



Clashavoon Dunmanway 110 kV Power Line Project

This document outlines answers to questions sent to EirGrid following a public open day held in the Castle Hotel Macroom on the 09/05/2011 in relation to the Clashavoon Dunmanway 110 kV Power Line Project.

1) I am concerned about human & animal health and have heard that the proposed 110kV could affect my health and animal health. What studies have been carried out to examine these possible healths affects?

EirGrid is a company owned by the State. EirGrid has the exclusive function to operate and ensure the maintenance of and, if necessary, develop a safe, secure, reliable, economical and efficient electricity transmission system with due regard for the environment in Ireland.

The World Health Organisation and ICNIRP (the International Commission on Non-Ionizing Radiation Protection) continually monitor the results of scientific studies into EMF, and all other EMF related studies. From the totality of these studies ICNIRP developed its 'Guidelines for limiting exposure to time-varying electric, magnetic and electromagnetic fields (up to 300GHz)'. Both the World Health Organisation and the European Commission have endorsed these guidelines. They form the basis of EU Council Recommendation 1999/519/EC which set out the relevant European Union Guidelines. EirGrid designs and operate the Irish transmission network in accordance with these EU Guidelines.

EirGrid are satisfied from the totality of studies and the views of international authoritative agencies, and international experience of best practice in transmission system development, that the balance of evidence is that overhead transmission lines proposed for use do not have any adverse effect on human health or animal health.

The proposed Clashavoon Dunmanway project will operate at all times (even standing directly under the line) well below the levels set by the International Commission on Non-Ionising Radiation Protection (ICNIRP) regarding EMF exposure and public health and endorsed by the World Health Organisation, the EU and the Irish Government.

For more information about EMF's and overhead lines view [EirGrid Booklet on EMF & Electricity](#) on www.eirgridprojects.com

2) I am concerned about the visual impact of the proposed line. How are EirGrid going to mitigate any potential visual impacts?

The proposed 110 kV line will consist primarily of double wood poles. A lattice steel structure is used when changing direction or to strengthen the line in places. Picture 1 below is of the existing Dunmanway Macroom 110 kV line and picture 2 is of a typical lattice steel structure.



