

REPORT ON CONSULTATION ON
DRAFT TRANSMISSION
DEVELOPMENT PLAN 2017-2027



Table of Contents

Abbreviations.....	3
Glossary	4
Introduction	5
Description of Consultation Process	6
Purpose of the Transmission Development Plan	6
Responses to the Consultation.....	7
Welcome for the opportunity to respond to the TDP Consultation	7
Summary of feedback	7
Network Development in the North-West.....	7
Our response	8
Impact of Tomorrow’s Energy Scenarios (TES) on TDP.....	8
Our response	9
Capex Monitoring for PR4 and beyond	10
Our response	10
Prioritisation of Projects.....	12
Our response	12
Pre-emptive/Proactive Investment.....	13
Our response	14
Long term running of Combined Cycle Gas Turbines with Carbon Capture and Storage Technology.....	15
Our response	15
Interconnection	15
Our response	16
The TDP in Context of other EirGrid Publications	17
Our response	17
The Data Used in the TDP – Part 1.....	18
Our Response	18
The Data Used in the TDP – Part 2	19
Our Response	20
Readability of the TDP	21
Our Response	21
Submissions received.....	22

Abbreviations

ATR	Associated Transmission Reinforcement
CRU	Commission for the Regulation of Utilities
DSO	Distribution System Operator
EC	European Commission
ESB	Electricity Supply Board
FAQ	Firm Access Quantity
SI	Statutory Instrument
SONI	System Operator Northern Ireland
TDP	Transmission Development Plan
TSO	Transmission System Operator

Glossary

Associated Transmission Reinforcement (ATR)	ATRs are the transmission reinforcements that must be completed in order for a generator to be allocated Firm Access Quantity (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 the power produced by a generator is constrained up or down, 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 statutory¹ and licence² obligations to produce a Transmission Development Plan (TDP) annually. Before the TDP can be approved the Commission for Regulation of Utilities (CRU) is obliged to hold a public consultation on the draft TDP³. 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 CRU.

This document is the consultation report on the TDP 2017 consultation. It describes the consultation process and provides an overview of the submissions received and our responses to the issues raised.

At the outset we want to point out an error in draft TDP 2017 that was highlighted as a result of the responses received. TDP 2017 refers to demand in All-Island Generation Capacity Statement 2017 (GCS 2017). In draft TDP 2017 the demand estimate shown was the forecast median Total Electricity Requirement (TER) peak demand. However, the TDP should have reported the forecast median transmission system peak demand which is lower than the forecast TER peak demand. The demand forecast in final TDP 2017 has been updated. Thank you to the respondents for their comments which enabled us to correct the data.

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)

Description of Consultation Process

We consulted the CRU, 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 CRU held the public consultation on the draft TDP 2017-2027. The draft TDP was posted for consultation on the CRU website on 29 March 2018 and the consultation ended on 04 May 2018.

A notification of CRU's consultation was sent, via email, to the CRU's stakeholders subscribed to CRU's info@cru.ie mailing list. We also sent a notification on 20 April, via email, to our stakeholders subscribed to EirGrid's info@eirgrid.com mailing list.

Purpose of the Transmission Development Plan

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 that the TDP is neither a strategy-forming nor a policy-forming document.

Responses to the Consultation

The CRU received six submissions in response to the consultation. These were from:

- Aught Wind Farm Limited;
- Bord Gáis Energy;
- Ervia;
- IDA Ireland;
- SSE; and
- Western Development Commission

We would like to thank all parties for their responses. The rest of this report deals with the issues raised in these submissions. We have attached the six submissions to the back of this report.

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

Welcome for the opportunity to respond to the TDP Consultation

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

Summary of feedback

Network Development in the North-West

Aught Wind Farm Limited

“The specific area of note is the north west 110kV network area, specifically the Inishowen Peninsula in north Donegal. Much of this area has been designated suitable for wind energy and other forms of renewable energy by Donegal County Council under their County Development Plan. While the Peninsula currently has more than 100 MW of existing wind energy generation, there is significant scope for further generation to be developed in the region. There are currently a substantial number of new planning applications in the process, a number in early stage development and other with local authority grants of planning permission.

However, it is understood that the existing ESBN 110kV infrastructure in the Inishowen Peninsula is currently used to its maximum for the export of the existing generation capacity.

Given the 110kV network constraints in the Inishowen Peninsula region and the wind energy potential, I would urge the CRU to consider a significant 110kV network development in the region to facilitate to distribution of the proposed wind energy generation [in the area] and cater for this in the final Transmission Development Plan for 2017-2027.”

Our response

We agree that there is a need to strengthen the network in the North-West to ensure security of supply and to facilitate the integration of renewable generation. For this reason, we are planning a future project in this area known as the Renewable Integration Development Project (RIDP), which has “Project of Common Interest” status with the European Commission. This is described in Section 6.2 ‘The Border, Midlands and West Planning Area’ of TDP 2017. This project has a cross-border element which will, in conjunction with the “North-West of NI Reinforcement Project” currently being advanced by SONI⁴, provide enhanced capacity between the networks in Donegal and Northern Ireland. This project will be developed according to EirGrid’s Framework for Grid Development and SONI’s Framework for Developing the Grid to ensure consultation with and a benefit to all stakeholders.

Impact of Tomorrow’s Energy Scenarios (TES) on TDP

Bord Gáis Energy

“It would be useful to see and understand if any scenario analysis has been applied when developing the plan in the Consultation. If not, it would be useful to understand how the Development Plan process will include this Analysis going forward.”

⁴ This will be detailed in the forthcoming Transmission Development Plan Northern Ireland 2018-2027, which will be published by SONI in 2018.

SSE

“The TSO in 2017 also published its “Tomorrows Energy Scenarios” which is focused on the likely demand and generation scenarios that may be occur in the future. This uses a number of different scenarios from high growth and penetration scenarios. The focus of the TDP is intended to reflect how EirGrid envisages meeting the strategic challenges, or at least that is what SSE believes the document should strive to do. However, the TDP does not appear to align in any way with the Tomorrows Energy Scenarios document, and rather presents a short-term view of projects that aim to be built.”

