REPORT ON CONSULTATION ON DRAFT TRANSMISSION DEVELOPMENT PLAN 2015-2025

EIRGRID

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Abbreviations

ATR	Associated Transmission Reinforcement
CER	Commission for Energy Regulation
DSO	Distribution System Operator
EC	European Commission
ESB	Electricity Supply Board
FAQ	Firm Access Quantity
IDA	Industrial Development Authority
SI	Statutory Instrument
SONI	System Operator Northern Ireland
TPC	Transmission Planning Criteria
TDP	Transmission Development Plan
TSO	Transmission System Operator

Glossary

Associated Transmission Reinforcement (ATR)	ATRs are all the transmission reinforcements that must be completed in order for a generator to be allocated FAQ. ATRs include reinforcements such as line and busbar upratings, new stations and new lines
Firm Access Quantity (FAQ)	The level of firm financial access available in the transmission network for a generator is that generator's FAQ. Firm financial access means that if a generator is constrained on or off, it is eligible for compensation in the manner set out in the Trading and Settlement code

Introduction

As the Transmission System Operator (TSO) for Ireland, we are responsible for the development of the Irish transmission network. We are obliged to develop a safe, secure, reliable, economical, and efficient transmission network to meet all reasonable demands for electricity, in accordance with our legal obligations.

We plan the development of the transmission network taking account of the long-term electricity system needs and the economics of various development options.

We have both statutory[1] and licence[2] obligations to produce a Transmission Development Plan (TDP) annually. Before the TDP can be approved the Commission for Energy Regulation (CER) is obliged to hold a public consultation on the draft TDP[3]. Based on the responses to the consultation we update the draft TDP, where necessary, and submit a consultation report alongside the final TDP for approval to the CER.

This document is the consultation report on the TDP 2015 consultation. It describes the consultation process and provides an overview of the submissions received and our responses to the issues raised.

Description of Consultation Process

We consulted the CER, Electricity Supply Board (ESB) in its role as Distribution System Operator (DSO) and System Operator Northern Ireland (SONI) prior to the draft TDP being issued for public consultation.

The CER held the public consultation on the draft TDP 2015-2025. The draft TDP was posted for consultation on the CER website on 7th December 2015 and the consultation ended approximately 7 weeks later on 22th January 2016.

[1] Statutory Instrument No. 445 of 2000 (Paragraph 8) and EU Directive 2009/72 (Article 22)

[2] TSO Licence (Condition 8)

[3] European Directive 2009/72 (Article 22)

A notification of CER's consultation was sent, via email, to all CER's stakeholders subscribed to CER's info@cer.ie mailing list.

Responses to the Consultation

The CER received two submissions in response to the consultation. These were from:

- The Irish Wind Energy Association; and
- The Western Development Commission.

We would like to thank both parties for their responses. The rest of this report deals with the issues raised in these submissions.

In the following sections we summarise and respond to the submissions.

Welcome for the opportunity to respond to the TDP Consultation

Both respondents welcomed the opportunity afforded them by the consultation process to comment on the plan.

Purpose of the Transmission Development Plan

Not all comments received were directly related to the TDP and were outside the scope of the document; thus, it is useful to outline the purpose of the TDP.

National and European strategic energy policy objectives set the context for investment in the Irish transmission system to ensure security of electricity supply, competitiveness of the national economy, and long-term sustainability of electricity supply in the country. To achieve these strategic objectives, it is necessary to invest in the development and maintenance of the electricity transmission system.

The primary objective of the TDP is to describe the transmission network reinforcements planned for the next ten years. The TDP explains:

- Our approach to network development;
- The drivers for investment, both policy drivers and technical drivers;
- The needs of the transmission network; and

- The planned network developments with expected project completion dates.

In so doing, the TDP raises awareness of planned network reinforcements. It is important to note; the TDP is neither a strategy-forming nor a policy-forming document.

Summary of feedback received outside of the scope of TDP

Economic Benefits & Opportunities – Transmission Investment

Summary of feedback

The Western Development Commission

"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."

"While the full exploitation of such opportunities is not within EirGrid's remit, it is important to recognize that EirGrid's investment in the transmission system is a very significant infrastructural investment in the Region which has the potential to bring many economic benefits. The WDC believes that a coordinated effort should be made to ensure that the full benefits of future investments are realised and that EirGrid should work with agencies involved in enterprise development (the IDA in particular), with local authorities, and with other interested groups to make this happen."

