisation (WHO) has looked at all the research and its most recent report, published in June 2007, states clearly that "the balance of evidence is that extremely low frequency electric and magnetic fields, at the levels to which members of the public are exposed from power lines, do not have adverse effect on health".

EirGrid is encouraging everyone with concerns or queries in relation to the proposed power lines to make contact through the advertised channels so that we can work together on getting these very important and beneficial projects underway.

For further information, visit [www.eirgrid.com](http://www.eirgrid.com) or e-mail [meathcavanpower@eirgrid.com](mailto:meathcavanpower@eirgrid.com) or lo-call 1890 25 26 90.

**"Industries are attracted to a region for many reasons, one of them being a dependable supply of electricity. New industries locating in Ireland discuss with EirGrid the terms, conditions, security of supply and the quality of the power being delivered"**



## **EIRGRID SAYS HEALTH FEARS ON PROPOSED POWER LINES ARE UNFOUNDED**

**“Examine all the research into electromagnetic fields and health”, it advises**

**January 14<sup>th</sup> 2008:**

EirGrid, the Transmission System Operator, is continuing to comprehensively address concerns expressed by some people in relation to the proposal to build a 400kV powerline between Woodland in Co Meath and Kingscourt in Co Cavan and a 400kV Interconnector between Cavan and Tyrone in Northern Ireland.

EirGrid points out that the consensus of major scientific organisations like the World Health Organisation does not suggest that electromagnetic fields (EMF) cause "any adverse health effects at levels generally encountered by members of the public".

While EirGrid understands that some people have expressed concerns in relation to health issues, it asks that people examine the whole body of evidence and the totality of the research available, rather than look at any one study into EMF as individual studies are limited and often contradict each other.

Since the 1970s, there have been thousands of studies carried out into electromagnetic fields and people sometimes base their concern on a single study with which they are familiar rather than considering the totality of available research.

"The World Health Organisation (WHO) is the top public health organisation in the world and it gathered a panel of interdisciplinary experts to look at all the available information and research. The WHO's 400 page report, published in June 2007, concluded that the research does not suggest electromagnetic fields (EMF) cause any adverse health effects at levels generally encountered by members of the public", says Mr Aidan Corcoran, Project Engineer, EirGrid.

He adds: "EirGrid constructs its facilities to the highest standards and manages them actively on an ongoing basis. 400kV power lines have been in place right across the country from Co Clare to Co Meath for more than twenty years already, without any adverse effects."

EirGrid complies with International Guidelines for EMF exposure set by the International Commission on Non-Ionizing Radiation Protection (ICNIRP), which advises the WHO. In its 2007 Report, the WHO confirmed these guidelines are sufficient to protect public health. The Department of Communications, Marine and Natural Resources published a report in 2007 and the conclusions of the international expert authors are consistent with the WHO Report.

EirGrid is continuing to consult with people on the shortlisted route corridors. Three route corridor options for both projects are currently being investigated. No decision has been made yet on the preferred route corridor for each line.

**ENDS**

For further information, please contact Mary Murphy: 01 2846338 / 087 2336415

## **EIRGRID EXPRESSES CONCERN AT INCIDENTS LAST NIGHT AFTER MEETINGS WITH RESIDENTS**

**16th January 2008:**

EirGrid has expressed its deep concern that members of its staff and consultants were harassed, physically intimidated and held against their will last night (Tuesday 15<sup>th</sup> January), following a series of very successful meetings in Co Cavan with local people about the much-needed proposed power line between Meath and Cavan.

After the meetings, 30 people not involved in the pre-booked meetings entered the premises and harassed and physically intimidated EirGrid staff, consultants and representatives in what was a very frightening and appalling incident. EirGrid emphasises that it is entirely unacceptable for its staff and consultants and representatives performing their lawful duties to be harassed, or intimidated.

The meetings had been scheduled to address the information requests of members of the community and six successful meetings had been held earlier this week, without incident.