Western Development Commission

“It would be expected that there should be some acknowledgement of EirGrid’s long term planning work and how this might impact on developments to 2027. However, ‘Tomorrow’s Energy Scenarios’ is not even referred to in the TDP 2017-2027. There needs to be some clarity as to how these areas of EirGrid’s work (long term scenario planning and project development planning) relate to and inform each other.”

Our response

Transmission Development Plan 2017 has a data freeze date of 31 March 2017. TDP 2017 was therefore based on the best information available at this date. In July 2017 we published ‘Tomorrow’s Energy Scenarios 2017’⁵, the result of extensive consultations with stakeholders in planning our energy future. In March 2018 we launched ‘Tomorrow’s Energy Scenarios 2017 Locations Consultation’⁶, providing more information on our locational assumptions for future electricity demand and supply. Following this, we will analyse how the existing and planned transmission grid performs under each of the scenarios over a range of timeframes. The results of this analysis will be published in ‘Tomorrow’s Energy Scenarios Transmission System Needs Assessment (TESNA)’ report in Winter 2018/19. The system needs and solutions to those needs will be captured in future TDPs following the publication of TESNA.

⁵ <http://www.eirgridgroup.com/site-files/library/EirGrid/EirGrid-Tomorrows-Energy-Scenarios-Report-2017.pdf>

⁶ <http://www.eirgridgroup.com/site-files/library/EirGrid/Tomorrows-Energy-Scenarios-2017-Locations-Consultation.pdf>

Please note that in Section 2.6 of final TDP 2017 we have included an update on the progress of the TES since the data freeze date.

Capex Monitoring for PR₄ and beyond

Bord Gáis Energy

“In its Decision on the latest transmission network revenue review, (CER/15/296), the CRU stated:

“risk revenue will not be funded by the consumer where the key objectives have not been achieved. We need to see more about the benefits of each of the projects to understand if they have been achieved and if the underwriter is getting value for money.”

And also;

“the approach for PR₄, whereby the CER intends to put in place a more comprehensive and active Capex monitoring framework. There will be a greater emphasis on ex-ante specification of Capex projects, and on-going reporting, in order to facilitate an ex-post assessment of the efficiency, or otherwise, of the costs.”

In this light and to the extent that this Draft Development Plan falls within the allowed Capital Expenditure of PR₄, it would be useful to see what of the plan has been approved for spending (or falls within what was applied for under the PR₄ submission by the network operator and the network owner) and what requires future approvals under the next 5-year revenue review if they are to progress. This will help to input into the Capex monitoring framework and will also help interested stakeholders in understanding the risks relating to the planned projects.”

Our response

The function of the TDP is to outline the developments required to ensure the security of the transmission system. Some of these developments straddle a number of price review periods. However, it is not the function of the TDP to demonstrate alignment with the price review process. This will be captured as part of the Capex Monitoring Process.

In this context, on 10 May 2018, the CRU published its decision on Reporting and Incentives under Price Review 4⁷.

Decision 1 states:

“The TSO and TAO shall jointly prepare and publish a summary report documenting how their activities and behaviours over the previous calendar year have delivered outputs relevant to the needs of customers, market participants and other stakeholders. The report shall provide a comprehensive and accessible summary of performance using relevant and appropriate performance indicators and metrics.

The report of performance during calendar year 2017 shall be published on or before 31st December 2018, this will be an initial report and based on indicative incentive performance.”

Decision 2 states:

“The TSO and TAO shall move to an annual cycle of capex reporting. Further, the annual cycle shall include, in addition to the project-level reporting to the CRU, a report designed for stakeholders – as a companion document published alongside the new consolidated annual performance report (see Decision 1), with comparable levels of accessibility for the reader.

The reporting shall be increased in scope to include reporting on all aspects of investment planning and delivery, from the initial identification of needs based on planning studies through to the delivery and energisation of individual projects.”

In line with decision 1, this year we will, jointly with ESBN, prepare a summary report on our performance, focused on outputs relevant to stakeholders. Alongside this, in line with decision 2, we will, jointly with ESBN, publish a Capex Monitoring Report. This annual reporting will complement the information presented in the TDP.

⁷ <https://www.cru.ie/wp-content/uploads/2018/05/CRU18087-Reporting-and-Incentives-under-Price-Review-4-Decision-Paper.pdf>

Prioritisation of Projects

Bord Gáis Energy

“It would be useful if the plan also flagged the prioritisation of projects, highlighting the risks relating to projects and the mitigating factors that EirGrid are planning to manage those risks and ensure both the time and cost-efficient development of the grid. In terms of the prioritisation of the projects, we believe that this should involve a cost benefit analysis of the planned projects with the balance of benefits clearly visible to understand those projects of most importance in delivering cost savings and operational efficiencies.”

Our response

As Section 5.3 of TDP 2017 highlights, the development of the transmission network is subject to delivery risk. We use risk management plans and processes to identify, analyse, monitor and manage project and programme risks. We provide project Estimated Completion Dates (ECDs) based on the best project information available at the time of the data freeze, 31 March 2017. Certainty with regard to completion dates increases as a project progresses.

We publish a quarterly Associated Transmission Reinforcement (ATR)⁸ 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; and
- Any comments on the ATR, including information on project risks. This information is updated every quarter and available on our website.

⁸ <http://www.eirgridgroup.com/customer-and-industry/general-customer-information/operational-constraints/>

As noted in the previous section ‘Capex Monitoring for PR4 and beyond’, PR4 Capex Monitoring Reports will also provide data on project progress.

In addition, there is a document on our website which outlines our approach to project sequencing and prioritisation⁹.