Our response

We agree with the respondent that investment in the transmission system is a very significant infrastructural investment and that coordinated investment has the potential to bring many economic benefits and opportunities. As the TDP is largely a technical document this feedback is most relevant to our grid development strategy which we published for discussion in March 2015. The discussion paper "Your Grid, Your Views, Your Tomorrow." is available on www.eirgridgroup.com.

In the discussion paper we give a regional breakdown of forecast capital expenditure and benefits of such investment. This is detailed within the wider economic context, the recent economic downturn, the Government's Action Plan for Jobs and review of energy policy, and the Industrial Development Authority's (IDA Ireland) Regional Development Strategy.

Our final strategy, to be published later this year, will support Ireland's wider economic, environmental and social policy objectives. It is also important to note that we regularly meet with the IDA to discuss their clients' or potential clients' needs.

The Government published the Energy White Paper in December 2015. We note in the White Paper that the Government will implement a New National Energy Forum later in 2016 which will contribute to policy development and implementation. We look forward to working with, and contributing to, the Forum.

Summary of feedback received outside of the scope of TDP

Economic Benefits & Opportunities – Generation Technology & Marketing the West as an Energy Region

Summary of feedback

The Western Development Commission

"The requirement for electricity transmission investment is not, however, just to meet the actual and potential electricity demand. The Western Region has abundant ocean energy potential and high wind speeds, and is therefore at the forefront of renewable energy generation and supply. In addition to renewable generation opportunities there are opportunities for research and development in renewable technologies (particularly in relation to ocean energy) and for training in, and manufacturing of, newer technologies, as well as for marketing the region as an 'energy region' which can provide clean renewable power to users with high demand. All of these rely on a quality transmission grid."

Our response

We plan the development of the network using the most up to date information on future generation and forecast electricity demand. As new information on demand and generation becomes available, we update and amend our network development plans, as necessary. However, it is outside the scope of the TDP and of EirGrid to research and develop generation technology and market a particular region.

In saying the above, we are a small island with ambitious targets for renewable generation, a strong ICT base and a comparatively low number of industry stakeholders. This means

Ireland is well placed to demonstrate, test and commercialise innovative advancements in the area of smart grids. To deliver a 'smarter' grid, we have put in place the Smart Grid Programme.

Through our Smart Grid Programme, we research innovative smart grid solutions and technologies. One of our main aims is to create a 'smarter' grid which can be adapted to meet the needs of a constantly changing electricity industry. This programme involves the testing, trialling and integration of new technologies, services and projects which complement each other and will ultimately improve the electricity system. The aim of this programme is to provide innovative solutions which help deliver tangible benefits for our customers and the wider community. A smarter grid will also help facilitate a low carbon energy future while helping us operate and maintain a safe, secure and efficient power system.

National & EU Legislation - Renewable Energy

Summary of feedback

Irish Wind Energy Association

"IWEA notes that the Transmission Development Plan should place more emphasis on the legal requirement of the RES Directive in terms of the obligation to have priority access, priority of dispatch and guaranteed transmission of renewable generation, and how these obligations are being achieved."

Our response

We agree with the respondents' views that the RES Directive (2009/28/EC) is a very important legal obligation in this area. The TDP includes a specific reference to the directive in section 1.1.

Section 1.1 contains references to several other National and European regulations relevant to planning the transmission network. Each of these requirements is important, and all the

network reinforcement projects included in the TDP have been developed in line with these obligations[4].

With regards to the RES Directive, our transmission development plans directly take account of priority access. Access to the transmission system is firstly accorded through connections to the system and secondly through the development of the system to facilitate full access. Our licence requires us to make connection offers to parties seeking connection in accordance with regulatory approved processes, terms, conditions and directions. The current Gate 3 scheme has resulted in offers having been issued to approximately 4,000 MW of renewable projects.

In selecting the optimum transmission network development solutions we perform extensive network planning studies where generators are modelled based on a number of key considerations. For example, in the case of wind, we take account of:

- Expected connection dates of generators;
- Availability of wind generation based on historical wind profiles; and
- Priority dispatch of RES generation should it be available.

The decision of the SEM Committee, decision SEM-11-062, requested that we provide priority dispatch to renewable generation. This now forms a central part of our system operations and is in line with the renewable energy Directive and SI 147/2011.

In addition, we believe that the combined approach of investing in the network and developing new and innovative operational strategies is fundamental to enabling the transmission network to meet future needs. Our infrastructural programme is integral to ensuring an adequate and appropriate transmission network and is a vital to helping Ireland meet its renewable energy targets.

Operational strategies, which form part of our DS3 project[5], are also required to enable Ireland meet its renewable energy targets. It should be noted that the TDP documents our infrastructural programme and does not specifically document the DS3 programme.

