EirGrid "Your Grid Your Views Your Tomorrow" Consultation

Summary Report

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1 Contents

Executive Summary

In 2008 EirGrid published Grid25, a long term strategy to develop the grid. EirGrid is now reappraising the need and the drivers for the investments outlined within Grid25. As part of this process, EirGrid consulted organisations and members of the public on a discussion paper on Ireland's Grid Development Strategy (for convenience, this is termed the "draft strategy"). The draft strategy consultation ran from the 27 March to the 5 June 2015. The purpose of the consultation was to receive feedback on the draft strategy and inform the preparation of a Grid Development Strategy to be published later this year. Alongside events, a total of 3,386 responses were received to the consultation.

Dialogue by Design processed, analysed and summarised the feedback that was provided. This report, compiled by Dialogue by Design, summarises that feedback.

The report is to be used by EirGrid to support the work it is doing in finalising its Grid Development Strategy. Its purpose is to summarise and present the responses submitted to the consultation in an accessible and organised manner for EirGrid and its stakeholders.

Some of the feedback provided relates to areas such as energy policy, in particular wind energy which is outside of the remit of EirGrid. However, this feedback has been recorded in this report for completeness. EirGrid will give a copy of the report to the Department of Communications, Energy and Natural Resources which is currently in the process of drafting a new energy white paper.

This report summarises the feedback received under five main topics: the draft strategy overall and wider energy policy (Chapter 3); the need case for developing the grid (Chapter 4); the optimisation of the existing network (Chapter 5); the technology alternatives (Chapter 6); finally, the consultation process (Chapter 7).

Within comments on the strategy overall and wider policy issues, there is support for the draft strategyin allowing the grid to be developed to meet Ireland's growth and policy objectives. There is also some support for proposals for interconnection with the UK and Europe on the grounds that these would contribute to future energy security in Ireland. Criticisms of the draft strategy relate to respondents' belief that it runs counter to various legal commitments or policies; focuses too much on economic considerations; and is premature with respect to the release of the White Paper on Energy Policy.

There is concern about the equity of grid development, when energy generators are placed in rural areas far away from the regions where the bulk of the demand is, the Dublin area in particular. With respect to interconnection, concerns are raised about the concept of a "super grid" with Northern Ireland or interconnection in combination with wind energy generation. This also relates to the potential import or export of energy and the potential consequences of this for the Irish energy market.

On the topic of the need case for developing the grid, one of the reasons in favour of enhanced transmission infrastructure is that this would help support regional development. EirGrid's revised forecasts for electricity demand are supported, although with calls for additional independent assessment. The link between development of electricity infrastructure and capacity and economic growth is challenged, particularly with reference to rural areas. Scepticism about the need for increased capacity generally relates to the belief that this is primarily driven by the aim of connecting new wind energy generators in order to meet Ireland's renewable obligations.

Concerns are also raised around costs, specifically about potential increased costs to consumers or public subsidies to wind farm developers. The need for investment of such a large amount of public money to be as cost-effective as possible is particularly stressed. Other considerations relate to non-monetary costs not being sufficiently taken into account, specifically the impacts on communities, health, environment, tourism and the local economy. It is suggested a full cost benefit analysis should be carried out and that long-term impacts should be weighed against other considerations, primarily the degradation of rural landscape.

On the topic of minimising development and energy demand, EirGrid's commitment to the optimisation of the existing network is supported on grounds that it would provide extra capacity quickly without the impacts associated with new developments. Respondents suggest that reducing further development can be achieved thanks to technological innovations in energy efficiency; the potential of series compensation to increase capacity on existing lines; and overall demand reduction. There is also support for the promotion of decentralised (or localised) generation as an alternative to large-scale generation projects, which it is argued would minimise the need for transmission development. EirGrid's proposal for reduced power capacity in the long term is also supported based on agreement with the assessment of future demand and the argument that such an approach is more cost effective. However, there is some concern that if this aim is followed too rigidly it could undermine long-term security of supply.

On the topic of technology alternatives, there is support for EirGrid's consideration of all practical technology options for developing the network, particularly alternatives to overhead lines and advanced available technologies such as series compensation. Concerns raised in relation to the consideration of technology options include that the criteria used for appraising options need to be set out in more detail, particularly with regard to the consideration of costs through cost-benefit analysis. There is also scepticism about the extent to which EirGrid considered alternatives to overhead lines, which some feel are still being promoted as the most feasible or cost-effective solution. Respondents' concerns about overhead lines include the potential impacts of these on communities, cultural heritage, the environment, agriculture, the local economy and health. Underground cables are supported on the grounds that these would reduce many of these impacts, as well as being perceived to be a cost-effective technology.

On the topic of the consultation process and EirGrid's approach to engagement, EirGrid's commitment to engagement in principle and through one of its strategy statements is well received. However respondents express doubts about how this consultation has been carried out and how future engagement would be organised. Criticisms of the consultation process include that:

- it was not sufficiently advertised and inclusive;
- information provided within the draft strategy consultation is too technical and complex;
- the consultation was ill-timed, in particular, it was too short or did not follow the principle of early engagement;
- Scepticism is also expressed towards research documents produced by EirGrid, i.e. around health and the need case for upgrading infrastructure and towards the process for administering compensation.

These issues are set out in more detail in the following chapters.

Chapter 1: Introduction

1.1 Background

EirGrid is a state-owned company, responsible for managing and operating Ireland's transmission grid. The company works to ensure a safe, secure supply of electricity to homes, businesses and industry across the Republic of Ireland.

In 2008 EirGrid published Grid25, a long-term strategy to develop the grid. The strategy outlined the investment required to develop the transmission network in order to future-proof Ireland's electricity needs. EirGrid is now reappraising the need and the drivers for these investments and published the discussion paper in April 2015, as part of this process.

This strategy responds to feedback received from the public, during and since the previous strategy review, as part of EirGrid's efforts to encourage greater participation in their decision-making process. It also reflects an updated economic content, and incorporates new transmission technologies.

The final strategy will be published later this year after the feedback from this consultation has been incorporated where possible. The strategy will aim to support Ireland's wider economic, environmental and social policy objectives.

1.2 About the consultation

Consultation on the discussion paper 'Your Grid, Your Views' (the draft strategy), ran from the 27 March 2015 to 5 June 2015. The original deadline of 22 May was extended by two weeks, at the request of community groups and the public for more time to consider the draft strategy.

A series of public consultation events were organised in partnership with Irish Rural link. These events were held toward the end of the consultation period and took place in Sligo, Cork and Dundalk.

Respondents were able to submit comments to the consultation via a variety of means; online through the consultation website, by post, by telephone or by email.

A total of 3,386 responses were received to the consultation. Responses were received by post, email, letter, telephone or online. A large number of paper campaign responses were also sent to EirGrid. Here we define campaign responses as those with identical or semi-identical text (with some alterations) sent by numerous different respondents. The breakdown of responses by response method is as follows:

Table1-1: Number of responses by response method

Response method	Number of responses
Letters/emails/phone calls	1,386
Campaign responses	1,906
Online responses	94
Total	**3,386**

Respondents were asked their views on seven questions in the draft strategy consultation. Table 1.2 outlines each of the questions and the number of responses to each:

Table1-2: Number of responses by question

Question	Number of responses
Q1: What are your views on our proposals to develop the electricity grid to support current plans for new investment and jobs?	442
Q2: What are your views on our other reasons for continuing to develop the electricity grid	434
Q3: What are your views on: Strategy Statement 1 – Optimise the current network in order to minimise requirements for new infrastructure?	425
Q4: What are your views on: Strategy Statement 2 – consider all practical technology options for network development	424
Q5: What are your views on: Strategy Statement 3 – Foster open engagement and inclusive consultation with local communities and stakeholders as a central principle to developing the grid?	425
Q6: What are your views on EirGrid's proposal to meet project needs but with reduced power capacity in the long term?	422
Q7: Do you have any other comments on this draft review of our Grid Development Strategy? If so, please provide these below.	3384

Where respondent's comments did not follow the question structure, their responses were captured as feedback to Question 7.

