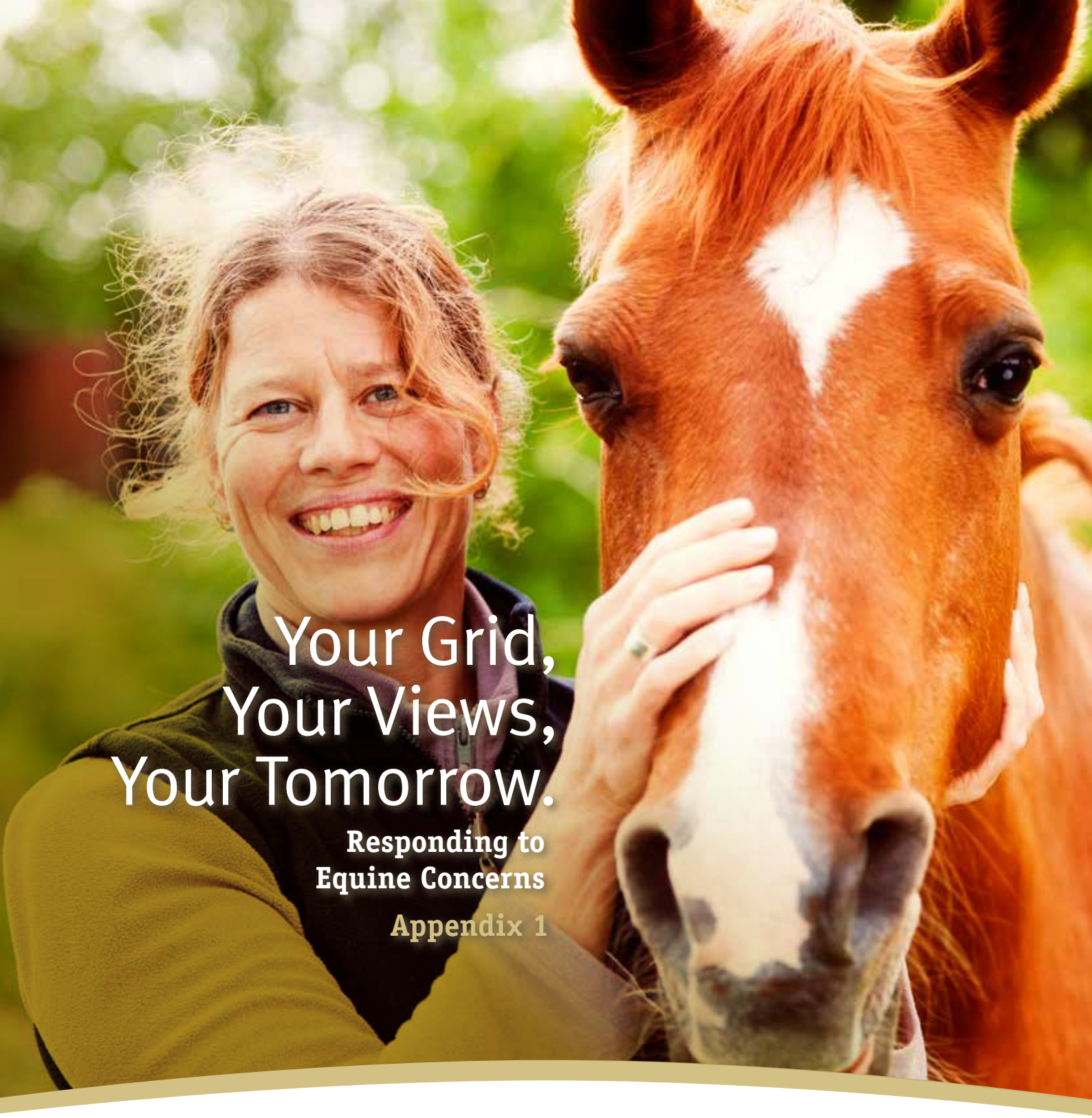


Your Grid, Your Views, Your Tomorrow.

Responding to Equine Concerns

Appendix 1

EIRGRID

The current. The future.