Pre-emptive/Proactive Investment

IDA Ireland

“in conjunction with the supply constraints now emerging in the Dublin region and high levels of projected economic growth... the proposed TDP needs to be assessed in terms of not only its technical specifics, but also critically in terms of whether it demonstrates the required level of ambition and an ability to cater for future demand in a range of possible scenarios.

In order to continue to support mobile international investment it is critical that the transmission infrastructure is developed in a proactive way the demonstrably provides the capacity now, and into the future, so that investors can plan with confidence on the basis that their energy requirements can be securely and competitively accommodated in a range of scenarios.”

SSE

“SSE is of the view that the value of the TDP lies in its alignment with longer term strategic views taken by the TSO in terms of how EirGrid sees the industry in the medium term. Otherwise, if the assessments are solely done on the basis of those requesting connection to the grid, the TDP will lack a forward-thinking element, which is critically important given that network development is a long term investment from planning through to delivery.”

Bord Gáis Energy

“it is not clear what within the Draft Development Plan is ‘future-proofing’ the network for wide-scale decarbonisation versus what within the Development Plan is reactive to

⁹ <http://www.eirgridgroup.com/site-files/library/EirGrid/TheSequencingofTransmissionProjects-AnInformationNotebyEirGrid-April2014.pdf>

known network requirements. Noting that a lot of the developments listed in the Plan are in Phase 2 and Phase 3 stages of development, and some are already part of the Associated Transmission Reinforcement Status Update, it would suggest that the vast majority of the projects in this latest plan relate to existing network issues”

Our response

It is important to note that:

- all reinforcements are designed for long-term network needs which benefit all users of the transmission system; and
- our All-Island Ten Year Transmission Forecast Statement reports opportunities for connecting new demand and generation.

In Section ‘Impact of Tomorrow’s Energy Scenarios (TES) on TDP’ above we outline the recent developments in TES. The impact of TES will be captured in future TDPs following publication of the system needs assessment.

We note the CRU’s publication in December 2017, “Regulatory Approach to Maintaining Local Security of Supply in Electricity”:

“The CRU is of the view that there may be merit in adopting a strategic approach when considering proposed options to mitigate a potential local security of supply risk or local operational constraint. This could involve building transmission infrastructure which is likely to be needed to meet rapid demand growth but which would not be built under usual planning assumptions due to the level of uncertainty around forecasts. This could also include other mitigation options such as targeted operational support provision, demand side measures, or voltage support provision. It should be noted that there is a risk that this strategic expenditure may not be required if expected demand growth does not ultimately connect. However, such an approach may improve the overall long-term capacity in strategic, but potentially constrained, areas of the network.

The CRU requests EirGrid submit proposals to the CRU on how such additional monitoring and pre-emptive capital projects could be carried out.”

These considerations are at an early stage and any transmission developments that arise out of these considerations would be reflected in future TDPs.

Long term running of Combined Cycle Gas Turbines with Carbon Capture and Storage Technology

Ervia

“Ervia is currently carrying out a Carbon Capture Storage (CCS) feasibility study. If developed, CCS could decarbonise a number of Combined Cycle Gas Turbines in the Cork area.

EirGrid’s Ten Year development plan and Future Energy Scenarios should make provisions for long term running of CCGTs with CCS.

Future transmission network planning should ensure that there is adequate resilience on the Cork City 220kV transmission network to accommodate a high loading factor for Whitegate and Aghada CCGT power plants.”

Our response

We will capture these developments in future studies, and in particular through the TES and system needs assessment process referred to above in Section ‘Impact of Tomorrow’s Energy Scenarios (TES) on TDP’. The system needs and solutions to those needs will be captured in future TDPs.

Interconnection

Ervia

“All cost benefit analyses for electricity transmission reinforcements and interconnectors should include a sensitivity analysis incorporating the following issues:

- The potential for the increase of energy prices due to the underutilisation of indigenous energy infrastructure of gas transmission and gas generation plants
- CBA [Cost-Benefit Analysis] must run sensitivities on potential price increases in interconnected regions
- Any analysis must consider the reliability of electrical interconnection
- The availability of power during peak heating events occurring in both interconnected electricity networks

- The future requirement for grid stability and inertia when Moneypoint ceases burning coal”

SSE

“The TDP makes the following statement:

“With increased interconnection there is also access to a broader generation base, which enhances the networks’ security of supply. This can potentially defer the need for additional generation to be constructed to meet security of supply standards or requirements”.

In the first instance we are of the strong view that whilst the guiding strategies are in themselves sensible, it is concerning that interconnection has been singled out as a means of delivering these. The redesign of the I-SEM Capacity Remuneration Mechanisms (CRM) is intended to ensure that sufficient capacity is installed on the system. Consumers pay for such capacity to be available at times of peak demand, whereas interconnector flows are dependent on price signals in interlinked markets. As such, it is important to distinguish interconnectors which are transmission infrastructure from generators in Ireland who have and must under the CRM be available to generate energy when required. We are of the view that the repeated reference to Interconnectors is not aligned with the core purpose of any planning document which is publicly consulted on; which is to inform stakeholders of the TSOs anticipated network needs, including reinforcements in the medium term.”

Our response

Prior to new interconnectors being approved they will go through a rigorous review and approval process by regulatory authorities to ensure they deliver benefits to customers. The regulatory authorities will assess the cost and benefits of each individual proposal. This regulatory process is outside the scope of the TDP.

National and European energy policy supports and promotes further market integration and interconnection between EU member states. Indeed EirGrid has statutory and licence obligations to explore and develop opportunities to interconnect the transmission system with other systems.

It's in this context that interconnection is mentioned in the TDP. We do not seek to single out interconnection. It's important to recognise that future potential interconnection projects could connect along the south and/or south-east coasts, and thus have an impact on network development in those areas.

The TDP in Context of other EirGrid Publications

Bord Gáis Energy

“EirGrid has published a number of reports on Generation Adequacy, Forecast Statements and Scenario Analysis which detail how generation and demand may expect to change in the coming years. It is not clear from this Draft Development Plan how the planned projects relate to these reports.”