Those who responded were asked to provide contact details to be held alongside their response, including the county that they lived in. The breakdown of responses by county is as follows:

Table1-3: Number of responses by county

County	Number of respondents
Co. Cork	1079
Not provided	771
Co. Waterford	533
Co. Wexford	353
Co. Tipperary	204
Co. Kildare	143
Co. Kilkenny	61
Co. Meath	51
Co. Wicklow	49
Co. Carlow	41
Co. Dublin	39
Co. Laois	13
Co. Cavan	12
Co. Mayo	11
Co. Kerry	10
Co. Westmeath	7
Co. Offaly	7
Co. Limerick	6
Co. Roscommon	5
Co. Galway	4

Co. Clare	3
Co. Louth	3
Co. Donegal	2
Co. Sligo	2
Co. Longford	1
Co. Antrim	1
Co. Leitrim	1
Co. Monaghan	0

Chapter 2: Processing, analysis and reporting methodology

This report does not seek to make recommendations or draw conclusions from the responses submitted to the consultation. The report will be used by EirGrid to inform the work it is doing in its strategy review. Its purpose is to summarise and present the responses submitted to the consultation in an accessible and organised manner for EirGrid and its stakeholders.

There were three stages in the processing and analysis of consultation responses:

1. Data receipt, data entry and categorisation
2. Development and implementation of an analytical framework
3. Reporting

2.1 Data receipt, data entry and categorisation

Responses submitted online via the consultation website were imported directly into Dialogue by Design's bespoke analysis tool for collation. Responses received by other means, i.e. post, email or telephone, were received by EirGrid and sent to Dialogue by Design. These were then read using character recognition software, before being cleaned and quality checked by data entry staff.

Responses were categorised according to length, and whether they fitted the consultation questions. Responses which didn't fit the consultation questions were captured in Question 7, "Other comments on the draft strategy".

2.2 Development of an analytical framework

Dialogue by Design developed an analytical coding framework to organise respondents' views by theme. The structure of the consultation document guided the development of the coding framework, which used the following themes:

- Consultation and Engagement (CE)
- Development need (DN)
- Minimising Energy Use and development (ME)
- Transmission Technology (TE)

To capture the full range of themes discussed by respondents as well as the detailed comments and suggestions, the analytical framework used three-tier codes ('Theme - code - code'). Each code reflects a specific point or comment made in responses.

Codes were applied to a part or parts of a response by highlighting the relevant text and recording the selection. A single response could receive multiple codes. All responses were coded using the same framework. Dialogue by Design developed the

analytical framework by reviewing the early responses to each consultation question, grouping comments making similar points and using codes to reflect the particular points being made. See appendix 1 for the list of codes applied.

2.3 Reporting

Respondents to consultation are self-selecting and do not comprise a representative sample of the public.

This consultation was an open and qualitative process, inviting free text responses from anyone with an interest in the proposals described in the consultation document. This approach enabled respondents to provide rich and detailed comments on the proposals themselves, on how they might be improved and on the reasons underlying their views. We have sought to reflect the issues discussed in responses, rather than attributing any weight to the number of respondents raising a particular issue. The purpose of the consultation was to help EirGrid understand the views and concerns of respondents in relation to the Draft Grid Development Strategy review, in order that these can help inform the the final Development Strategy. To this end, we have not cited the number of times a specific instance is raised within responses. We have looked to discuss issues raised, only providing context where appropriate by using 'some', 'many' or 'a few.' These terms do not reflect a numerical value or proportion.

As noted earlier, some responses made no or only limited reference to specific consultation questions. We have summarised these responses in the appropriate chapter, according to the themes identified in the response.

We have aimed in this report to reflect the range of views expressed in responses, within the constraints of producing a readable report. We have sought, as far as possible, to present respondents' comments without judgement or interpretation and have not judged the accuracy or otherwise of respondents' comments, nor their relevance or otherwise to the proposals.

We have used direct quotations from responses to illustrate the points discussed in the narrative.We have selected these for their relevance to the discussion or because they express clearly the views of many respondents.

We have not edited quotations so any errors, including typographical and grammatical errors, are respondents' own. Also, we have included the names of organisations in our summary but not those of individuals.

2.4 How this report is structured

The report is structured thematically rather than according to the consultation questions. This is because many issues are raised across a number of questions. A thematic structure allows the range of comments, issues and concerns raised in responses to be explored in greater depth and in a clear and coherent way that is more accessible to the reader.

- Chapter 1: Introduction
    - This chapter provides background on EirGrid the Draft Grid Development Strategy and the consultation process.
- Chapter 2: Analysis and reporting methodology
    - This chapter covers the methods used to process, analyse and report on the responses received during the consultation.
- Chapter 3: Comments on the draft strategy and broader context
    - This chapter summarises comments on EirGrid's Draft Grid Development Strategy overall, as well as wider issues around energy policy at the national and international level.
- Chapter 4: Comments on grid development
    - This chapter summarises respondents' comments on the case for developing the electricity grid, including capacity and demand, economic growth, and regional development.
- Chapter 5: Minimising development and energy demand
    - This chapter summarises comments on the optimisation of the existing network in order to minimise new infrastructure, reducing energy demand and localising electricity generation.
- Chapter 6: Comments on transmission technologies
    - This chapter summarises comments on EirGrid's considerations of transmission technology options, as well as comments on specific technology options- particularly overhead transmission lines and undergrounding.
- Chapter 7: Comments on EirGrid's approach to engagement and the consultation process
    - This chapter summarises comments on the Consultation process and other engagement undertaken by EirGrid.

Chapter 3: Comments on the draft strategy and the broader context

3.1. Overview

This chapter summarises comments on EirGrid's draft strategy overall, as well as wider issues around energy policy at the national and international level. Some of the issues discussed in this chapter overlap with those in the following chapter, although Chapter 4 (Comments on grid development) focuses more on the need to develop the grid as set out within the draft strategy.

Aside from comments on the draft strategy as a whole, this chapter also summarises comments on different forms of renewable energy generation (including wind energy), interconnection with European countries and the equity implications of the draft strategy.

3.2. Comments on EirGrid's overall draft strategy

Comments supporting the draft strategy

A number of respondents express support for the draft strategy, often on the grounds that they feel it adequately reflects the recent significant changes in the Irish economy and future demand projections. Other reasons for support are that the draft strategy provides for developing the grid in order to meet Ireland's wider economic, social and environmental policy objectives (see Chapter 4 for particular comments on developing the grid).

> "Chambers Ireland supports the view that the electricity grid must be developed to underpin Ireland's future economic growth strategy." (Chambers Ireland, UserID 98)

The Irish Hotel Federation believes there is a need to streamline the planning process to facilitate the development of essential infrastructure central to the growth of the tourism industry. Similary, the Irish Wind Energy Association supports the strategy and its focus on the case being made for a modern electricity infrastructure.
Many express particular support for the emphasis in the draft strategy on the low carbon energy sector, including the New Ross & District Chamber of Commerce. Others praise the commitment to align the final strategy with the Irish Government's White Paper on Energy Policy.

Criticisms of the draft strategy

Many criticisms of the draft strategy relate to respondents' belief that it runs counter to various legal commitments or policies. For example, some respondents believe that a Strategic Environmental Assessment (SEA) should be carried out for the strategy.

Some of these criticisms suggest a lack of public involvement in the draft strategy, with respondents claiming that it contradicts the UNECE Aarhus Convention in relation to early public participation in environmental decision making, as well as the Public Participation Directive.

Respondents consider that whilst EirGrid is not solely responsible for determining the Irish National Energy Plan, it has a duty to ensure that the legal basis for all components of the plan is sound. Respondents level a number of other criticisms. They believe that the draft strategy:

- is focused too much on economic considerations rather than the needs of Irish citizens. Some argue more specifically that it has it has been influenced by economic policy at the EU level, promoting the interests of multinational energy companies.
- builds on a 'flawed energy policy' focused too narrowly on wind energy.
- still appears to promote 400kV overhead transmission lines as the most viable solution despite the re-assessment of Ireland's electricity demand and the revised strategy for Grid Link.
- is premature, in that it has been released before the forthcoming White Paper on Energy Policy by the Irish Government, and could be overturned by this.

3.3. Comments on energy policy and renewable energy technologies

A range of issues are raised in relation to energy policy- both that of the Irish government and at the EU level. Some of these issues are outside of EirGrid's scope of influence and are here noted in order to record the feedback received. Respondents discuss the EU 2020 renewable energy targets, as well suggesting alternative sources which might contribute to achieve such targets and commenting in more depth on different types of generation.

Comments on wind energy policy and generation

Many respondents state their opposition to further wind development and put forward a number of reasons for this. These comments are not directed to EirGrid in isolation, in that respondents point out the role of the Irish Government in promoting an energy policy they feel is too narrowly focused on onshore wind energy generation.