Picture 1

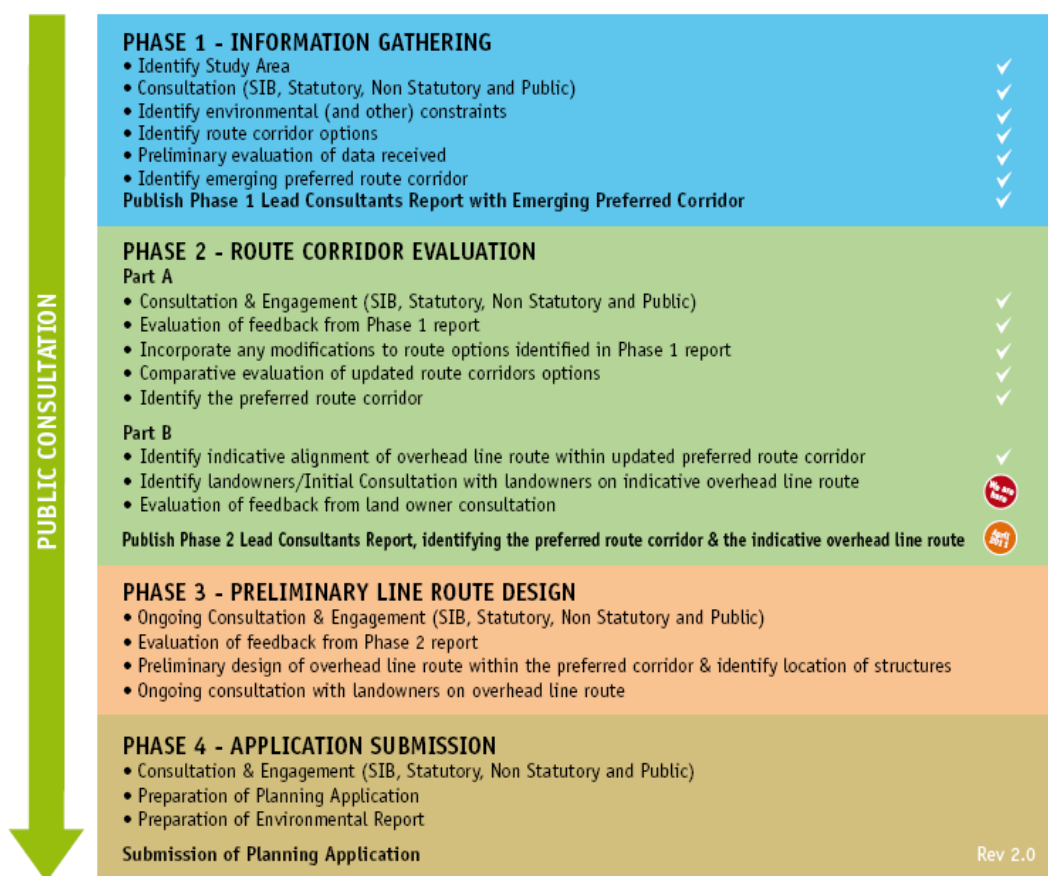


Picture 2

The process for submitting a planning application for the proposed Clashavoon Dunmanway Project has been divided into four key phases as follows:

Phase 1	Information Gathering	Complete
Phase 2	Route Corridor Evaluations	On-Going
Phase 3	Route Design	Estimated June- July 2011
Phase 4	Application Submission	Estimated September 2011

Planning Application Project Roadmap



As part of phase 1, EirGrid's Environmental consultants, AOS Planning have prepared two reports on visual/landscape impact. Both reports have been published on the project website (www.eirgridprojects.com). The reports set out the methodology and information sources used in the assessment of visual/landscape impact at phase 1.

Report 1	Constraint Report Landscape - Visual Impact	August	2010
Report 2	Assessment of Corridors Report Landscape -Visual Impact	September	2010

As part of phase 2 EirGrid's consultants, ESBI, will identify an indicative line route within the preferred corridor, again based upon an evaluation of the findings of the visual impact assessment, as well as impact assessment of other environmental topics. A Phase 2 report will be published once an indicative line route has been identified and verified.

At phase 3, when the detailed line siting and design is being undertaken, EirGrid's consultants will prepare detailed expert environmental assessment, that will address and identify any potential impacts, proposed mitigation measures and any residual impacts (if any) for all aspects of the environment.

One of these reports will be a visual/landscape assessment. This will be submitted as part of a comprehensive environmental report with the planning application and made publically available on the dedicated application website.

3) Is there limitation to agricultural land use after Construction of the line?

Normal agricultural activities can continue as usual after the construction of the proposed 110 kV overhead line.

EirGrid is the operator of the transmission system (Transmission System Operator) while ESB is the owner of the transmission system (Transmission Asset Owner), therefore ESB will own the overhead line. In its role as the TAO (Transmission Asset Owner) ESB produces an excellent booklet "Farm Well Farm Safely" which can be downloaded from the ESB Networks website at www.esb.ie/esbnetworks.

4) I am concerned as an adjacent householder whose land/property is not traversed that there will be a decrease in the value of my home. How are EirGrid going to compensate me for my loss?

EirGrid operates over 4,000 kilometres of 110 kV lines throughout Ireland in a safe and secure manner. Much of this network has been in existence for over 40 years and EirGrid does not perceive that overhead power lines impact on property values. The development of the electricity grid is vital to provide us all with an essential and secure supply of energy.

5) My area is renowned for its archaeological and historic value? Will the proposed electricity circuit pose a threat to this heritage?

EirGrid has developed a Code of Practice in conjunction with the Department of Environment Heritage & Local Government. This Code of Practice highlights that EirGrid is fully committed to ensuring that developments are carried out in an environmentally sensitive manner, protecting our cultural heritage.

Question 2 above details the project roadmap. As part of phase 1, EirGrid's consultants, AOS planning have prepared two reports on Cultural Heritage for the proposed Clashavoon Dunmanway project. The cultural heritage report included a historical report on the entire study area for the project. These expert environmental reports detail the constraints and expert environmental assessment of the proposed route corridors.

Both reports have been published on the project website (www.eirgridprojects.com)

<i>Report 1</i>	<i>Constraints Report – Cultural Heritage</i>	<i>August 2010</i>
<i>Report 2</i>	<i>Assessment of Corridors Report - Cultural Heritage</i>	<i>September 2010</i>

At phase 3, when the detailed line siting and design is being undertaken, EirGrid's consultants will prepare detailed expert environmental assessment, that will address and identify any potential impacts, proposed mitigation measures and any residual impacts (if any) for all aspects of the environment.