Our response

The projects that are contained in the TDP are consistent through all the documents. The projects are required to cater for the needs that have been identified. The projects arise following either an assessment of the age/condition of assets or an assessment of the future network against the technical standards outlined in the Transmission System Security and Planning Standards (TSSPS).

A key point to note is that each document represents a particular snapshot in time, so it is important to be cognisant of this fact when reading the documents.

Each document is required by either legislation or our licence, and each serves a particular obligation which we are required to meet:

- The purpose of the All-Island Generation Capacity Statement (GCS) is to assess and report forecast demand and generation adequacy.
- The purpose of the All-Island Ten Year Transmission Forecast Statement (TYTFS) is to assess and report opportunities for connecting new demand and generation. Forecast short circuit currents and modelling data are also provided.
- The purpose of the TDP is described above in Section ‘Purpose of the Transmission Development Plan’.

In Section ‘Impact of Tomorrow’s Energy Scenarios (TES) on TDP’ above we outline the recent developments in the TES. The impact of TES will be captured in future TDPs following publication of the system needs assessment.

The Data Used in the TDP – Part 1

SSE

“From our reading it would appear that the generation and demand figures are taken from the 2016 Forecast Statement. We request confirmation as to which generation and demand figures are being used in the TDP.”

“The TDP makes no reference to and doesn’t take account of the soon to be released east coast study or the reinforcements that would be required to support offshore wind, in particular Arklow. We would therefore request that additional details are provided with regards to the alignment of the longstop dates in future connection offers.”

Our Response

TDP 2017 refers to demand in GCS 2017. As noted above in the Introduction, draft TDP 2017 incorrectly referred to forecast median TER peak demand when it should have referred to forecast median transmission system peak demand. This has been corrected in final TDP 2017. We thank the respondents for their comments which enabled us to update the data.

In terms of generation, TDP 2017 refers to the generation that was reported in TDP 2016. This is because there were very limited changes to contracted generation between TDP 2016 and TDP 2017.

We are currently completing a separate East Coast Generation Assessment study which will provide more detail on the capacity available for new generation on the east coast and also the available space in existing substations for new connections. This will be published in due course. However, the study is beyond the scope of the TDP. The TDP is a snapshot of projects at a particular point in time, and their status/needs they are designed to address etc. Future developments will be added to future TDPs as they progress and become committed projects. Likewise, as future connection contracts are

executed and any resultant reinforcements identified these will be included in future TDPs.

The Data Used in the TDP – Part 2

Western Development Commission

“This CRU consultation is on the Transmission Development Plan for 2017-2027. In the Plan it is never explained why this is the period covered. Given that this is 2018, and the final document will not be published until summer 2018 at the earliest, there should be some explanation of the time horizon chosen (i.e. why is it not a 2018-2028 plan?).

While the time period under consideration might not be considered important it does make the updates and progress with documents somewhat out of date or unclear; it is not always evident whether it is taking full account of decisions made, for example, in 2017.”

“The TDP refers to the national energy policy outlined in the White Paper “Ireland's Transition to a Low Carbon Energy Future 2015 – 2030”. It notes that “Investment in the transmission system is necessary to enable Ireland’s transition to a low carbon energy future. In this regard, the TDP is developed to support government objectives and enable this energy transition” but it does not make any reference to other key policies such as the Draft Renewable Electricity Policy and Development Framework. Nor does it specifically refer to other key government policies driving change over the next 30 years, including the most significant of these: Project Ireland 2040. This incorporates both the National Development Plan (NDP) which is the capital investment programme and the National Planning Framework (NPF), which will also incorporate the Regional Spatial and Economic Strategies (RSES).”

“A chart is provided on regional generation and demand balance for the region. The demand and generation estimates are given for 2026 (as they were for TDP 2016). However, a lower demand estimate is used in TDP 2017 (1247MW compared to 1290MW in 2016). There is no discussion of this change at regional level, particularly given that higher projections for demand in the next ten years are given in TDP 2017 compared to TDP 2016 (Table 3.1). Meanwhile, the same generation forecast for 2026 is given in both

TDP 2016 and TDP 2017, and yet it is noted later in the TDP that a significant number of generation connection offers which were not taken up, impacting on the need for some investment (Grid West). However, this reduction in estimated generation is not referred to or apparent in these figures.”

Our Response

We endeavour to publish the development plan within the year in question, which has not happened with TDP 2017. The TDP is an annual document; there will be a TDP 2018. It is important to note that the annual documents are consistent and there is no gap in the series of publication of the TDPs. Data freeze date for TDP 2017 is 31 March 2017, similarly data freeze date for TDP 2018 is 31 March 2018.

Project Ireland 2040 was not referenced in TDP 2017 as it was published in February 2018 and our data freeze date is 31 March 2017. This overarching policy initiative which is made up of the National Development Plan 2018-2027 and National Planning Framework to 2040 will be captured in future TDPs.

TDP 2017 refers to demand in GCS 2017. As noted above in the Introduction, draft TDP 2017 incorrectly referred to forecast median TER peak demand when it should have referred to the lower forecast median transmission system peak demand. This has been corrected in final TDP 2017. We thank the respondents for their comments which enabled us to update the data.

As a result of this, the forecast load in the Border Midlands West (BMW) area has been updated in TDP 2017 to 1,230 MW. In regard to what appears to be a decrease in the BMW forecast between TDP 2016 and TDP 2017, since TDP 2016 the distribution of load in the three planning areas (that is, BMW, South-West Mid-West and South-East Mid-East Dublin) has been refined. The updated TDP 2017 forecast for the BMW area is in line with the BMW forecast in TDP 2015. It should be noted that the higher projections for demand are driven largely by forecast demand increases in the South-East Mid-East Dublin area.