Many respondents express opposition to further support for wind generation, expressing doubts as to whether this is a sensible policy for Ireland. Whilst they

generally appreciate the need to meet climate change and renewable energy obligations taken at the European and national level, respondents note the Government should not assume onshore wind energy generation is the only option available. Some point out that other European countries are in the process of revising their wind subsidy programmes in favour of other renewable energy sources which they feel would be most effective from a carbon saving perspective as well as minimising the potential negative impacts on the environment and landscape.

A major issue raised relates to the fact that wind power generating capacity is usually built in environmentally and visually sensitive areas remote from areas of energy need, which would cause the need for costly transmission lines and use up undeveloped landscape. Wind energy generation is also associated with overhead power lines being used for transmission:

> "Why Ireland is building power generating capacity in sensitive areas remote from need? This is more costly and uses up our precious resource of undeveloped landscape." (Mountaineering Ireland, UserID 809)

Respondents question the long-term viability of wind energy both from a financial and technical point of view. From a technical standpoint (in terms of security of supply), they argue that wind energy would be intermittent and need fossil fuel-powered back up plants "to keep the lights on when the wind does not blow" (UserID961).

In terms of cost-efficiency, many comment that significant state subsidies to wind development are not justifiable anymore, this being a mature technology. Respondents argue that wind energy supply has reached maximum market penetration in Ireland and that continued support would lead to increased energy costs. There are references to various reports from economists or governmental bodies which would be advising the Department of Communications, Energy and Natural Resources (DCENR) to halt expenditure on wind generated energy.

> "There will be a gross overcapacity in wind if the planned additional capacity is installed. This flawed energy policy will lead to continued high electricity prices for the Irish industrial consumer, thereby killing any Irish competitiveness." (UserID 77)

Similar concerns in relation to wind energy generation were raised in the events, particularly in relation to overcapacity. One attendee for example expressed concern about the potential social, economic and environmental damage to Ireland could entail from a policy of continued wind energy development .

Other reasons are put forward by those who oppose wind energy generation:

- Wind energy is pushed forward for reasons relating to high profitability for developers, rather than for genuine environmental concerns,
- Impact on the environment (e.g. land under them dried out) and on landscape,
- Impact on tourism and jobs in other sectors of the economy,
- References to local development plans deeming specific areas unsuitable for wind farm development.

Some comments point out that the decision to refuse planning permission for wind farms and uncertainties regarding other planned wind developments would question the justification underpinning EirGrid project proposals, i.e. Grid West.

A few respondents support wind energy generation with caveats, such as going off shore for industrial developments, or subject to community ownership for smaller ones.

Some respondents acknowledge wind energy contributes to decarbonisation and reduced reliance on fossil fuels.

There are a few comments in support of further wind development, including from stakeholders such as Coillte and Bord na Móna PowerGen. They argue this is a resource Ireland has an abundance of and could make a significant contribution to decarbonising Ireland's energy supply.

> "A great deal of the opposition to wind energy seems to come from a flat refusal on the part of the opposition to accept the scientific evidence for climate change and Ireland's moral, political and legal responsibility to play our part in stopping it." (UserID 134)

Other renewable energy sources

Many respondents generally opposing further wind development suggest that biomass would represent an alternative and cost-effective renewable energy source. This view also emerged at one of the consultation events, where it was said that biomass holds a great potential due to the number of herds in Ireland as well as human waste. Some respondents argue that in recent years biomass has developed a stable market which would protect Irish consumers from international energy price fluctuations whilst ensuring security of supply and minimising potential impacts on landscape. Specific and common suggestions relate to the conversion of Moneypoint coal fired plant which would avoid the need for new transmission infrastructure and allow for the achievement of the 40% renewable energy generation target.

> "We call for a revaluation of new technology and Bio Energy alternatives in order to both meet the Government's renewable energy target and lessen the impact to Ireland's natural scenic beauty." (UserID 101461)

Respondents request a rigorous assessment of all alternative renewable energy sources as well as suggesting particular forms of generation they feel would be most appropriate, including:

- Photovoltaic panels, which many claim would be cost-effective, generate energy where it is needed, and minimise potential negative impacts on communities,
- Combined heat and power plants (particularly employing biomass) with district heating,

- Hydropower and community developed small and micro hydro-electricity systems,
- Geothermal energy and tidal energy, in particular with reference to the formation of an Atlantic Economic Corridor along the Irish west coast and Donegal,
- The development of electric or low-carbon vehicles and the electrification of heating and cooling in parallel to the development of low- or no-carbon sources,

Comments on these forms of technology are often linked to support for increased energy efficiency and support for local generation (see Chapter 5 for more detail).

Other comments on energy policy

Some respondents express more general opposition to the recent shift towards renewable energy generation. Some feel these forms of generation are not cost effective and pose risks to security and stability of supply. Other comments explicitly oppose the 40% renewable energy generation target set at the European level, in particular because this would be responsible for the need to develop the grid.

However, others consider such a target is necessary and beneficial in terms of decarbonisation and reduced dependency on imported conventional energy. Decarbonisation is also mentioned as a reason for developing the electricity grid. Bord na Móna PowerGen argues that the electricity grid is the area in which the biggest carbon savings can be made, and that this would avoid the impacts on business and the economy that would result from measures in other sectors. By contrast others argue that there are better ways of meeting these than through the electricity grid, or question EU targets in this area.

Finally, one participant at a consultation event expressed concern about the lack of coordination and strategic planning between EirGrid and the Electricity Supply Board (ESB), suggesting that a comprehensive cross-agency list of projects, including costs and timelines, be made public.

3.4. Comments on interconnection

The commitment to pursuing greater interconnection with other countries is a key aspect of the draft strategy discussed in responses. This includes comments on the principle of interconnection between Ireland and Northern Ireland (as proposed through the North South Interconnector), with mainland Great Britain (as proposed through the East West Interconnector project) and potentially with other European countries such as France. Respondents comment on these proposals individually as well as the principle of interconnection more generally.

There are comments in support of interconnection with the UK and mainland Europe, as this would be in Ireland's strategic interest in terms of future energy security. It is suggested that new natural gas and biomass fired plants would allow for the export of green energy to Europe via an interconnector to France and for the expansion of the Irish low-carbon sector:

> "We support interconnection as a means of increasing competitiveness of electricity supply and enabling the trading of electricity in times of surplus or deficit to improve efficiency of the system and making good economic use of the country's national resources. Where feasible it should be incorporated into the draft strategy so that the development of the network considers scenarios during its development to ensure that new builds and uprates are consistent with new interconnection possibilities". (Bord na Móna PowerGen, UserID 101302)

By contrast, some respondents state opposition to both international interconnectors proposed, as well as to interconnection with Northern Ireland without elaborating further. Others criticise the 'ideological concept' of a "supergrid", arguing that it does not make sense to look at all-island capacity given differences in electricity demand. They also feel that the infrastructure required would be too costly.

There are a number of comments and concerns around the import or export of energy as result of interconnection. Indeed many feel that the policy of interconnection reflects the need to import energy as a result of the weakness electricity generation within Ireland. They cite high Irish electricity costs as evidence of the sector's inability to provide a competitive low-carbon energy. Others express concern that an interconnector with France and the UK would lead to an increasing amount of energy being imported, which in turn would mean that Ireland would lose control over the source of imported energy, posing risks for security and stability of supply.

Conversely, some argue that the rationale for proposed EirGrid projects such as Grid Link and the North South Interconnector is driven by the goal of exporting electricity to the UK and France by means of interconnection. Related concerns that emerged at the consultation events include the suggestion that exporting energy to the UK would take massive amounts of power away from Ireland and that interconnectors are expensive, difficult to maintain and lead to transmission losses.

Many respondents oppose interconnection in combination with further wind energy generation development. They argue that wind generated over-capacity would need to be exported leading to the need for additional expensive transmission infrastructure to the detriment of the Irish consumer, of the environment and rural communities in Ireland.

> "The absurd amount of wind energy connected or contracted (6,800 MW), compared to the amount of wind energy needed (3200-3800 MW) to reach the 40% target, makes it necessary to export the generated electricity in order to avoid high curtailment cost". (UserID 101807)

On interconnection with France, respondents also question the proposal for this to be developed in the south-east and not in the east of Ireland, where demand for energy is greater.