“The unfortunate thing is that the only people who will lose out as a result of last night’s actions are people who want information, as we have had to cancel 12 further planned meetings this week. That is entirely regrettable,” said an EirGrid spokesperson.

EirGrid is asking anyone with information who wishes to feed into the decision on the route selection, to contact the company through the email addresses [MeathCavanPower@eirgrid.com](mailto:MeathCavanPower@eirgrid.com) or [CavanTyronelInterconnector@eirgrid.com](mailto:CavanTyronelInterconnector@eirgrid.com) or the information line - 1890 25 26 90

As previously stated, EirGrid intends to announce the preferred final route shortly, at which point the consultation process with the affected landowners and residents will begin. An Environmental Impact Statement which will deal with issues such as health, underground and other issues, will be submitted with the planning application.

In the last 14 weeks, EirGrid has been in communication with more than 5,000 people in advance of making a decision on the preferred route for the vital electricity power lines. The public consultation has taken the form of open days, face to face meetings, as well as thousands of communications via telephone information line and email and writing. Statutory consultation will begin when EirGrid lodges an application for planning permission with An Bord Pleanala. At that point, people will have the opportunity to make their views known to An Bord Pleanala who will make a final decision on whether the project proceeds.

ENDS

For further information please call Mary Murphy 087 2336415 / 01 2846338

**EIRGRID WELCOMES STATEMENT FROM MINISTER FOR COMMUNICATIONS,  
ENERGY AND NATURAL RESOURCES**

**Sunday, 20 January, 2008**

**Issued by EirGrid, Ireland's electricity transmission system operator.**

EirGrid welcomes the statement from the Minister for Communications, Energy and Natural Resources, Eamon Ryan TD, in relation to transmission infrastructure developments. This infrastructure is critical for economic development and for ensuring a secure and reliable supply for all electricity users.

We welcome his proposal that this issue be considered by the Joint Oireachtas Committee.

We agree with the Minister that issues relating to the development of Ireland's electricity transmission grid should be considered by policy makers. This is in light of the need for support for major developments of our national electricity grid to meet the needs of the economy, business, and all consumers.

Work being carried out by expert consultants commissioned by EirGrid on undergrounding of power lines, will be supplied to the Minister and to the Joint Oireachtas Committee for Communications, Energy and Natural Resources.

EirGrid acknowledges the considerable interest expressed by public representatives right across the political spectrum in ensuring that there is maximum information in the public domain on the question of undergrounding of transmission cables, and other technical aspects relating to electricity transmission infrastructure.

EirGrid will be supplying members of the Committee and the Minister with information compiled by the consultants and will be making this information publicly available. We look forward to consideration of the issues in the Oireachtas Committee.

EirGrid will also be supplying detailed analysis of issues around undergrounding to the Strategic Infrastructure Board when it applies for planning permission later this year for the Tyrone-Cavan and the Meath-Cavan 400kV lines.

ENDS

Editor's notes:

EirGrid is the independent electricity Transmission System Operator (TSO) in Ireland and the Market Operator in the wholesale electricity trading system.

EirGrid's role is to deliver quality connection, transmission and market services to generators, suppliers and customers utilising the high voltage electricity system, and to put in place the grid infrastructure required to support the development of Ireland's economy.

EirGrid develops, maintains and operates a safe, secure, reliable, economical and efficient transmission system.

**For further information, please contact [Mary Murphy](#) at 01 2846338**

**EIRGRID ASKS FOR COMMENTS AND SUBMISSIONS IN ADVANCE OF DECISION ON  
PREFERRED ROUTE FOR POWER LINES IN NORTH EAST**

**January 21<sup>st</sup> 2008**

EirGrid invites anyone who has not yet submitted information as part of the public consultation process on the proposed power lines for Cavan/Tyrone and Meath/Cavan and who wishes to do so, to email or post their submission to EirGrid by the 11<sup>th</sup> of February, 2008

EirGrid intends to announce the preferred route for the Cavan /Tyrone and Meath/Cavan proposed power lines within weeks of receiving all remaining submissions.