In terms of generation, TDP 2017 refers to the generation that was reported in TDP 2016. This is because there were very limited changes to contracted generation between TDP 2016 and TDP 2017. However, since the TDP 2017 data freeze date (31 March 2017) there

have been significant changes to contracted generation capacity. These changes were a result of capacity being released under the CRU's Decision 'Connection Policy Transitional Arrangements' (CER/16/284). These changes will be formally captured in TDP 2018.

In the meantime to give the background to changes in projects in the BMW area, on page 74 in the section of draft TDP 2017 that discusses the Grid West and North Connacht projects we refer to these changes in generation capacity that occurred after the data freeze date. The result of these changes is that we have replaced the Grid West project with a smaller-scale 110 kV development known as the North Connacht 110 kV Project.

Readability of the TDP

Western Development Commission

"For information on projects the reader is required to then turn to the appendices to find progress information the projects. This does not make for a user friendly document."

Our Response

Our intention is to produce a user friendly and easily accessible document. Given that the nature of the document is data intensive, this is a challenge. We take note of your comments and will seek to improve the next TDP.

Submissions received

Aught Wind Farm Limited
12 Milltown Business Park
Buncrana
County Donegal

Commission for Regulation of Utilities
The Exchange
Belgard Square North
Tallaght
Dublin 24

1st May 2018

**Response to CRU Consultation Paper – EirGrid’s Draft Transmission Development Plan
2017-2027**

Dear Sir/Madam,

I, Mr Michael Doherty Director of Aught Wind Farm Limited, wish to thank the CRU for the opportunity to comment on the EirGrid draft transmission development plan 2017-2027.

The specific area of note is the north west 110kV network area, specifically the Inishowen Peninsula in north Donegal. Much of this area has been designated suitable for wind energy and other forms of renewable energy by Donegal County Council under their County Development Plan.

While the Peninsula currently has more than 100MWs of existing wind energy generation, there is significant scope for further generation to be developed in the region. There are currently a substantial number of new planning applications in the process, a number in early stage development and other with local authority grants of planning permission. See Table 1 for further details;

Project Name	Developer	Size (MWs)	Decision Date
Aught WF	Aught WFL	32.2MW	Granted
Fahan WF	Fahan WFL	5MW	Granted
Carrowmore WT	Storm EL	3MW	May 2018
Drunskillen WF	Inish Renewables	10.5MW	June 2018
Illies Lower WF	Illies WFL	21MW	July 2018
Crockglass	TBC	6.4MW	July 2018
Leemacrossan WF	Canavan Associates	~20MW	August 2018
Glenard WF	Coillte	~52MW	September 2018
Tullydish WT	Keelen Energy	3MW	Granted
Meenyanly WT	TBC	3MW	Granted
Total		~156.1MW	

Table 1 – Current Status of Wind Energy Developments in the Inishowen Peninsula

Several the projects noted in Table 1 have applied for grid connections via the ECP-1 application process. However, it is understood that the existing ESNB 110kV infrastructure in the Inishowen Peninsula is currently used to its maximum for the export of the existing generation capacity.

Included in the Aught Wind Farm ECP-1 application was two preferred grid connection methodologies. Both methodologies are designed to facilitate the distribution of the Aught Wind Farm generation capacity as well as future wind energy generation from the region to the meshed transmission networks stations at Letterkenny and Coolkeeragh.

The two proposals are set out below;

- 1) A new build 35km underground cable route from Aught Wind Farm substation to Sorne Hill 110kV station to Letterkenny 110kV substation (see Figure 1).
- 2) A new Build 8.5km underground cable route from Sorne Hill to Aught Wind Farm substation to a new build 110kV substation at Culmore Road County Derry. The new substation is proposed to facilitate a loop into the existing Coolkerragh to Springtown 110kV overhead line (see Figure 2).

The grid connection method outlined in point one is currently being studied and under discussion with the local authorities. Several surveys, consultation and landowner wayleaves have been actioned, to expedite the development of this line, if and when required. Further details of the development works can be provided upon on request. Figure 1 illustrates the proposed new 110kV network development (in red).



Figure 1 – Aught to Letterkenny UGC Proposal (Red illustrates new build works)

Again, the grid connection method described in point two is well advanced. All required cable easement wayleaves have been secured from the proposed Culmore substation to the proposed Aught wind farm substation. All agreements can be furnished on request. Planning permission for the proposed Culmore Road new build 110kV substation adjoining the Boarder

has been attained (reference number A/2014/0375/F) from Derry City & Strabane District Council. It is proposed to break into the existing double circuit 110kV Over Head Line connecting Coolkeeragh Power station with Springtown 110kV station and loop in to the proposed Culmore substation. The existing line passes approximately 700m from the proposed Culmore Road substation location.

This option should be carefully considered by ESB Networks, as it will form a potential Inter-Connector arrangement between the EirGrid & SONI networks. Also, will complete the 110kV network loop between Letterkeeny-Trillick-Sorne Hill-Coolkeeragh as illustrated in Figure 2 below.



Figure 2 – Aught to Culsmore UGC Proposal (Red illustrated new build works)

Given the 110kV network constraints in the Inishowen Peninsula region and the wind energy potential, I would urge the CRU to consider a significant 110kV network development in the region to facilitate to distribution of the proposed wind energy generation and cater for this in the final Transmission Development Plan for 2017-2027.

The above proposals will ensure that the CRUs strategic objectives are met, including;

- Ensuring the security of electricity supply, by completing a 110kV loop (N-1 scenario) in the Inishowen Peninsula region
- Ensuring the competitiveness of the national economy, by ensuring that low cost, renewable energy is exported to system end users
- Ensuring the long-term sustainability of electricity supply in the country, by promoting indigenous energy generation and reducing the countries dependence on imported fossil fuels
- Promoting market integration, via the proposed interconnector as outlined in opinion two

- Securing transmission network supplies, by the additional generation capacities from the proposed wind energy developments as outline din Table 1; and
- Promoting the integration of Renewable Energy Sources (RES) and complementary thermal generation, which will ultimately be achieved by the integration of the proposed wind energy developments to the transmission network via the above outlined transmission developments for the Inishowen Peninsula.