A number of other considerations and concerns are raised in relation to interconnection. Respondents question the alleged role of private enterprises in talks with other European countries about interconnection solutions. Some feel that a robust cost-benefit analysis should be made available for public and regulatory scrutiny before any investment is made on interconnection to France and the UK. Finally, some respondents argue that the 10-15% interconnection target set at the European level does not take into account the circumstances of individual member states, while others argue that Ireland is already compliant with European interconnection targets.

3.5. Comments on equity implications at the national and international level

Some respondents are concerned that EirGrid's proposals would have the effect of allowing some areas, organisations or individuals to benefit at the expense of others.

In particular, many feel the draft strategy would favour the establishment of wind farms and data centres in Ireland, which they argue are mainly owned by foreign companies. Respondents express concerns that the data centres planned in the Dublin area would create few jobs whilst being highly energy-intensive. They believe these would receive government subsidies while Irish tax payers would need to ultimately bear the cost of required energy infrastructure and increased CO2 emissions.

Respondents also comment on the unequal share of costs with respect to wind energy generation, arguing that the 'Transmission Use of System' charge would ultimately lead to the transfer of costs from wind energy speculators to the Irish citizens:

> "…charges to generators is more pernicious in that the more transmission infrastructure that EirGrid provides to facilitate wind energy operators, the more costs are transferred from speculative investors to the ordinary citizens of Ireland. This means that individual private consumers end up subsidising speculative investors." (UserID 101808)

In terms of regional equity, many respondents note that energy generators are going to be placed in rural areas far away from the regions where the bulk of the demand is, i.e. the Dublin area. Respondents feel that the needs of densely populated areas that are going to benefit from data centres are put before the need to protect the landscape in rural areas.

3.6. Requests for more information

There is only a small number of requests for information relating to the draft strategy and policy. One respondent asks what impact the draft strategy will have on the White

Paper on Energy Policy, while another asks if the future de-commissioning of wind turbines has been taken account of. Respondents request more detailed and technical information on the plans for interconnection with other European countries. At one of the consultation events there was a request for more information on what the benefits would be for Ireland of having interconnection plans with the UK and France. Participants asked whether there is a government target on the amount of renewables that can be generated in the North West and what are the real reasons for which some wind farms proposals might seem to skip the queue under Gate 3. More information was also requested on curtailment payments for wind farms, i.e. timeline, amounts and the process governing them.

Chapter 4: Comments on grid development

4.1 Overview

This chapter summarises respondents' comments on developing the electricity grid. These issues are raised in responses to all questions, although particularly in responses to Questions 1 and 2 which relate specifically to the reasons for this development. Question 1 asks 'What are your views on our proposals to develop the electricity grid to support current plans for new investment and jobs?' Question 2 asks 'What are your views on our other reasons for continuing to develop the electricity grid?'.

As well as the relationship between development of the electricity grid and regional development, respondents comment on the forecasts for demand and the need to maintain a secure supply. They also highlight a number of other specific considerations to be taken into account in EirGrid's approach to developing the grid, in particular around costs and the potential impacts on local communities.

4.2 Comments on growth

Respondents express support for EirGrid's proposals to develop the grid in order to support investment and jobs. For example the Sligo Chamber of Commerce and Industry comments that:

> "The provision of a stable and secure electricity transmission system is crucial to the economic development of Sligo, the North-West and the entire West of Ireland from Kerry to Donegal. It is also fundamental to the harnessing of the full potential of renewable energy resources in the West of Ireland." (Sligo Chamber of Commerce and Industry, UserID 100402)

As the above quote, many also believe that enhanced transmission infrastructure will help support regional development. A small number of respondents also underline the relationship between electricity supply infrastructure and economic growth or regional development, without reference to the draft strategy.

> "Without good capacity and reliability such businesses are less likely to consider regional locations. Development of the transmission system in the Western Region can therefore make a significant contribution to the economic potential of the Western Region and bring substantial benefits beyond those directly related to the transmission system." (Western Development Commission, UserID 56)

Many respondents challenge the link between development of electricity infrastructure and capacity and economic growth as implied in Question 1. Respondents put forward a number of arguments in this area. They believe that:

- Economic growth is not dependent on increased energy use. Some oppose the goal of increased growth or at least feel that this should be considered against the potential impacts of new development;
- The projected benefits associated with grid development and increased energy capacity has been overstated by EirGrid;
- Regional development would not increase as regional industries such as tourism agriculture and the equine industry are generally not energy-intensive;
- The landscape is an important asset in rural areas. If affected by infrastructure development this would have a negative impact on tourism and the local economy; and
- Development would mainly benefit the major centres of demand such as Dublin.

Similar points were raised by particpants in the consultation events. For example community groups expressed disagreement with the viewpoint of EirGrid and the Industrial Development Agency Ireland (IDA) that grid development is necessary to attract industry. Participants also argued that rural areas such as the west of Ireland are very much economically dependent on tourism which might be negatively affected by the introduction of pylons and wind farms.

Many of the comments on the equity of regional development relate to interconnection. These are summarised in Chapter 3, Paragraph 3.4.

4.3 Comments on electricity demand and security of supply

Respondents believe it is necessary to develop the electricity grid in order to provide sufficient capacity to meet future levels of demand for electricity. Indeed, maintaining and improving security of supply is a key issue raised in responses, cited by some respondents as a reason in support of grid development and in many cases simply underlined as a key consideration.

> "The Irish Academy of Engineering fully supports grid development to support current plans for new investments and jobs. Security of supply and price competitiveness should be key considerations." (The Irish Academy of Engineering, UserID 74)

Respondents express support for EirGrid's revised forecasts for electricity demand on which the draft strategy is based. Some simply state agreement that further development of the grid is necessary to provide sufficient capacity, often mentioning the needs of enterprises and the renewable sector.

Others are more sceptical of the need for increased capacity. Respondents cite a number of factors which they feel have not been properly considered in assessing demand, including population decline, the economic downturn and the decline of manufacturing.

Respondents question EirGrid's demand forecasts, or cite other evidence suggesting demand will not be as great, in some cases claiming that EirGrid's own reports show this. Some argue that EirGrid have not taken account of national energy requirement forecasts. Others argue that demand requires more detailed consideration and independent assessment:

> "The figures you provided for predicted demands were well in excess of the real amounts required. In order to achieve a realistic set of figures for the country's electricity demands a more detailed investigation should be undertaken, one that can be trusted and one which realistic plans can be accounted for." (UserID 164)

Participants at the consultation events also questioned the need for development, in particular the need to build massive infrastructure if the timeframe is medium-term, especially if there is currently a 50% over capacity in energy generation.

Some respondents question about the accuracy of long-term forecasts in general, emphasising the difficulty predicting and planning accurately for future levels of demand. Others highlight the need for any development to be 'future proofed' in terms of future changes in demand, without expressing support for the proposals need to plan for the long term is a key consideration for many respondents, with some noting.

Some respondents who question the need for increased capacity argue that the case for developing the grid is primarily driven by the aim of connecting new wind energy developments in order to meet Ireland's renewable obligations. Comments on energy policy are summarised above in Chapter 3.

Finally, a small number of respondents comment upon the uneven nature of demand, which varies in different parts of the countries and at different times. Domestic generation feeding into the grid is suggested as a possible way of addressing such variations as is series compensation.

4.4 Considerations and concerns related to grid development

As well as commenting on the need to develop the grid, respondents also highlight a number of considerations that they feel need to be taken into account in any development. Most of these relate to the costs of developing the grid and the specific impacts which they believe will result from such development.

4.4.1 Comments on the costs of developing the grid

Many respondents express concern about the cost of developing transmission infrastructure, often stating that this would not be cost effective. These comments often make reference to projections for future capacity and demand (see paragraph 4.3 above), with respondents questioning the need for expenditure in light of these.

> "To proceed with a grid costing billions which may not be necessary with the cost levied on an already burdened consumer is reckless." (Suir Valley Environmental Group, UserID 100781)

Many respondents express particular concern about the investment of such a large amount of public money and underlining the need for proposals for development of the grid to be as cost-effective as possible.

> "For Ireland to remain an attractive destination in which to do business and to invest, it is imperative that energy costs can be maintained at an efficient level. Developing the grid should thus be done through the most cost-efficient approach." (New Ross & District Chamber, UserID 100754)

Some respondents are concerned or critical of the use of public money to fund development of the grid, often mentioning public subsidies to electricity companies and wind farm developers. A small number of respondents state more specifically that the costs of developing new infrastructure should be borne by the developer (i.e. EirGrid) rather than using public money.