Since early October 2007, EirGrid has been engaged in an extensive consultation process with the people of Meath, Cavan and Monaghan on three proposed routes. Over the last 15 weeks, EirGrid has been in communication with more than 5,000 people about the vital electricity power lines for this North East region.

EirGrid and its consultants will process all the information received in order to determine a preferred route. The consultation process will continue with landowners, residents and other stakeholders in relation to the preferred route and other aspects of the project. Following this consultation, EirGrid will submit a planning application to An Bord Pleanala, later in 2008.

An Environmental Impact Statement (EIS) will be prepared to deal with all relevant issues, including health concerns and undergrounding versus overhead lines. The EIS will be submitted with the planning application and will be available to the public. Members of the public have seven weeks to make submissions to the planning authority from the date of application to An Bord Pleanala.

EirGrid emphasises the critical need for these new transmission lines for the delivery of high quality power in sufficient quantities for the needs of all customers in the region. EirGrid strongly believes that its present proposal for the upgrading of the transmission system is the best one.

As part of the ongoing consultation process, EirGrid invites anyone who wishes to submit information relating to the choice of route corridors, to email or post their views to the following addresses by the 11<sup>th</sup> of February, 2008: by email [MeathCavanPower@eirgrid.com](mailto:MeathCavanPower@eirgrid.com) or [CavanTyroneInterconnector@eirgrid.com](mailto:CavanTyroneInterconnector@eirgrid.com) or by post to EirGrid Plc, 27 Lower Fitzwilliam St, Dublin 2.

**Ends.**

**For more information contact Mary Murphy 01 2846338**

**Note to editors:**

Since last October, EirGrid has been engaged in an extensive consultation process on three proposed routes, in advance of making a decision on the preferred route for the vital electricity power lines. The public consultation has taken the form of open days, face to face meetings, as well as thousands of communications via the telephone information line, email and writing. EirGrid has noted the comments, observations and views expressed during the consultation on the selection of the preferred route for these much needed electricity lines.



## EIRGRID STATEMENT ON FLUORESCENT TUBE/POWER LINE PHOTOGRAPHS

February 1<sup>st</sup> 2008

The well known and normal phenomena of a fluorescent tube “glowing” if it is held directly beneath a high voltage power line does not imply adverse health implications, EirGrid assured people today. The electric field produced by the power line causes the tube to glow very dimly showing that there is electricity in the power line nearby, but as you move away a short distance the glow disappears quickly.

EirGrid aims to keep electricity lines as far away from homes as possible, and because of this there will be few houses within hundreds of metres from any proposed high voltage line.

Electric fields cannot penetrate walls. Electric fields from power lines cannot enter homes or businesses. Electric fields in people’s homes or places of work come from whatever electrical appliances and electrical wiring are in the home or business.

Power lines produce both magnetic and electric fields. It is the electric field alone which causes the fluorescent tube to ‘glow’. This “glowing” phenomena has no connection whatsoever with magnetic fields. The main debate about possible adverse health effects of power lines centres on the measurement of exposure to *magnetic fields*, not electric fields.

EirGrid is satisfied from the totality of studies and the views of international authoritative agencies like the WHO, that the balance of evidence is that extremely low frequency (ELF) electromagnetic fields (EMF) such as those produced by the proposed 400kV power lines do not have any adverse effects on health.

ENDS

Further information: Mary Murphy 087 233 6415 / 01 284 6338

## **EIRGRID STATEMENT ON VITAL PROPOSED POWER LINES**

**1<sup>st</sup> February 2008**

EirGrid is currently in a public consultation process in relation to the routing of two vital power line projects.

The overhead power line projects are two 400kV (kilovolt) electricity lines. The two lines – one from Tyrone to Cavan and one from Cavan to Meath – will bring major benefits to Irish electricity users and to counties Meath, Monaghan and Cavan.