One of these reports will be a Cultural Heritage assessment. This will be submitted as part of a comprehensive environmental report with the planning application and made publically available on the dedicated application website.

6) I am concerned the proposed new overhead line will affect wildlife such as bats and birds. What are EirGrid proposing to mitigate this impact?

Question 2 above details the project roadmap. As part of phase 1, EirGrid's consultants, AOS planning have prepared two reports on Ecology for the proposed Clashavoon Dunmanway project. These expert environmental reports detail the constraints and expert environmental assessment of the proposed route corridors.

Both reports have been published on the project website (www.eirgridprojects.com).

Report 1	Constraints Report – Ecology	August 2010
Report 2	Assessment of Corridors Report - Ecology	September 2010

At phase 3, when the detailed line siting and design is being undertaken, EirGrid's consultants will prepare detailed expert environmental assessment, that will address and identify any potential impacts, proposed mitigation measures and any residual impacts (if any) for all aspects of the environment.

One of these reports will be an Ecology assessment. This will be submitted as part of a comprehensive environmental report with the planning application and made publically available on the dedicated application website.

7) Why is this project not going underground?

EirGrid has the exclusive function to operate and ensure the maintenance of and, if necessary, develop a safe, secure, reliable, economical and efficient electricity transmission system with due regard for the environment. Whenever a new high voltage circuit is proposed, EirGrid's Policy on the use of Overhead Line and/or Underground Cable guides the decision on whether to use overhead line or underground cable.

As a result of EirGrid's policy, an underground cable will only be used if all of the following four conditions apply-

- 1. An overhead line is not environmentally feasible;*
- 2. A technically and environmentally acceptable route for underground cable can be found;*
- 3. The effect that the electrical characteristics of underground cable have on the transmission network is acceptable, and the relative 'availability' of the underground cable is tolerable; and;*
- 4. The relative greater cost of the underground cable above that for overhead line can be justified;*

In relation to condition (1) above, Chapters 3 & 4 of of the Phase 1 Consultants Report (Available on www.eirgridprojects.com) confirms that there are three environmentally feasible corridors, within which to route an 110kV overhead line circuit, and that the predicted environmental impacts of such overhead development are sustainable. Therefore EirGrid proposes an overhead line solution for this project. As such condition (1) does not apply. Notwithstanding this, the use of underground cable has been considered for this project.

In relation to condition (2) above, EirGrid commissioned ESB International to carry out a feasibility study to investigate underground cable route options and environmental studies to assess the impact of installing underground cable on these routes. Technically feasible cable

route options were identified and the environmental impacts are sustainable. As such condition (2) does apply.

In relation to condition (3) above, a project specific 110kV technical screening study has examined the electrical characteristics of using a cable for the proposed circuit. The electrical characteristics of cable are deemed tolerable based on the 110kV technical screening study. The reliability of both the overhead line and underground cable has been assessed based on a combination of fault data from the Irish transmission system and CIGRE (The international council on large Electric Systems) data on 110kV faults. Over the lifetime of the proposed circuit, the overhead line has a better reliability and a significantly better repair time of faults. Therefore, it follows that the overhead line will provide a better availability than underground cables.

In relation to condition (4) above, EirGrid has estimated the costs associated with an overhead line and underground cable solution. Based on the emerging preferred overhead line corridor and the emerging preferred underground cable route, it is estimated that, the underground cable would cost approximately 100% more than the overhead line. As such the relative high cost of an underground cable cannot be justified for this project. As such condition (4) does not apply.

In summary, as a result of EirGrid's Policy on the use of Overhead Line and/or Underground all four of EirGrid's conditions should apply for an underground cable to be used within a proposed circuit.

As a number of these conditions do not apply EirGrid is proposing an overhead line solution for this project.

8) I have heard that the proposed 110kV line, if granted permission, could be upgraded to a 220kV line without planning permission. Can EirGrid confirm this is true?

It must be noted that the need for, and nature of, the project was identified initially by studies carried out by EirGrid's expert system planners, who forecasted the maximum carrying capacity that would be required for this project.

It is from such studies that it was concluded that the proposed 110 kV project would meet the identified need for the project. The proposed 110kV line if granted planning approval would be constructed using the pole structures described in Phase 1 Consultants Report (Available on www.eirgridprojects.com). Once constructed, the line can be operated at nominal voltage of 110kV. It would not be possible to upgrade the line to 220kV using the structures described in the Phase 1 Consultants Report. It should be also noted that Dunmanway transmission station is an 110kV station.