Many are concerned about public expenditure and emphasise the importance of cost-effectiveness, with many stating that "best value for the Irish people" should be the guiding principle in decisions on building new electricity infrastructure. Many respondents argue that an approach based on addressing specific areas of the current electricity transmission grid where capacity is needed would offer a more cost-effective approach.

In some comments the discussion of costs relates to energy prices. For example respondents express concern that the cost of development would result in increased costs to the consumer. Many note the current high costs of electricity in Ireland and its effect in competitiveness while others emphasise the potential economic impacts of a rise in prices through increasing costs for businesses.

Others argue that the benefits of new development in terms of increased capacity should result in a reduction of energy prices to the consumer.

> "EirGrid should quantify the major cost savings that are claimed and to translate them into a reduction in electricity cost for the Irish consumer." (UserID 101809)

By contrast some suggest that it would be acceptable for this extra cost to be financed by consumers through electricity bills.

Some respondents feel that alongside creating investment and jobs, non-monetary costs have not been sufficiently taken into account, in particular impacts on local communities, the environment and tourism. Others feel that the economic benefits in terms of growth and jobs have been exaggerated. Some of these respondents state that a full cost benefit analysis should be provided for new developments. This point was also raised by particpants at the consultation events. Noting that the Electricity Supply Board (ESB) has investment plans for grid upgrading amounting to EUR55 billion by 2030 without making the need case, they asked for a comprehensive cross-agency list of projects, including costs and timelines, to be made public.

Some respondents also criticise EirGrid's expenditure and management of costs, or highlight perceived inconsistencies or changes to costings for the draft strategy and individual projects.

4.4.2 Comments on the potential impacts of new development

In discussing the need for development of electricity grid, respondents express concern about the potential impacts associated. Many of these concerns reflect those expressed about overhead transmission lines in particular. These impacts are listed under Chapter 6.

The need to avoid certain impacts is noted as a caveat or consideration by those who otherwise agree with the need for development.

> "I have no problem at all with the development of the grid for investment and jobs, in fact I applaud and support it. It is the issue of turning the country into an industrial estate by erecting pylons and windfarms […] everywhere that I have a serious objection to." (UserID 142)

Some respondents who are opposed to development (especially in the form of overhead power lines) argue that long-term impacts should be weighed against other considerations. These include many of the impacts discussed above:

> "Eirgrid must take a longer term view of what you are doing and you must avoid scarring a landscape that has been the beauty of Ireland forever." (UserID 85)

Many of these considerations and concerns are closely related to the degradation of rural landscape and are often mentioned together. A campaign group highlights the potential impact on agricultural enterprises which market themselves on environmental stewardship and farming in an unspoiled landscape.

Similarly, participants at one of the consultation events noted while EirGrid is promoting the positive effects of infrastructure on employment, they did not feel being taken seriously regarding their concerns about tourism, property devaluation and health.

4.5 More information

Respondents ask for further detail or clarity on a number of the issues related to the development of the grid. Some state that EirGrid's proposals and rationale for development of the grid are not set out clearly enough. At one of the consultation events too a recommendation was made to communicate the need for grid development in a clear and easy language.

Respondents request more detailed information on the need case for development for the grid; in particular on the extent to which the case for development is driven by the need to connect new wind energy developments to the grid.

"Nowhere in the current strategy document has EirGrid addressed the question of how many of the other proposed transmission projects would be necessary if there were no further expansion of wind power." (UserID 100025)

Respondents also feel that more information is needed on the costs relating to new development (both in general and in relation to specific projects) such as the cost of

transmission required to connect new electricity generation be published in the name of transparency, with some mentioning wind energy projects in particular.

Chapter 5: Feedback on theme of minimising development and energy demand

5.1 Overview

This chapter summarises comments on minimising development and energy demand. Respondents comment on a number of issues within this theme, including the optimisation of the existing network, reducing energy demand and localising electricity generation. Each of these is outlined below.

5.2 Comments on optimising existing infrastructure

The optimisation of the existing network in order to minimise new development is a key issue within this theme. This is most often discussed in responses to Question 3 which asks for respondents' views on the strategy statement "The network will be optimised to minimise requirements for new infrastructure."

5.2.1 Comments in support of optimising existing infrastructure

Many respondents are in favour of optimising existing electricity infrastructure. Some respondents go further to add that this should be a central part of EirGrid's strategy and that the development of new infrastructure should be minimised.

> "Eirgrid should absolutely stop real construction. The under taking of developing further energy should only be done in areas that the Grid is substandard. Replacement and upgrade should be the primary focus of Eirgrid's Grid strategy." (UserID 71)

Those who support this principle of optimising the existing network cite a number of benefits in connection with this. In particular, many feel such an approach would be more cost-effective.

> "Where pinch points occur, these can be corrected at local level without the unnecessary massive expenditure of €3.9 billion plus the additional associated costs" (campaign response, e.g. UserID 101273)

Others argue that utilising existing infrastructure would provide extra capacity quickly without the impacts associated with the development of new infrastructure. Many of those who advocate minimising the development of new infrastructure refer to specific impacts associated with such infrastructure: in particular impacts on the landscape, nearby communities, property values, or the local economy and businesses.

Some also refer to technological innovation as an argument against further development of the electricity grid. Some of these respondents highlight the potential of series compensation to increase capacity on existing lines while others mention developments in energy efficiency and demand reduction which they believe would

make new infrastructure unnecessary. Many of these respondents are particularly against the use of pylons which they see as an outdated form of technology.

5.2.2 Concerns about optimising existing infrastructure

Some respondents, while supportive of proposals for optimising the existing network, also express reservation about this approach. They express concern that this approach should not be followed too rigidly, stating that security of supply in the long-run should be the main consideration. Some who express concern about security of supply in stronger terms state their opposition to optimising the existing network as a consequence. Others are more concerned that developing new infrastructure should not be ruled out if this is necessary.

Respondents also feel that the commitment to optimise the current network in order to minimise requirements for new infrastructure is too vague. They argue that it is hard to disagree with a statement like this, but further elaboration is needed on how this will be done. Some simply underline their opposition to pylons and seek confirmation that these will not be used.

Respondents who live near existing lines express concern about the potential impact of upgrading works on individuals and communities.

5.3 Comments on reducing energy use

Many respondents argue that reducing overall energy demand and usage should be a priority.

> "A combination of proper insulation standards for the home, coupled with mandatory solar hot water installations, is all that is needed, to make a huge impact on demand, and contribute greatly to Ireland's 2020 renewables target." (UserID 48)

Other respondents add that the focus should be on funding energy saving and conservation measures including retrofitting, triple glazing and water harvesting. They argue that in addition to the environmental benefits such an approach would create significant employment while avoiding the negative impacts associated with developing new infrastructure.

Respondents also make the more specific point that the energy supply needs to be decarbonised in order to reduce the reliance on fossil fuels.

5.3.1 Comments on proposals for reduced long-term power capacity

Respondents also comment more specifically on the need to plan for a lower level of demand in the long term. This is discussed particularly in responses to Question 6, which asks for respondents' views on EirGrid's proposal to meet project needs but with reduced power capacity in the long term.

Respondents express support for EirGrid's proposal for reduced power capacity in the long term, in some cases stating agreement with the assessment of forecast of future

demand, stating that further capacity (or indeed the same level) will not be required in the long term. Some of these respondents refer to changes within the Irish economy to support their view:

> "The Irish Academy of Engineering fully supports the approach now being taken by Eirgrid in light of Ireland's changed economic circumstances since the publication of Grid25 in 2008 and the significant reduction in projected peak electricity demand in 2025 compared to the forecasts which were made back in 2008." (The Irish Academy of Engineering, UserID 78)

While supportive of the idea of reduced long-term power capacity, some respondents are wary that if this aim is followed too rigidly it could undermine long-term security of supply.

Others express this concern more strongly, and disagree with the proposal for reduced long-term power capacity on this basis. They argue that capacity does need to be increased in the electricity grid, in a few cases specifying that capacity should be increased in the renewable sector in particular. Waterford City and County Council argue that reduced capacity could constrain economic development.

> "The PA [Planning Authority] consider that long term strategic infrastructure should be guided by 'maximum attainable growth' rather than a 'scaled back' moderate economic growth model, as predicted by the ESRI [Economic and Social Research Institute]." (Waterford City and County Council, UserID 101466)

A small number are sceptical about the forecast for reduced demand, highlighting the difficulty of long-term forecasting. They note that a number of factors could affect this (including economic development) and that these will need to be planned for in order to ensure there is an adequate supply of power.