Appendix 1

Approach of European Grid Operators to Agricultural and Equine Land Users

Introduction

The submissions received over the course of the recent consultations on proposed grid projects in Ireland relating to agriculture and equine raised many concerns about the approach taken to these activities at the route selection, construction and operational stages of electricity transmission lines.

But how does this approach compare with what is being done by other Grid operators in Europe for example? Is it in line with or different to that which is being done by them? Are there learning's that can be taken from the approach of others to agriculture and equine interests, which if applied by EirGrid, would improve the approach to developing overhead lines in Ireland?

It was felt that arriving at an understanding of the approach of other Transmission System Operator's (TSO's) with regard to how they treat agricultural and equine concerns would be very valuable in preparing the final report. At the same time it is recognised that agriculture as practiced in Ireland has unique differences from the way it is practiced in other European countries owing to farm size, field size, land quality, climate, culture etc. Nonetheless understanding the different approaches would provide a useful knowledge base against which to compare and determine if some of the measures identified could be applied to the Irish context to result in an improvement for landowners engaged in these activities. A survey of other European TSO's approach to these issues was undertaken through the representative body ENTSO-E.

ENTSO-E

ENTSO-E (The European Network of Transmission System Operators for Electricity) is the representative body for all electric TSOs in the EU and others connected to their networks, for all regions, and for all their technical and market issues. 41 TSOs from 34 countries are members of ENTSO-E.

ENTSO-E activities are focused on:

- reliable operation,
- optimal management,
- sound technical evolution of the European electricity grid,
- security of supply,
- meeting the needs of the Internal Energy Market and facilitating market integration,
- network development statements,
- network codes,
- promotion of relevant R&D and the public acceptability of transmission infrastructure,
- consultation with stakeholders and positions towards energy policy issues.

As a member of ENTSO-E, EirGrid took the view that it is the organisation best placed to facilitate the undertaking of a survey to gain an understanding of the approach taken by other TSO's to agricultural and equine operations while developing overhead transmission lines. ENTSO-E agreed to work with EirGrid to circulate a survey questionnaire among member TSO's.

The Survey

To encourage participation and a focused response, a concise survey questionnaire containing three questions was drafted to enable an understanding to the gained of the TSO' approach to the issues in question.

The questions were as follows;

Question 1.
At the corridor / route selection stage of a new transmission overhead line, are any agricultural land uses or any horse enterprises treated as a constraint to be avoided? YES /NO

If Yes, please describe in further detail.

Question 2.
Have you any policies for dealing specifically with agriculture and/or horse enterprises during the following stages?

A). Route Selection Stage	Yes/No
B). Construction Stage	Yes/No
C). Operational/Maintenance Stage	Yes/No

If Yes, please describe in further detail.

Question 3.
Do you have a code of practice for dealing with these matters or any published material outlining your approach to dealing with landowners [and landowners issues] in general? YES /NO

If yes, please describe further and provide links or references to published material.

The questionnaire was circulated by ENTSO-E to all members.

Table 1 lists those that responded to the survey, the country(s) in which they operate and the length (in km) of transmission lines which they operate.

TSO Name	Country of Operation	Length of Transmission System (km)
50hertz	Germany*	9,995 km
Amprion	Germany*	11,000 km
APG	Austria	6,777 km
Eles	Slovenia	2,682 km
Elia	Belgium	8,000 km
ESO	Bulgaria	14,727 km
REE	Spain	42,000 km
RTE	France	104, 684 km
Sepsas	Slovakia	2,863 km
Tennet	The Netherlands / Germany	21,000 km
Terna	Italy	63,500 km
Energinet	Denmark	6,800 km
Fingrid Oyj	Finland	14,300 km
National Grid	England & Wales	8,600 km

Table 1. Respondents to the survey, their country of operation and total length of transmission lines under their operation. *There are multiple TSO's in Germany.

The table shows that a response was received from most of the major TSO's operating in western Europe including the largest. In total, those responding to the survey operate in excess of 300,000 km of transmission lines. The Irish System operated by EirGrid extends to 6,500km.

Analysis of & Discussion on the responses.