I trust that all the above is clear and concise. However, do not hesitate to contact me should you have any queries regarding this matter. I am happy to meet to discuss the proposed grid connection at any time.

Yours sincerely,

Director
Michael Doherty
Aught Wind Farm Limited

Paul Byrne
The Commission for Regulation of Utilities
The Exchange,
Belgard Square North,
Tallaght,
Dublin 24

4th May 2017

RE: EirGrid's Draft Transmission Development Plan 2017 – 2027

Dear Paul,

I am writing to you in response to the Commission for Regulation of Utilities' ("the CRU") Consultation on the Draft Transmission Development Plan 2017 – 2027.

In responding to this Consultation, Bord Gáis Energy (**BGE**) will not attempt to refute EirGrid's expertise in planning, developing and maintaining the electricity grid to meet the needs of the electricity system and its customers. In responding, BGE focuses on trying to bring together this plan within the context of: 1) the latest 5-year transmission network revenue review; 2) the CRU's initiatives to introduce greater monitoring and incentivisation in the development of the network, in line with the longer term revenue reviews; 3) EirGrid's own Generation Adequacy and Transmission Forecast Statements; 4) the Grid Scenario Analysis project that EirGrid continues to develop in light of Ireland's decarbonisation objectives; and 5) the constraints we observe on the network and the impact these constraints are having on market outcomes (both energy and capacity).

In its Decision on the latest transmission network revenue review, (CER/15/296), the CRU stated:

"risk revenue will not be funded by the consumer where the key objectives have not been achieved. We need to see more about the benefits of each of the projects to understand if they have been achieved and if the underwriter is getting value for money."

And also

"the approach for PR4, whereby the CER intends to put in place a more comprehensive and active Capex monitoring framework. There will be a greater emphasis on ex-ante specification of Capex projects, and on-going reporting, in order to facilitate an ex-post assessment of the efficiency, or otherwise, of the costs."

In this light and to the extent that this Draft Development Plan falls within the allowed Capital Expenditure of PR4, it would be useful to see what of the plan has been approved for spending (or falls within what was applied for under the PR4 submission by the network operator and the network owner) and what requires future approvals under the next 5-year revenue review if they are to progress. This will help to input into the Capex monitoring framework and will also help interested stakeholders in understanding the risks relating to the planned projects.

Related to this and the CRU's intent to introduce a robust monitoring and incentivization framework for the operation and development of the network, it would be useful if the plan also flagged the prioritisation of projects, highlighting the risks relating to projects and the mitigating factors that EirGrid are planning to manage those risks and ensure both the time and cost-efficient development of the grid. In terms of the prioritisation of the projects, we believe that this should involve a cost benefit analysis of the planned projects with the balance of benefits clearly visible to understand those projects of most importance in delivering cost savings and operational efficiencies.

Observing the current network issues and the knock-on impacts that these have on the markets, both in energy and capacity, it is important that the Development Plan prioritises those works that support the market in delivering the most efficient outcomes and cheapest prices in the long-term for customers in line with respective market objectives. For example, the Development Plan highlights a lot of development in the Dublin area. We are acutely aware of the network constraints in Dublin and the market power issues they have given rise to, particularly in recent months. Given the Dispatch Balancing Costs and added Capacity costs that these constraints cause, these works in the Dublin area should be prioritised as a matter of urgency. BGE recognises however that in highlighting the Dublin area constraints we may be

overlooking other projects that may deliver similar benefits to the system and its customers. It is for that reason we believe that the Draft Development Plan should clearly flag not just the projects under development but the benefits relating to them, the risks involved in delivering them and the mitigating tools that EirGrid have in place or are planning, to minimize these risks to ensure optimal value is delivered for the customer who ultimately underwrites them. This will help in understanding how and where the system will be able to accommodate future growth in demand and generation, potentially even heat mapping constraints, providing signals to investors accordingly.

Lastly, EirGrid has published a number of reports on Generation Adequacy, Forecast Statements and Scenario Analysis which detail how generation and demand may expect to change in the coming years. It is not clear from this Draft Development Plan how the planned projects relate to these reports and, in particular, the Scenario Analysis relating to the level and depth of decarbonisation supported by electrification. That is, it is not clear what within the Draft Development Plan is 'future-proofing' the network for wide-scale decarbonisation versus what within the Development Plan is reactive to known network requirements. Noting that a lot of the developments listed in the Plan are in Phase 2 and Phase 3 stages of development, and some are already part of the Associated Transmission Reinforcement Status Update¹, it would suggest that the vast majority of the projects in this latest plan relate to existing network issues and do not account for the Scenario Analysis that EirGrid is developing. It would be useful to see and understand if any scenario analysis has been applied when developing the plan in the Consultation. If not, it would be useful to understand how the Development Plan process will include this Analysis going forward. This would enable interested stakeholders to ascertain the key drivers behind the choices proposed in the Draft Development plan and better enable stakeholders to input into the process to ensure a holistic view of the varying objectives from the different reports are taken into account.

In summary, although the Draft Development Plan contains a lot of detailed information, the structure and content has not really changed in over 10 years looking back on Development Plans to 2008. BGE would like to see a different approach to the Development Plan such that it **brings together** all of the relevant data and provides a clear basis off which to: 1) prioritise works; 2) monitor network development; and 3) measure & reward performance against targeted metrics. The suggestions above will likely not change the Development Plans themselves or the work that EirGrid and ESB Networks do in planning and preparing for network Development, but it would make the Plan a lot more transparent to interested parties and provide a useful tool to understand priorities, how network capacities may change over time and ultimately the efficiencies that network development is contributing and the value it is delivering for customers.