[4] The National and European regulations relevant to planning the transmission network (referenced in section 1.1 of the TDP) are available online.

Network Reinforcement – Ensuring Infrastructure does not become a constraint

Summary of feedback

The Western Development Commission

"Existing industry in the Region needs robust, reliable electricity supply, and infrastructure which is capable of meeting any increase in electricity demand. In addition, the Western Region needs to be able to attract new industries. With its significant renewable energy potential, the Western Region is in a position to attract industries with high electricity demand which are seeking clean 'green' power sources, if the quality transmission system is in place to allow this. Without good capacity and reliability such businesses are less likely to consider regional locations."

"While it is important that there should be emphasis on efficient use of existing assets, it is essential that the necessary appropriate long term investments in new infrastructure are also made. This will ensure that infrastructure does not become a constraint on optimal electricity generation and supply or on demand for electricity or in turn on the potential for new demand to be accommodated in different regions.

"The WDC would like to emphasise the importance of ensuring that EirGrid remains focused on the development of these transmission projects[6]. The potential for renewable energy in the region has been outlined earlier and it is important that the transmission infrastructure necessary for this potential to be realised is in place as soon as possible."

Our response

We have a statutory duty to support the development of the Irish economy and society by ensuring the transmission network is able to support all reasonable demands for electricity. In addition, we are required to enter into agreement for connection with parties seeking to connect to the network under such terms approved by the CER.

[5] More information about the DS3 Programme is available online at: http://www.eirgridgroup.com/how-the-grid-works/ds3-programme/

[6] Grid 25 strategy (the Grid West element in particular)

We plan the development of the network using the most up to date information on future generation and demand. The process is dynamic to meet ever-evolving needs and to enable the strategic development of the system in the long-term. Each of the projects contained within the TDP are the product of on-going reviews that take into account the changing economic conditions to ensure that projects are cost effective and optimally timed.

The TDP presents the developments required to deliver the current grid development strategy, meeting future requirements as they are known at this time.

The delivery of transmission infrastructure projects typically takes between 3-10 years.

Network Reinforcement Delivery – Project Risk/Success

Summary of feedback

Irish Wind Energy Association

"IWEA has responded to previous consultations on the Draft Transmission Development Plan and notes that the following suggestions still apply in making the document more useful to stakeholders in the energy industry, while making better use of the resources required to complete the document and fulfil EirGrid's regulatory obligations:

1. The risk associated with projects should be identified. It should be noted that the generator bears the risk of delays to transmission infrastructure and information regarding the risks should be made available.
2. Details on the success of project roll-out to date based on dates provided in previous TDP's should be provided. This will enable stakeholders to have a reasonable estimate of future success."

Our response

Project implementation risk exists from the moment a project is conceived. Our risk management plans and processes seek to identify, analyse, respond, monitor and control project and programme risks. These processes facilitate the management of high risk project dependencies and critical path issues within the context of a changing environment. Section 5.3 in the TDP summarises the risks associated with transmission project delivery.

Project completion dates in the TDP are forecasts based on the best project information available at the time of the data freeze date. Certainty with regard to completion dates increases as a project moves through the various phases in its lifecycle. The project schedule at the concept stage is developed based on standard lead times for generic project types. As a project moves forward a detailed schedule is developed, milestones are achieved and greater certainty as to the completion date exists. The TDP states that the delivery of projects, ranging from local station works to the provision of a new circuit, through the network development process typically takes between 3-10 years.

We publish a quarterly Associated Transmission Reinforcement (ATR) report to provide customers with up to date information regarding the progress of the delivery of all ATR projects. ATRs are projects associated with the delivery of transmission network infrastructure necessary for the firm access of customers.

The ATR status update includes information on:

- Scheduled ATR Completion dates; both the assumed completion date used in latest Firm Access Quantities (FAQ) Analysis (2012) and latest updated completion date
- Changes to the ATR since previous quarterly update
- Any comments on ATR, including information on project risks

This information is updated every quarter and available on our website[7].
The CER also publishes project information in the Joint TSO/TAO Price Review 3 (PR3) Capex Monitoring Report[8]. The report presents a project timeline, where relevant, for all capital projects with a total forecast expenditure of greater than €10 million. The report is updated quarterly and is available on the CER website[9].

We believe the ATR and PR3 Capex Monitoring Reports, and PR4 Capex Monitoring Reports in the future, remain the most suitable publications for the requested information as they

[7] www.eirgridgroup.com

[8] The Price Review 4 (PR4) period (2016-2020) began on 1 January 2016. Similar project reporting will continue in PR4.

[9] www.cer.ie

already report original and updated forecast completion dates and comments regarding project progress and risk.