Question 1 sought to establish clearly if agricultural land uses or horse enterprises are treated as a constraint to be avoided at the corridor / route selection stage of electricity transmission line routing.

The current EirGrid approach is that these land uses are not a constraint to be avoided but at the detailed line routeing stage, the aim is to minimise the impact on these enterprises through discussions with the owners of the enterprises to determine the least impacting line alignment and structure locations having regard to all the other constraints and line design guidelines.

What the responses to question one show is that this is very much the approach of the TSO's who responded to the survey. None of those that responded have a policy of avoiding agricultural land/enterprises or horse enterprises when routeing new transmission lines.

One TSO responded *"generally, yes"* to this question but go on to say,

"in these areas it would be preferable not to take action unless there are no other alternatives, or in the presence of alternatives with a lower environmental compatibility". In essence this is no different to the EirGrid approach in that the final route that is chosen is the one that represents the least environmental impact. Similarly another TSO commented that they try to avoid special crops such as vineyards and olive groves.

Another TSO made the comment that *"agricultural land is absolutely necessary when routeing new transmission lines"*.

Having established in Q1 whether or not these land uses are treated as a constraint, questions 2 & 3 sought to understand how these land uses / enterprises are treated when it comes to the detailed line routeing across them and also at the construction and operational stages of the transmission line.

Question 2 enquired as to whether TSO's had a formal policy setting out their approach to agriculture and or horse enterprises at;

a. route selection stage
b. construction stage
c. operational / maintenance stage.

This question was interpreted differently by different respondents and in most cases accompanied by text explaining or qualifying the answer.

In response to part (a) – route selection stage – most TSO's have a policy of meeting with each landowner and occupier to discuss/consult on the route alignment so as to minimise the impact in the first instance and then to mitigate its effects on the enterprise as far as possible. Specific additional comments are as follows;

- *"We try to place our towers near to the boundaries between parcels of land to reduce the burden of the individual landowners"*.
- *"For new transmission lines above 110 kV and more than 15 km route length an EIA is necessary, where all possible identified impacts along the route of the line are assessed – this includes also impacts on agricultural and/or horse enterprises"*.
- *"No special treatment for agriculture and/or horse enterprises is done, unless these areas are also areas of sensitive use for people (see Question 1). For new transmission lines above 110 kV and more than 15 km route length an EIA is necessary, where all possible identified impacts along the route of the line are assessed – this includes also impacts on agricultural and/or horse enterprises"*.
- *"We do treat each individual case on it's merits and as mentioned in the previous question, we would look to have meaningful discussion with each land owner/ Occupier at the route alignment stage to mitigate any effect as far as possible"*.

- *"The legal requirement in (name of country) for selecting a route for a new power line is to assess thoroughly all the possible impacts of the project (environmental, financial, landscape, etc.). The selected route therefore results from a (long and somewhat lively) dialogue with local stakeholders which at final defines a compromise ("lowest impact route"). Agriculture representatives are one of these stakeholders. Impacts on livestock farms (including horses) are one of the possible identified impacts but not particularly weighted in the whole process, as this possible impact can be mitigated using good practices of electrical installations (grounding, etc.)".*
- *"Agriculture areas are more desired than forests".*

Again the approach being taken by the respondents is consistent with that being pursued by EirGrid. The EirGrid approach can be broadly outlined as follows;

1. As soon as the indicative line route within the corridor is identified, the owners of the land over which the line crosses are identified from a search of the Property Registration Authority of Ireland (PRAI) database.
2. A map showing individual landholdings and the line route across it is produced for each identified landowner and this is issued to each landowner for discussion as part of an information pack.
3. A meeting is organised with each landowner to discuss the proposal as it impacts their land. This is to get the landowners views on the alignment identified, give them an opportunity to suggest alternative alignments and indicate what would represent the least impacting locations for towers on the line route on their land.
4. All suggestions from landowners are fully investigated in arriving at a preferred line route which shows the proposed locations of towers. Proposed alterations to the route alignment are undertaken when they are shown to be technically feasible, do not result in a greater overall environmental impact and do not result in a greater adverse impact on the lands of neighbouring landowners. Landowners generally ask that towers be sited close to/on field boundaries and where this is possible this is done. However, the placing of towers on hedgerows requires that the hedgerow be surveyed by the environmental and technical team.
5. A map of the revised line route showing structure locations is issued to each landowner and again comments are sought from them. Again, where possible, landowner's wishes are delivered upon.
6. Where required a full Environmental Impact Assessment (EIA) is undertaken on the final line route to produce the Environmental Impact Statement (EIS) which is lodged with the planning application. Impact on agriculture and equine enterprises is considered as part of this process.
7. Throughout the process, landowner representatives locally are briefed on the project.