I hope you find the above suggestions useful. I would welcome an opportunity to discuss them in more detail with you at your convenience.

Yours sincerely,

Jill Murray
Bord Gáis Energy

¹ <http://www.eirgridgroup.com/site-files/library/EirGrid/2018-Q1-ATR-Status-Update.pdf>

**Response to the CRU's
Consultation Paper regarding
EirGrid's Draft Transmission
Development Plan 2017-2027**

4th May 2018

Ervia

Introduction to Ervia

Ervia is a commercial semi-state company with responsibility for the delivery of gas and water infrastructure and services in Ireland, through Gas Networks Ireland and Irish Water. It also provides dark fibre broadband infrastructure through its business Aurora Telecom.

Gas Networks Ireland develops, operates and maintains the natural gas transmission and distribution networks in Ireland, consisting of 13,954km of gas pipelines. Gas Networks Ireland provides gas transportation services to all gas suppliers and shippers.

Irish Water is the national water utility responsible for providing safe, clean and affordable water and wastewater services to 1.7 million customers in the Republic of Ireland. Irish Water is responsible for the operation of all public water and wastewater services.

These national gas and water utilities underpin the social and economic development of Ireland and will play strategic roles in the transition of Ireland to a low carbon, climate resistant and sustainable economy by 2050.

Overview / Executive Summary

Ervia welcomes the opportunity to respond to the CRU regarding EirGrid's Draft Transmission Development Plan 2017 – 2027.

Ervia provides the following comments and recommendations as its response to the Draft TDP 2017 for CRU Public Consultation

Ervia's comment:

- Ervia is currently carrying out a feasibility study which, if developed, could decarbonise a number of Combined Cycle Gas Turbines (CCGT) using Carbon Capture Storage (CCS) technology in the Cork area.

Ervia's recommendations are as follows:

- Ervia supports the reinforcement of the Transmission Network in the Cork City area and in particular the Aghada 220/ 110 kV station upgrade (CP0794). The potential for high load factors for the CCGTs fitted with CCS should be factored into future generation modelling (2030 – 2050).
- All cost benefit analyses for electricity transmission reinforcements and interconnectors should include a sensitivity analysis incorporating the following issues:
 - The potential for the increase of energy prices due to the underutilisation of indigenous energy infrastructure of gas transmission and gas generation plants.
 - The unreliable performance of the Electrical Interconnectors.
 - CBA must run scenarios including potential price increases in interconnected regions
 - The availability of power during peak heating events occurring in both interconnected electricity networks.
 - The future requirement for grid stability and inertia when Moneypoint ceases burning coal

Comments

Ervia is currently carrying out a Carbon Capture Storage (CCS) feasibility study. If developed, CCS could decarbonise a number of Combined Cycle Gas Turbines in the Cork area

If developed, CCS could capture up to 90% of CO₂ from the exhaust stream of existing CCGTs in Ireland. The electricity can be exported to the grid as a low carbon energy source while still retaining the traditional benefits of thermal generators i.e. the output is dispatchable and provides ancillary benefits to the grid such as system inertia and grid stability.

EirGrid’s Ten Year development plan and Future Energy Scenarios should make provisions for long term running of CCGTs with CCS.

Globally the benefits of CCS are well recognised.

- In its ‘Fifth Assessment Report’ the IPCC (Intergovernmental Panel on Climate Change) identified CCS as being critical to achieving ambitious climate targets. Their analysis found that “...without CCS the cost of achieving atmospheric concentrations in the range of 430-480 ppm CO₂-eq would be 138% higher” than with CCS¹
- The IEA (International Energy Agency) state that globally “Without CCS transformation of power sector will be at least \$3.5 trillion more expensive” than with it²
- The European Commission in its ‘Roadmap to 2050’ states “7% - 32% of power generation targets can be achieved through CCS”³
- Poyry – Fully decarbonising Europe’s energy system by 2050 shows the importance of CCS in Europe where in the lowest cost scenario ‘Zero Carbon Gas Pathway’ CCS and gas play a crucial role.⁴

What is Carbon Capture & Storage (CCS)?

CCS is the process of capturing carbon dioxide (CO₂) from power or industrial emitters, transporting and injecting it to an underground geological formation (such as a depleted gas field) for permanent storage. Ervia is currently assessing the potential for a large CCS project in Ireland to capture the CO₂ from a number of gas-fired CCGT power plants which would allow the export of low-carbon electricity to the grid. Ervia’s initial assessment is positive and suggests that CCS could operate favourably in cost terms when compared to the alternative technologies to provide low-carbon, dispatchable electricity to the system.

¹ [IPCC 2014](#)

² [IEA 20 years of Carbon Capture and Storage](#)

³ [Strategic Energy Technology Plan - EU](#)

⁴ [Poyry – Fully decarbonising Europe’s energy system by 2050](#)

Recommendations

Ervia supports the reinforcement of the Transmission Network in the Cork area and in particular the Aghada 220/ 110 kV station upgrade (CP0794). The potential for high load factors for the CCGTs fitted with CCS should be factored into future generation modelling (2030 – 2050).

Mitigating the risk of loss of generation and voltage violations at the Aghada 220/110kV station is of particular interest to Ervia's feasibility study into the potential installation of carbon capture plants in this area. Future transmission network planning should ensure that there is adequate resilience on the Cork City 220kV transmission network to accommodate a high loading factor for Whitegate and Aghada CCGT power plants.

All cost benefit analyses for electricity transmission reinforcements and interconnectors should include a sensitivity analysis incorporating the following issues

1. The potential for the increase of energy prices due to the underutilisation of indigenous energy infrastructure of gas transmission and gas generation plants

Any cost-benefit analysis (CBA) for further electrical interconnection should take into account the future impact on utilisation of existing state owned gas and electricity infrastructure i.e. a CBA for an electrical interconnector cannot be carried out in isolation of the wider energy market.