Network Reinforcement in relation to location

Summary of feedback

The Western Development Commission

"The WDC believes that an efficient, resilient energy infrastructure is crucial for regional development and welcomes the recognition given to this in the Transmission Development Plan. Given the importance of energy infrastructure in underpinning development we have been concerned that regions such as the west, with low population densities and spatially dispersed industrial development, are given due consideration in the development of electricity transmission infrastructure."

Our response

We agree with the respondent that an efficient, resilient energy infrastructure is crucial for regional development. We are the licenced TSO for Ireland, and both legislation and our licence specify a duty of non-discrimination by the TSO. We comply with all relevant statutory requirements and regulatory obligations.

We plan the development of the transmission network taking account of the long-term needs of the transmission system and the economics of various development options. The need for development is determined by assessing long-term future network performance against technical standards. These technical standards are embodied in the Transmission Planning Criteria (TPC).

The standards in the TPC are in line with international standards. They set out an objective standard which delivers an acceptable compromise between the cost of development and service delivered. The requirement for network development is identified when simulation of future conditions indicates that the TPC would be breached. When it is established that changes on the network cannot be accommodated without violating the TPC, a range of issues are considered when selecting a transmission reinforcement strategy.

By using the TPC we ensure that system needs and the performance of the transmission system are the factors which drive transmission system investment. Page 68 of the TDP highlights the number of active projects in the three regions categorised in the TDP; Border, Midlands & West; South-West & Mid-West; and South-East, Mid-East & Dublin. As is evident from the table there are a number of planned developments in each region.

As noted earlier, in "Your Grid, Your Views, Your Tomorrow", a discussion paper on Ireland's Grid Development Strategy we published a regional breakdown of forecast capital expenditure and benefits of investment. The final strategy, to be published later this year, will support Ireland's wider economic, environmental and social policy objectives including the Government's Action Plan for Jobs and Energy White Paper, and the Industrial Development Authority's (IDA Ireland) Regional Development Strategy.

We also look forward to working with, and contributing to, the Government's New National Energy Forum.

Future projections when planning the Network

Summary of feedback

The Western Development Commission

"As the economy seeks to decarbonise over the coming decades it is likely that electricity (from renewable generation) will become more important for heating, and also for transport. These potential demands also need to be taken into consideration when planning grid development."

"It is important that any investment should not only meet the needs of a particular project, but also that long term electrical provision issues, changing patterns of generation and demand (including smart grid and distributed generation) and other future energy needs are accommodated as far as possible in the investment ensuring that it can continue to meet projected needs and other needs, in line with ensuring the investment made is reasonable in economic terms."

Our response

We agree with the respondent that having the best possible demand models is crucial when planning grid development. The demand models we use when planning the development of the transmission system are based on:

- Historical trends;
- Economic forecasts; and
- Energy policies at regional, national and European level.

These models are outlined in the Generation Capacity Statement (available at www.eirgridgroup.com), along with the results they produce.

Energy policy is an integral input to our demand models. With decarbonisation of the energy industry being a central focus of current energy policy, our demand models, and thus our low, median and high demand scenarios are forecasts of the foreseeable future demand.

We agree with the respondent that it is important that investment in the transmission system should accommodate projected transmission system needs whilst ensuring the investment made is reasonable in economic terms.

When assessing development options to address future potential network needs, we consider the impacts of each possible option on other potential development needs.

Sometimes by making more effective use of the existing network, we can delay large investment or avoid the need for additional circuits. In some cases a proposed project may meet more than one development requirement and prove more economic and have less impact on the environment than multiple projects. Where possible, we seek to find single development projects to meet multiple network requirements.

Timely start of Planning Process

Summary of feedback

The Western Development Commission

"It is important that the long time period required to bring bigger transmission projects to fruition is acknowledged and that the planning commences early enough to ensure completion by the appropriate time, for either demand or supply users."

Our response

We agree with the respondent that it is important to commence the planning process in a timely manner, and commence project planning at the earliest opportunity.

The delivery of projects, ranging from local station works to the provision of a new circuit typically takes between 3-10 years. These timescales are required to ensure that all the aspects of the project can be thoroughly considered:

- Consideration of stakeholder input;
- Consultation opportunities;
- The public planning process;
- Review of project need and scope;
- Detailed design; and
- Finally the time required to construct the project.

It should be noted that once the statutory planning process begins, timelines for planning applications are to a significant degree beyond the control of the applicant. There are various planning and legal factors which may arise for either strategic infrastructure development (SID) or non-SID applications. Third party appeals can arise which can significantly alter the expected completion date of planning processes.