All of the items that have been identified by other TSO's as key in their approach to agricultural and equine enterprises at the route selection stage are being applied by EirGrid presently. Dealing directly with landowners at the route selection stage comes across clearly from the survey as a very important activity at this stage and is something that EirGrid also places great emphasis on. However, the impacted landowners cannot be determined until an indicative line route is known. Prior to that EirGrid makes every effort to ensure that people generally are informed that a line is required and the area within which the line will be located is widely consulted on.

In response to part (b) of question 2 (construction stage), the following were some of the main comments;

- *"Working methods shall be such that all unnecessary damage to the vegetation, trees and land will be avoided. Any changes to the land surface shall be minimal and any imprints left shall be levelled. Foundation work and other heavier work on fields shall be performed during ground frost or when the soil will bear a load, as far as possible. Any potentially injurious parts shall be covered to make them harmless to people or animals (e.g. stay wires in pasture land). At transmission line work sites, the contractor shall notify the residents, nursing institutions and educational establishments of the neighbouring area, as well as any other instance that may be disturbed by the work (such as horse farms or fur farms), in advance of any work that will cause a disruptive noise or vibration, regardless of the notification requirement stipulated by the authorities".*
- *"An agreement with the chamber of commerce for agriculture is established for landowners compensation. This agreement includes permanent crop loss and land use for tower foundation area. Crop damage during construction stage is compensated additionally".*
- *"Cause as small as possible impact on the environment in the construction stage".*
- *"There is a compensation policy for all damages towards agricultural users. We also currently have one case where we cross parcels (with cables, not an OHL) where a yearly horse jumping contest is held. The timing of the construction and the repair of the terrain will be adjusted such that there will be no effect on the contest".*
- *"We compensate the landowners if it is necessary to move horses or other farm animals to another field during construction and maintenance. We have agreements with the national interest group for agriculture about the prices for compensation – both for achieving the right of way and for compensation for the loss of income from crop".*
- *"There is a compensation policy for all caused damages".*
- *"Use of special technologies of construction not to concern special crops (vineyards, olive trees). Carrying out the work in stretches, on lines of a sizeable length, may allow the schedule works to be carried out in any particular areas of the year when the possible impacts on the horses or farming work are minimum, always providing that this be possible within the limitations imposed by need to reach agreements with the owners before moving on to any other work".*

- *"(TSO Name) is permanently discussing with farmers representatives in a permanent national committee. One of the objectives is to update regularly the refunding of loss of crops and of land use due to the grid development and maintenance in agricultural lands. There is no permanent discussion regarding livestock farming. Nevertheless specific measures can be agreed following the dialogue process related to a particular project when its possible impact on livestock is questioned by local farmers. For example, this recently happened in a 400 kV project. The particular agreement committed (TSO Name) to upgrade the electrical feeding and protection system of all neighbouring farm buildings (barns), which implied for example the grounding of all floating metallic elements (fences, etc.). The main concern was about dairy cows and no particular question rose from horse enterprises".*
- *"During the preparation of the lines construction based on the relevant legislation, lump rent for use as compensation for the temporary withdrawal of land is set. Price varies within the protection zone of the overhead lines (OHL) and the price is different under the towers of the OHL too. Compensation is paid for all the species of land whether it is arable land, forests or other. The determining factor is the price of land financial standing. It is also intended legislative treatment of topsoil".*
- *"We identify possible mitigation and compensation measures and we subscribe a Memorandum of understandings among (TSO Name) and the local authorities".*
- *"We don't have a special policy or code for dealing with equine enterprises. And we don't have a special code for dealing with agriculture when it is about routing or special measurements. We do have although, something special to do about landowners: 1. we have to make a deal/contract with every landowner about the price we have to pay for making use of his land and a price to compensate his losses because of our assets. 2. Before we are going to talk with every individual landowner, we try to make an agreement with the branch cooperation of the agricultural sector".*
- *"We have internal policies relating to the contact, maintaining contacts with agricultural enterprises, and the compensation for the use of agricultural land".*
- *"Special mitigation measures; using of existing trails, streets, if possible. If not a building of firm surface and/ or use of planks to avoid compaction, restriction of construction stripe, separation of topsoil and subsoil, separate storage (topsoil ‹ 2m, if stored more than 3 month a greening), professional back-filling, Guarantee of unimpaired runoff, backfilling and re-cultivation during dry weather conditions to avoid capping + compaction, scarifying of soil if necessary, passing of sensitive soil only under dry condition, building of firm surface if necessary (e.g. geotextiles following DIN 18915.)"*
- *"At construction we would negotiate (where possible) a solution which enables the enterprise (agricultural or equine) to operate as normally as possible during the works and we have, in extreme cases, arranged for horses to be moved to alternative training arrangements and paid compensation for this activity for the duration of the works".*