5.4 Comments on local electricity generation

Many respondents support the promotion of decentralised (or localised) generation as an alternative to large-scale generation projects which would need to be connected to the grid.

In particular, respondents express support for distributed generation: generating power closer to the point of consumption. To this end, some criticise the Irish government's policy on wind energy on the grounds that it fails to take account "viable alternatives that would create and use power locally". Many of these comments focus on the idea that such an approach would minimise the need for transmission.

Some respondents advocate moving towards community run grids or microgrids, and there are comments in support of community generation, with specific mention of combined heat and power (CHP) and biomass as renewable energy technologies applicable at this scale.

At the consultation events , participants asked about the role of small scale generation in EirGrid's plans for transmission and whether the draft strategy would make it easier for small scale producers to supply the grid.

5.5 Other comments and suggestions on minimising development and energy use

Respondents comment on a number of other issues relating to minimising development and energy use:

- **Series compensation** is mentioned as a technology which involves enhanced utilisation of existing networks. As this is generally discussed in relation to the consideration of different technology options these comments are summarised under the chapter on Technology (Chapter 6 Comments on transmission technologies).
- **Costs**: cost-effectiveness is an important consideration cited by respondents in support of proposals for planning for reduced long-term capacity. Others argue that a full cost-benefit analysis should be carried out to ensure that respondents have sufficient information on which to base their opinion on the proposal. In some cases this relates to options presented in particular projects.
- **Smart meters:** These are electronic devices for monitoring electricity consumption at the level of the individual household**.** They are intended to reduce electricity demand and are mentioned in this context. Some respondents express concerns that they don't work, that they are an invasion of privacy and that they would present a potential cancer risk.

5.6 Requests for more information

Many respondents request further information or clarity on a number of particular aspects of minimising development and energy use, including:

- The proposed upgrading of the existing electricity lines, in terms of what this involves, the extent to which it is proposed (both generally and in relation to specific projects) and how it would interact with new development.
- The potential impact of upgrades on nearby communities.
- Smart Grids: participants at one of the consultation events asked for more information on these and the logic behind them. They questioned whether these were to educate communities or to get communities to use power at times when this is not currently fully used, in order to balance out the overall power level on the grid.

- How EirGrid intends to meet national requirements for energy companies to achieve 1.5% energy savings per year through energy efficiency measures. They question in particular how proposals for new development will take account of these requirements.
- Participants at one of the consultation events asked about the time frame for power matching (when the supply is increased at peak times to meet demand while storing energy at off peak times).

Chapter 6: Comments on transmission technologies

6.1 Overview

This chapter summarises comments on transmission technologies. Respondents comment on EirGrid's strategy statements related to transmission technologies, as well as making specific comments on individual technology options. Among the transmission technology options, most comments relate to concerns about overhead transmission lines and support for undergrounding, with a smaller number of comments relating to other technology options such as series compensation. Each of these is summarised below.

6.2 Comments on EirGrid's consideration of technology options

EirGrid's consideration of technology options is a key issue within this theme of transmission technologies. This is most often discussed in response to Question 3 which asks for respondents' views on the strategy statement , "The network will be optimised to minimise requirements for new infrastructure", and Question 4 which asks for respondents' views on this strategy statement,"All practical technology options will be considered for network development".

There are some comments about the wording of the strategy statement, "All practical technology options will be considered for network development". Some suggest that the word "practical" is too ambiguous and others suggest that the parameters should be clearly outlined in the statement including the need for a high quality network while limiting the social and environmental impact.

6.2.1 Comments in support of EirGrid's consideration of technology options

Many respondents are supportive of EirGrid's consideration of all practical technology options for developing the network. There is particular support for the consideration of advanced, new or recently available technologies as well as alternatives to overhead lines and pylons.

> "It was most heartening to read your new draft strategy for grid development which apparently takes into account new technologies" (UserID 100002)

Some respondents note that including all possible transmission technology options for public consultation would increase the transparency of the process.

6.2.2 Comments expressing caveats or further considerations

Respondents make some suggestions for further considerations with relation to technology options, suggesting that additional options should be considered alongside

those listed in the draft strategy document. There are some suggestions that Ireland should lead the way in developing and using new technologies, rather than only using options that have been used elsewhere. In contrast, others state that only proven technologies should be used.

> "I believe that EirGrid should broaden the range of technologies it is considering to cover the areas of demand management and distributed generation." (UserID 82)

Specific suggestions for consideration include:

- Wireless electricity transmission,
- Partial undergrounding with cross-linked polyethylene cables,
- Supercooled transmission,
- Tesla home battery or other local battery or inverter systems,
- Electromagnetic induction,
- Microgeneration, and
- Bio-gas.

Cost considerations relating to technology options are raised by some respondents. Respondents state that EirGrid's cost comparisons of different technologies only take into account immediate costs and request that whole project costs should be included, particularly for comparing overhead and underground options. Others request an up to date and full cost/benefit analysis of technology options. Some suggest that cost should not be the deciding factor for technology options.

There are contrasting views about the timelines associated with using new technologies. Some feel that grid development should be delayed in order to assess how emerging technologies will develop, or what their impact will be, and then make informed decisions about what technologies to use. Some highlight a risk that assessing all possible technology options could lead to delays in implementing grid development and solutions. Others emphasise that options should be appropriate for short, medium and long-term needs.

Other suggestions include monitoring changes in energy demand over the coming decades in light of developments such as improved insulation, decarbonisation, and microgeneration capabilities and prioritising technology options that would support such trends.

Some respondents state that although alternatives to overhead lines are included in the draft strategy document, they are concerned that overhead lines may be being positioned as though they are the most feasible or cost-effective solution.

6.3 Comments on overhead transmission lines

Many respondents express opposition towards overhead transmission lines, with some respondents expressing general opposition to any overhead line and others stating

their opposition towards overhead lines in specific locations or areas. Of these, some comments refer to specific project proposals, while others are more general in nature.

Some respondents frequently describe AC (alternating current) overhead transmission technology as outdated and urge the consideration of innovative or new technology options instead. Some state their opposition to overhead lines being included as an option in the draft strategy at all.

> "Scrap the unsightly line grid, pylons and other environmental eyesores and try to innovate instead." (UserID 83)

Respondents provide a number of different reasons for their opposition, including the following potential impacts of overhead lines:

- Visual impact on the landscape,
- Impact on communities, the local population, wellbeing or quality of life,
- Impact on cultural heritage assets,
- Impact on wildlife or biodiversity,
- Impact on the environment in general,
- Impact on agriculture,
- Impact on the local economy or tourism,
- Property devaluation,
- Health and safety concerns,
- Noise pollution,
- Impact on geology, and
- Impact on aviation.

Often, these concerns are interlinked. For example, respondents feel that overhead lines would have a negative impact on the landscape and cultural heritage sites and that this in turn would affect residents' quality of life as well as discouraging tourism in the area, with a knock-on detrimental effect on the local economy.

> "EirGrid's analysis fails to account for the visual intrusion of pylons across landscape and the overall impact this will have on tourism, the countryside and areas of natural beauty including the damage to heritage both natural, cultural and architectural." (UserID 153)

Respondents express concern that the need case for overhead lines appears to be driven by wind farm development and question the efficiency or need for wind farms, particularly when weighed against the perceived negative impacts such as those listed above.

There are comments about the relative cost of overhead lines, suggesting that the long-term costs of any impacts such as loss of tourism or cost to the environment must be accounted for in any cost/benefit analysis. Others raise concerns about the costs of maintaining overhead lines, particularly following strong winds and storms.

There are a few suggestions for how the impact of overhead lines could be mitigated, including running the infrastructure alongside main roadways or developing new pylon or tower designs. A few respondents oppose new overhead lines but support the upgrading of existing lines.

Some respondents express support for overhead lines because they believe these would provide greater capacity than other options, or because they appear to be the most cost effective option.

6.4 Comments on underground/underwater technology

The use of underground cables receives a high level of support from respondents. Respondents often assert that underground cables would mitigate or minimise many of the detrimental potential impacts they associate with overhead lines, such as impact on the landscape. Respondents feel that any lines above a certain capacity should be placed underground as the default option, and that smaller capacity overhead lines should be limited to wooden poles. Some refer to other countries described as having similar policies, such as Denmark and Belgium.