### **QUALITY AND RELIABLE POWER:**

The new power lines will bring the equivalent of 'broadband power' to the region – that is, the power lines will help ensure the delivery of power in significant quantities, and with the high standards and reliability all consumers need. These proposed new lines are vital in order to facilitate competition as part of the All Island Market, and also to supply the needs of new and existing householders, farms, commercial businesses and industries. The new lines are needed because transmission lines in the region will reach full capacity in the future.

The key to the benefits of the new networks is the use of the standard international technology for delivery of high voltage power – which is overhead lines.

These lines will comply with all international standards and are of the same type as the two 400kV overhead lines already in place in Ireland which are 439 kilometers in length.

### **VITAL INVESTMENT FOR ATTRACTING AND RETAINING INDUSTRY:**

Undergrounding all or part of a Transmission Network presents problems for the secure and reliable operation of that network. The location and repair of faults on underground cables can take a number of weeks, depending on the type of fault and its location. For such an integral part of the transmission system, such a compromise to the security of supply would be unacceptable.

Industries are attracted to a region for many reasons, one of them being a dependable supply of electricity. A priority for new industries locating in Ireland is the cost, terms, conditions, security of supply and the quality of the power being delivered. A Transmission System depending on circuits of underground cable would not provide the supply necessary to attract the high quality type of industry being sought in Ireland.

### **OVERHEAD LINES AND SECURITY AND RELIABILITY:**

These proposed lines are similar to overhead lines which are standard throughout Europe and internationally. For instance, 97 per cent of high voltage lines in Europe are carried overhead. No 400kV power line of the length and type needed in the north-east has ever been placed underground anywhere in the world.

Based on international experience, an underground electricity line would not provide the reliable, secure or economic service needed in the region. This is because where an underground power line develops a fault, the time taken to find and repair the fault can be weeks or months. In contrast, the standard international method for power lines, which is overhead construction and which is planned here, results in fault-finding and repair generally measured in only hours.

## **HEALTH ISSUES:**

Ireland complies fully with all of the most up-to-date electric and magnetic field policies and regulations in Europe and internationally.

The World Health Organisation gathered a panel of experts to look at all the available information and research on electric and magnetic fields (EMF) and power lines and they most recently reported on this in June 2007. They concluded that the research has **not** established that EMF causes any adverse health effects at levels generally encountered by members of the public. Based on this, and a review of this issue by the Irish Department of Energy last year, EirGrid firmly believes that there is no health risk associated with high voltage power lines. We would not be proposing these lines if they presented a health risk to anyone. We comply with every international guideline for building power lines safely and we always will.

## **COST OF INFRASTRUCTURE:**

This is, of course, a very significant issue for electricity customers. In addition to the security, reliability and repair issue, EirGrid has a responsibility to build this line without excessive cost to all customers. All electricity customers share the entire cost of any transmission infrastructure constructed, through our bills. International experience is that underground cables at this voltage typically cost many times more than overhead lines.

ENDS

Further information: Mary Murphy 087 233 6415 / 01 284 6338

## **APPENDIX E**

### **[COUNCILLOR LETTERS]**

**November 6<sup>th</sup> 2008**

Dear TD/Senator/MEP

As you are probably aware, Eirgrid is the organisation responsible for putting in place major electricity transmission infrastructure to support all regions and the economy nationally. We are planning two projects in the North East and invite you to meet us for a one-to-one briefing about the projects on Tuesday, 13<sup>th</sup> November 2007, in Dublin. Please phone us on 1890 25 26 90 to arrange a suitable time to meet with us.