Question 2 set out to determine if TSO's had specific policies for dealing with agriculture and equine enterprises. Question 3 asked about codes of practice. In answering there is some overlap between Q2 & Q3. Responses are taken as given. Allowing for translation and interpretation of the question, it appears that in general, the only policy that applies at the construction stage of projects relates to compensation for losses arising from the works. Minimising the impact of construction works on farms, while not the subject of policy documents, is a major concern for TSO's. Most respondents appear to have extensive measures/practices in place to firstly minimise and secondly mitigate the impact from construction works.

Question 2 (c) sought to understand what policies TSO's have in place for dealing with agriculture and or horse enterprises during the operational phase of the project (i.e. after construction) for maintenance activities.

Many of the comments given in response to Q2(b) apply equally to this question in that TSO's aim to minimise impacts on these activities during any maintenance works. Additional comments include;

- *"Yes. Crop damage during maintenance is compensated".*
- *"Yes. The compensation policy for agriculture foresees both compensation of the owner (buying of the pylon area) and compensation of the users (for loss of usable land, extra costs, lower profits etc)".*
- *"Yes. There is a compensation policy for all caused damages".*
- *"Yes. There is a compensation policy for all damages towards agricultural owners. Another series of very diverse measures are simultaneously agreed upon, including those referring to the correction of damage and environmental protection".*
- *"Yes, compensation payment" with the other measures applying in response to Q2(b) applying here also.*
- *"In normal operation and maintenance we do not get any major issues but on the few occasions where the enterprise has been badly affected we have arranged for horses to be moved to alternative arrangements and paid compensation for the effect".*

Having ascertained in question 1 whether or not agriculture and equine enterprises are treated as a constraint at line routeing, and any policies applied to these activities in question 2, question 3 sought to understand if TSO's have codes of practice for dealing with these activities or what, if any, publications they have, outlining their approach to dealing with landowners.

The following are the comments received;

- *"We have published our land use and environmental policy"*
- *"Agreement with the chamber of commerce for agriculture. Different values in €/m² depending on the soil quality are defined. For each new transmission line project such agreements are negotiated with the local/regional chamber of commerce for agriculture".*
- *"Yes. All owners are met individually and a compensation offer is made. The compensation policy (for agricultural owners and users) has been agreed upon with the agricultural organisations. This is not binding for the owners and users but is in many (but not all) cases accepted.*