> "In terms of future development I believe that undergrounding all existing 220kv and 400kv transmission lines should be put into action. The maximum OHL compatible with a rural environment is 110kv line supported by double timber poles." (East Cork No Pylon Group, UserID 161)

Respondents feel that undergrounding is a cost effective transmission option when costs are considered in the long term and in light of the indirect costs they associate with overhead lines such as property devaluation or health costs, as indicated in 6.3. Similarly, respondents contend that the costs of undergrounding have been over-estimated when compared with those associated with overhead lines. They believe that the costs of laying underground cables in the short-term will be justified and off-set by the long-term benefits of doing so. Others note that the cost of undergrounding has fallen as the technology has advanced and that cost should no longer be a limiting factor in relation to this option.

Some comments express opposition towards undergrounding on the basis of cost or of disruption to farmland and local communities during the period required to lay the cables.

Some respondents state that if a 400kV line is required, then undergrounding is their preferred option in the case that underwater cables are found not to be feasible. Some believe that underground cables should be the next option only if series compensation using existing infrastructure is demonstrated not to be sufficient.

Respondents express particular support for the use of underwater cables. They believe that underwater cables along the coastline would minimise disruption and impacts on the landscape and quality of life and could support new businesses moving to Ireland.

6.5 Comments on other transmission technologies

Respondents also comment on other transmission technologies referred to in the draft strategy document. These comments are summarised in turn below.

6.5.1 Series Compensation

EirGrid's consideration of series compensation technology is welcomed by respondents. Respondents state that series compensation appears to best meet the objective of maximising use of existing transmission networks and would be an innovative solution that could avoid the erection of any new pylons and overhead lines.

Respondents support this option because they feel it would minimise the impact on the landscape, environment, local communities, and economy, while meeting the energy needs of the foreseeable future. It is also noted to be a cost effective option both when compared with overhead lines and when considered over the long term.

Some respondents express concern about series compensation. Where reasons are given, they include concerns about network stability and concerns about whether such infrastructure would be able to adapt to future levels of demand.

6.5.2 HVDC

Respondents often refer to High Voltage Direct Current (HVDC) in association with their support for underground cables. They believe it is important to use new technology options that are already proven to be effective, and that HVDC underground cables meet this criteria as well as minimising the impact on the environment and landscape.

6.5.3 Dynamic Line Rating

Among those who comment on dynamic line rating (dynamic line rating involves the installation of devices to monitor weather conditions and allow higher power flows on lines when possible), there is support for this technology option. Some make general reference to dynamic line rating as a positive indication of EirGrid's consideration of new technology options. Others highlight specific benefits of this technology such as allowing the system to better accommodate high wind energy output.

6.6 Requests for more information

There are requests for more information about series compensation, and some respondents feel that the information provided to date is not clear or detailed enough for members of the public to comment. They request further information outlining the nature of series compensation technology specifically in relation to Grid Link, and a cost/benefit analysis of the option.

Respondents also request further information on a number of other issues including:

- The impact of high voltage power lines on health,

- EirGrid's position on overhead lines and pylons,
- More detailed information about costs, particularly for undergrounding,
- Cost/benefit analysis and risk assessments of different technology options including all direct and indirect costs and effects, and
- Information about the implementation plans for specific projects.
- Participants at a consultation event requested more information about series compensation technology and asked for any past studies to look at the social and environmental impacts of existing 400kV lines in the country.

Chapter 7: Comments on EirGrid's approach to engagement and the consultation process

7.1 Overview

This chapter summarises comments on the consultation process and other engagement undertaken by EirGrid. This includes comments on the strategy statement in the consultation document, which sets out EirGrid's approach to engagement and its commitment to "Foster open engagement and inclusive consultation with local communities and stakeholders as a central principle to developing the grid." However the majority of comments on this theme relate to the way the current strategy consultation has been run, as opposed to future engagement and consultation activity that EirGrid should undertake.

Respondents raise a number of issues around EirGrid's approach to consultation and engagement. These are summarised in the chapter below.

7.2 Comments on Strategy Statement 1

EirGrid's commitment to consulting and engaging with the public, as stated in the strategy statement , is generally supported by respondents to the consultation.

Many of those who support the statement simply state their support outright without providing further context. Of those who do elaborate, reasons for support include that:

- The opinion of those affected by developments matters,
- The opinion of the public matters,
- It's important to engage with and get agreement from affected communities,
- It's important to have engaged communities, and
- It would prevent miscommunication.

Other respondents express support for the wider principle of engagement in planning for grid development. Some of these respondents suggest that good engagement could address some of the concerns of communities potentially affected by proposed developments.

> "We acknowledge that there can be significant public opposition to essential energy infrastructure and […] welcome EirGrid's commitment to enhance community engagement and consultation" Department of Jobs, Enterprise and Innovation (UserID 100288)

Other respondents express more reserved or conditional support for this strategy statement. These respondents, while supporting the commitment to engagement in principle, often express doubt about how the draft strategy consultation has been carried out and how future engagement would be organised.

> "I welcome Eirgrid's new attempt at consultation, however, there are still major flaws in this area that will prevent some people from participating." (UserID 100010)

A small number of respondents express concern about the approach to consultation and engagement. They raise issues such as the potential for impact on timescales or emphasise their preference for no further development of the electricity grid.

7.3 Comments on the EirGrid draft strategy consultation

Respondents to the draft strategy consultation make a substantial amount of comments on the way that the consultation has been designed and run. These comments cover aspects such as the accessibility of the consultation, consultation events, the timeline of the consultation, the consultation design and engagement principles.

7.3.1 Comments on the accessibility of the draft strategy consultation

There are a number of comments on the options available to respond to the draft strategy consultation. Some respondents criticise the consultation process for not being sufficiently inclusive and EirGrid for not promoting the consultation sufficiently. Many of the comments suggest that EirGrid has limited the public's ability to respond to the consultation through restricting the options available to respond to the consultation.

A few respondents suggest that EirGrid should have made the option to respond by post a clearer or more prominent option.

Respondents argue that the online response system is restrictive for people not computer literate or without access to the internet. These respondents suggest that people in rural Ireland often do not have access to the internet.

> "This is a very poor way of collating our opinions as lack of internet access is a major obstacle in rural Ireland" (East Cork No Pylon Group, UserID 161)

Some respondents also note that a lack of internet access limits the public's ability to access consultation documentation and other information. They argue that this would therefore limit the ability of those affected to respond to the consultation, as they do not have all the relevant information.

Other respondents comment that the questions used in the online questionnaire are not fair and impartial, with some suggesting they could be leading and designed to favour EirGrid.

7.3.2 Comments on the consultation events

Many respondents are critical of the events organised by EirGrid during the consultation period. Some feel there were not a sufficient number of events to be considered adequate engagement with the public. Some were also critical of the location and timing of the events, specifically that the events were held during working hours and in locations far away from areas of potential grid development. Some respondents comment that information being consulted upon in the draft strategy consultation was technical and complex and that the lack of events provision did not give the public sufficient opportunities to ask questions about the information.

Participants at these events also commented on the organisation of the events themselves. Comments included that:

- The events were badly advertised and with too short notice;
- They felt such events do not represent real engagement, rather a ticking boxes exercise;
- The top management at EirGrid being involved in more of these events. Participants enquired how EirGrid is going to listen to communities and act upon these concerns.

7.3.3 Comments on the consultation timescale

There are a large number of comments on the timescale of the draft strategy consultation, many of which are critical of the time allowed for the consultation, considered as too short.

Respondents suggest that there is a substantial amount of material being consulted upon and the timescales did not allow them to read and review the information.

Some respondents think that EirGrid has not consulted the public at the correct time. Most of these respondents reference the Aarhus Convention, which recommends 'Early Engagement,' to suggest that EirGrid has consulted the public too late for plans to be influenced by the outcome of the draft strategy consultation.

Some respondents suggest that EirGrid should have waited before consulting the public for various reasons:

- To wait for the Irish government's Energy White Paper,
- To wait for the government review on Electromagnetic fields,
- To wait for all information to be available in the discussion paper,
- To wait for the publication of the National Landscape Assessment.
- At one of the events it was also suggested that the consultation should have waited until after the climate change talks due in Paris in November 2015.

A small number of respondents suggest that EirGrid should take a long-term approach to engagement and consultation.