The two projects are:

- A new 400kV Interconnector between Cavan and Tyrone to more than double the current power transfer capacity between the North and the South. The new interconnector will span approximately 45km in the Republic of Ireland, will cost in the region of €180 million and will be routed from a proposed new substation near Kingscourt in Co Cavan, through Co Monaghan and onwards to Co Tyrone. This project is being undertaken in co-operation with Northern Ireland Electricity (NIE).
- A 400kV Power Line from Woodland (Co Meath) to Kingscourt (Co Cavan). It is approximately 58km long and will cost in the region of €100 million. This power line will reinforce the power system in the North East, facilitating competition and secure supplies of power for all customers.

The network strengthening in Cavan, Monaghan, and Meath will support growth in the region and ensure continuing reliability of supply as well as giving existing industries a major boost when competing for business and inward development in the area.

Both projects will

- Ensure a future secure supply of electricity throughout the North East.
- Facilitate cross-border sharing of electricity
- Help promote better competition
- Facilitate use of renewable energy
- Upgrade existing electricity supplies.

A number of route corridor options for both projects are currently being investigated and a preferred route will be chosen in 2008. All stakeholders have an opportunity to make their views known at this early stage, before route option studies are completed and a final route is chosen.

Maps and details about each of the proposed route corridor options for both projects are available on [www.eirgrid.com](http://www.eirgrid.com)

I look forward to hearing from you to arrange a meeting for Tuesday 13<sup>th</sup> November, or another date of your choosing, if that does not suit you.

Kind regards,

Yours sincerely

Aidan Corcoran  
Manager, Transmission Projects  
EirGrid



7<sup>th</sup> November 2007

Dear Councillor xx

Following a presentation that we made to you at the October meeting of Cavan County Council regarding the two projects that EirGrid is currently planning for the North East - the new 400kV powerline between Woodlands in Co Meath and Kingscourt in Co Cavan, and the North-South Interconnector between Kingscourt and Co Tyrone - I am writing to update you on progress since then, as we appreciate that you are probably being approached by constituents regarding the project.

#### **Meeting**

We would be happy to meet you in the next week or so to give you a detailed briefing, one-to-one, if you feel it would be useful. Please contact our dedicated lo-call information phonenumber, **1890 25 26 90**, to schedule a date and venue.

#### **Printed Materials**

We are in the process of publishing a number of printed materials in response to public queries, detailed below, and we would be happy to send you copies of these, if you wish – please let us know how many of each publication you would like us to send. You may telephone us on **1890 25 26 90** or email **MeathCavanPower@eirgrid.com**.

#### **Project Update**

Since we briefed you at the October meeting of Cavan County Council we have

- held a public Information Open Day in Kingscourt, Co Cavan on 17<sup>th</sup> October
- launched our information phonenumber (1890 25 26 90) and email service which have been very busy dealing with legitimate queries from the public
- updated our website, [www.eirgrid.com](http://www.eirgrid.com), with information on the project.

In response to queries raised by the public at the open days, on the information phone-line and on the email, we have:

- organised a repeat Information Day in Co Cavan, on Wednesday, 28<sup>th</sup> November in Cabra Castle, Kingscourt, from 3pm to 8pm, and we ask you to encourage your constituents to come along to find out more about the project and to have their queries answered;
- compiled a document of frequently asked questions raised by the public;
- prepared Factsheets on Powerlines and Health and on Overhead v Underground Powerlines;

Alongside these measures, EirGrid has published a booklet on Electro Magnetic Fields.

These materials are available to download from our website, [www.eirgrid.com](http://www.eirgrid.com), and we are also in the process of printing them, so do let us know if you would like us to send you copies (telephone **1890 25 26 90** or email **MeathCavanPower@eirgrid.com**).

27 Lower Fitzwilliam Street Dublin 2  
Sraid MacLiam lochtar Baile Atha Cliath 2

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I look forward to hearing from you and hopefully to meeting you in the coming weeks, either at a one-to-one briefing or at our Information Day in Kingscourt on the 28<sup>th</sup> November.

Kind regards,  
Yours sincerely

Aidan Corcoran  
Manager, Transmission Projects

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