- *"Yes. There are meeting with all owners one by one in order to determinate a compensation.- The compensation policy (for agricultural owners and users) has been agreed upon with the agricultural organisations. The process of obtaining rights from landowners involves any economic agreements for setting up rights of way necessary for place the pylons and the OHL; this is usually done by friendly agreements with the owners for the payment compensation. When reaching agreements with owners, sometimes, motivation of owners not always are equal of the regional authorities statements. Due care should therefore be taken not to undertake to carry out any activities that flout the commitments entered into with the public bodies. This is particularly crucial when crossing protected natural sites".*
- *"(TSO Name) relationships with owners or farmers are framed by a number of agreements, signed by the transmission system operator and many organizations representing the agricultural profession. Regarding livestock farmers, (TSO Name), the State and agriculture representatives have established a common association. This association has three objectives: - The management of scientific work on the influence of electrical stray phenomena in agricultural areas; - Responding to requests concerning electrical safety and electrical phenomena in farms; - The promoting of good practices for electrical installations in farms".*
- *"No, we don't have a special policy or code of practice for dealing with equine enterprises".*
- *"We don't have a special policy or code for dealing with equine enterprises. And we don't have a special code for dealing with agriculture when it is about routing or special measurements. We do have although, something special to do about landowners: 1. we have to make a deal/contract with every landowner about the price we have to pay for making use of his land and a price to compensate his losses because of our assets. 2. Before we are going to talk with every individual landowner, we try to make an agreement with the branch cooperation of the agricultural sector. This agreement is the bases of all the individual negotiations".*
- *"No. But each landowner who is affected by the overhead line is contacted personally by us and we will try to achieve an amicable settlement on the topic of compensation".*
- *"Framework for compensation payment (not published), Concept for soil protecting construction work (not published yet) (non-exhaustive list)".*
- *"Whilst we do not have a specific Code of Practice we do have a number of "commitment" fact sheets which we have produced for use in specific circumstances as attached and these include: Working on Grid Assets on your land, Our Commitment to the Environment, Our Commitment to Safety.*
- *"These are broadly used for existing assets and for new construction we have a further suite of fact sheets including; Guidance on Land Rights for New Electricity Transmission Assets, Overhead Transmission Lines, Environmental and Engineering Surveys".*

Compensation is a major theme running throughout the survey responses but particularly in response to this question. The main point is that comprehensive agreements on compensation for the impact of new lines on farmland are put in place with the chamber of commerce for agriculture/farming organisations and these agreements frame all negotiations with individual landowners. Common among the responses received is that all landowners are met individually and final compensation agreed.

Closely tied to the compensation agreements are codes of practice setting out how works will be undertaken at the construction and operation stages and many of the TSO make reference to documents that they have available in this regard.

One TSO is very pro-active in the area of landowner concerns about stray voltage etc;

"Regarding livestock farmers, (TSO Name), the State and agriculture representatives have established a common association. This association has three objectives: - The management of scientific work on the influence of electrical stray phenomena in agricultural areas; - Responding to requests concerning electrical safety and electrical phenomena in farms.

Conclusions

The survey proved very interesting in getting an understanding of other European TSO's approach to agriculture and equine activities when routeing, construction and operating electricity transmission lines. It is recognised that agriculture as practiced in Ireland has unique differences from the way it is practiced in other European countries owing to farm size, field size, land quality, climate, culture, etc. Nonetheless, understanding the different approaches is a very useful first step in looking to see what improvements could be made to the approach currently being taken by EirGrid. The following conclusions and recommendations can be drawn from the survey;

1. Agricultural land and/or agricultural enterprises or equine enterprises are not treated as a constraint when it comes to routeing new electricity transmission lines.
2. TSO's have a policy of meeting with each landowner and occupier to discuss/consult on the route alignment so as to minimise the impact in the first instance and then to mitigate its effects on the enterprise as far as possible.
3. Some TSO's try to avoid special crops (vineyards & olive groves) or what might be termed "sensitive" land uses if it is possible, only routeing through them where there are no other alternatives.
4. Concerns regarding the equine industry are not a major issue for other TSO's.
5. Regular meaningful engagement between landowners and their representatives and the TSO's is an important feature of the industry in most countries.
6. Having a comprehensive compensation package in place addressing all of the issues that arise at the construction and operation stages is common among most TSO's.
7. Hand in hand with the compensation policy most TSO's have codes of practice or packages of measures setting out how works on their lands will be undertaken.
8. A notable feature highlighted by one TSO is the promotion of good practices for electrical installations in farms and responding to requests concerning electrical safety and electrical phenomena in farms.

Notes

Notes


EIRGRID