7.3.4 Other comments on the consultation

Many respondents comment on the Draft Grid Development Strategy document and its relevance to the consultation questions.

Respondents often suggest that the discussion paper lacks enough information to allow the public to comment upon it. Often these comments are combined with complaints about the documentation containing conflicting information.

Many of respondents go on to criticise the general validity of the consultation after these comments.

Some respondents comment generally on their opposition to EirGrid's development proposals. Many of these respondents comment that they do not trust EirGrid and therefore feel unable to engage with the proposals.

Respondents who comment on this topic mention a variety of reasons for their distrust. Some discuss specific consultations which they do not feel were adequately run. Other respondents suggest a lack of communication from EirGrid as the reason for the distrust, while others simply state their opposition to the proposals without clarifying. Some respondents suggest EirGrid should be much more open and honest about their future plans in their engagement and communications as a way to build up trust with the public.

Participants at the events suggested that early engagement and the adoption of technology to minimise impacts on communities and the environment could be a solution to address a perceived lack of trust of EirGrid.

Comments on compensation mostly relate to the proposed process for administering compensation and respondents are largely critical of this process. Many respondents express concern that EirGrid would be responsible for setting compensation levels, suggesting it would be in EirGrid's interest to not award appropriate levels of compensation to those affected by grid developments.

Other respondents suggest compensation should be more generous due to the unknown health implications of living next to power lines.

Respondents who comment on the Community Gain Fund are largely critical of the proposal. Most respondents feel that there is unlikely to be any benefits of grid developments received by communities. One respondent, the Western Development Commission, expresses support for the scheme.

8 Appendix 1: List of codes

Theme	Code
Consultation and engagement	Comment on previous consultation
	Community Gain fund - criticism
	Community Gain fund - support
	Compensation - needed/inadequate
	Compensation - other comment
	Compensation - process
	Documentation/strategy - criticism
	Documentation/strategy - support
	Events - criticism
	Feedback/acknowledgement
	Form/website - criticism
	More information needed
	Must be meaningful/genuine
	Process - challenge influence
	Process - consultation not accessible
	Process - criticism
	Process - other suggestions/considerations
	Process - support
	Public opposition/trust
	Question(s) - criticism
	Refer to previous consultation response
	Request for further consultation/involvement
	SS3 - agree/support
	SS3 - agree/support with caveats
	SS3 - oppose
	Suggest stakeholders to engage with
	Timeline - consult long term
	Timeline - criticism (general)
	Timeline - further consultation/long term
	Timeline - too early
	Timeline - too late
	Timeline - too short
	Timeline - wait for EMF review
	Timeline - wait for Landscape assessment
	Timeline - wait for White Paper
Development needs	Agree with caveats
	Agree/support
	Disagree/oppose

	Challenge economic growth/energy consumption link
	Consider agriculture
	Consider amenity/wellbeing
	Consider 'best value for the Irish people'
	Consider communities/population
	Consider cultural heritage
	Consider environment
	Consider health/safety
	Consider long term
	Consider other factors
	Consider storm/weather risks
	Consider tourism/local economy
	Consider visual/landscape
	Costs - CBA needed
	Costs - comments on profits/who pays
	Costs - developers should cover cost
	Costs - general/other
	Costs - Irish energy prices
	Costs - more info needed
	Costs - needs to be cost-effective
	Costs - too expensive/not cost effective
	Decarbonisation - grid development will support
	Decarbonisation - other comments/suggestions
	Demand - challenge
	Demand - difficulty of long-term forecasting
	Demand - driven by wind energy development
	Demand - more assessment needed
	Demand - other comments/suggestions
	Demand - support forecasts
	Develop grid in line with local need
	Energy policy - 40% target
	Energy policy - comment EC interconnection
	Energy policy - consider stability/security of supply
	Energy policy - renewables oppose/not cost effective
	Energy policy - renewables suggestions/considerations
	Energy policy - security of supply/effectiveness
	Energy policy - support EC interconnection
	Grid development is necessary
	Growth - equity (EU/international)

	Growth - equity (regional)
	Growth - grid development does not support growth
	Growth - grid development enables regional development
	Growth - more info needed
	Growth - other comments/suggestions
	Interconnection - agree/support
	Interconnection - more information
	Interconnection - oppose
	More information
	Other considerations/caveats/suggestions
	Projects - Grid Link
	Projects - Grid West
	Projects - North South Interconnector
	Renewables - biomass
	Renewables - combined heat and power
	Renewables - hydropower
	Renewables - long term viability of wind energy
	Renewables - minimise impacts
	Renewables - more information
	Renewables - oppose further wind development
	Renewables - other comments on wind energy
	Renewables - other considerations
	Renewables - solar
	Renewables - support further wind development
	Renewables - support general
	Renewables - wave/tidal
	Renewables - wind/impact on environment
	Renewables - wind/impact on visual/landscape
	Strategy - consider other options
	Strategy - criticism
	Strategy - Illegality/legal challenge
	Strategy - must comply with law
	Strategy - support
	Timescale - develop quickly
Maximising existing infrastructure	Comments on community generation
	Consider communities/population
	Consider energy efficiency/reduce use
	Consider health/safety
	Consider local battery/inverter systems

	Consider more local energy (reduce need for transmission)
	Consider security of supply/energy prices
	Consider Smart Grids
	Consider technological development
	Consider time of delivery
	Consider tourism/local economy
	Costs - CBA needed
	Costs - long term
	Costs - most cost effective
	Demand - difficulty of long-term forecasting
	Energy policy - reduce energy use
	Energy policy - reduce reliance on fossil fuels
	Minimises impact on communities/population
	Minimises environment impact
	Minimises health impact
	Minimises landscape/visual impact
	Minimises property value impact
	Minimises tourism/local economy impact
	More cost effective/efficient
	More information needed
	Other comments/suggestions
	Reduced long-term capacity(Q6) - agree/support
	Reduced long-term capacity(Q6) - agree/support with caveats
	Reduced long-term capacity(Q6) - disagree/oppose
	Reduced long-term capacity(Q6) - less impact on environment
	Risks network stability
	SS1/Utilise existing - agree/support
	SS1/Utilise existing - agree/support with caveat
	SS1/Utilise existing - disagree
	SS1/Utilise existing - specific suggestions
Technology	Consider local battery/inverter systems
	Dynamic Line Rating - support use
	HVDC - support use
	HVDC - support use w/caveats
	More information
	Other comments/suggestions
	Other country/project examples
	Overhead - consider all costs
	Overhead - driven by wind energy development
	Overhead - impact on agriculture
	Overhead - impact on amenity/wellbeing

	Overhead - impact on communities/population
	Overhead - impact on cultural heritage
	Overhead - impact on environment
	Overhead - impact on geology/aviation/other
	Overhead - impact on health/safety
	Overhead - impact on planning/development (blight)
	Overhead - impact on property value
	Overhead - impact on safety
	Overhead - impact on tourism/local economy
	Overhead - impact on visual/landscape
	Overhead - impact on wildlife/habitat/biodiversity
	Overhead - impacted individual
	Overhead - maintenance costs
	Overhead - more cost effective
	Overhead - noise
	Overhead - not cost effective
	Overhead - oppose
	Overhead - other considerations
	Overhead - support use
	Overhead - vulnerability to weather
	Series Compensation - costs justified
	Series Compensation - impacted individual
	Series Compensation - minimises environment impact
	Series Compensation - minimises tourism/local economy impact
	Series Compensation - minimises visual impact
	Series Compensation - more cost effective
	Series Compensation - more info/assessment needed
	Series Compensation - oppose use
	Series compensation - risks network stability
	Series Compensation - support use
	SS2 - agree/support
	SS2/technology options - agree/support
	SS2/technology options - agree/support with caveats
	SS2/technology options - cost considerations
	SS2/technology options - more consideration needed
	Underground - allow wirescape rationalisation
	Underground - costs justified
	Underground - costs overestimated
	Underground - impact on environment
	Underground - long- term resilience
	Underground - minimises environment impact

	Underground - minimises health/safety impact
	Underground - minimises impact on communities/populations
	Underground - minimises impact on tourism/local economy
	Underground - minimises visual impact
	Underground - minimises vulnerability to weather
	Underground - minimises wildlife/habitat/ecology impact
	Underground - more cost effective
	Underground - more info/assessment needed
	Underground - oppose use
	Underground - other considerations/suggestions
	Underground - support use
	Underground - support use with caveats
	Underground - too expensive/not cost effective
	Underwater - support use