2. CBA must run sensitivities on potential price increases in interconnected regions

The CBA for potential electrical interconnection to France must provide for future increased electricity market prices in France, if France proceeds with plans to decrease its nuclear generation capacity from 75% to 50%.

3. Any analysis must consider the reliability of electrical interconnection

In the EirGrid All-Island Transmission System Performance Report 2016⁵ it was highlighted that Irish Interconnectors have suffered significant reliability issues since they have started operation in the Irish market.

- In 2016 the availability of the East-West Interconnector (EWIC) was 70%.
- In 2016 the availability of the Moyle Interconnector was 59%.

Electricity interconnection is expensive and when Ireland is considering investment in further interconnection, a full cost-benefit analysis should be carried out to ensure Irish consumers will not be exposed to higher energy costs due to unreliable infrastructure. Figure 1 shows the poor

⁵ [EirGrid All Island Transmission Report](#)

reliability of the Moyle interconnector between 2010 and 2016. If Ireland is to rely on further interconnection for electricity, a full analysis of their reliability should be a major component of any evaluation. It seems from the recent reliability history of Irish Interconnectors (also UK-France Interconnection), Electrical Interconnection is not the most reliable way to increase Ireland's security of supply and this should be factored into all relevant business cases developed for future projects.

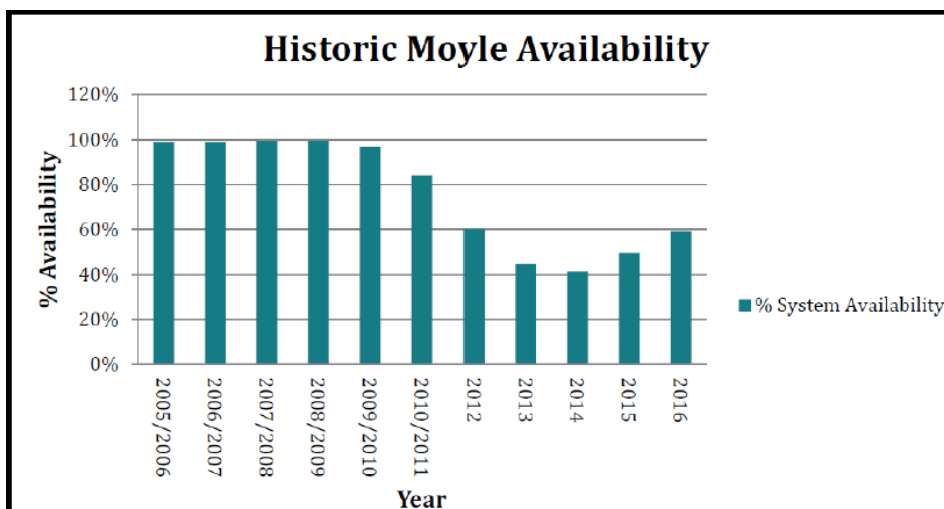


Figure 1 Moyle availability

4. The availability of power during peak heating events occurring in both interconnected electricity networks

Interconnection cannot necessarily be relied upon from a security of supply viewpoint⁶ for electricity at times of peak demand. Recent events across the UK/French interconnector demonstrates this. During the recent Beast from the East weather event the UK had to export to France. The six days from February 26th to March 3rd (highlighted in blue in Figure 2 below) were

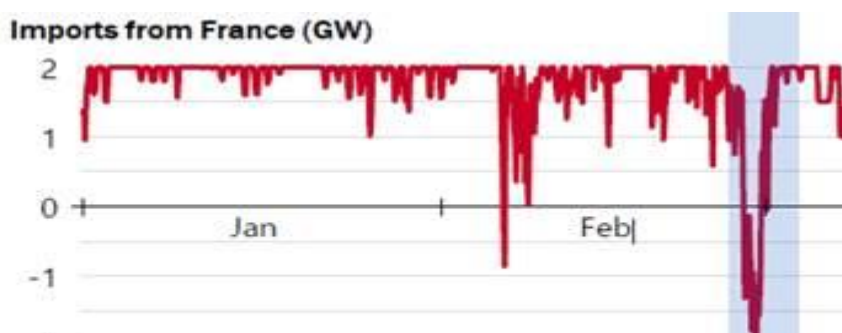


Figure 2 Imports from France to UK

⁶ https://www.drax.com/press_release/beast-east-exposes-reliance-french-interconnector/

the coldest Britain has experienced since Christmas 2010. During this period, electricity exports to France can be clearly seen in Figure 2.

French electricity demand is impacted much more by temperature than British demand, as many French homes use electric heating. If there is large scale electrification of heating in Ireland through the installation of heat pumps as is being proposed by various parties, the electricity maximum demand profile would increase significantly during cold weather. If Ireland is interconnected to France we cannot assume electricity will be available to import during peak demand periods.

5. The future requirement for grid stability and inertia when Moneypoint ceases burning coal

The current operational constraint report (April 2017)⁷ from EirGrid states that the system requires 20,000 MWs² or greater of inertia at all times. The sum of the inertia of dispatchable generation on the all-island grid is approx. 300,000 MWs². A 400MW CCGT provides approx. 6,000MWs². Four CCGTs connected to the grid could provide adequate inertia (24,000MWs²) to stabilise the system when Moneypoint ceases production in its current form post 2025. The requirement for inertia on the grid should be factored into future cost-benefit analysis of transmission and potential interconnection, as electrical interconnection does not provide any inertia for the system.

⁷ [EirGrid operation constraints report](#)

ervia

Aurora
TELECOM



Gas
Networks
Ireland

UISCE
ÉIREANN / IRISH
WATER



AN GHNÍOMHAIREACHT | INVESTMENT AND
INFHEISTÍOCHTA AGUS FORBARTHA | DEVELOPMENT AGENCY

TEACH PÁIRC WILTON	WILTON PARK HOUSE
PLÁS WILTON	WILTON PLACE
BAILE ÁTHA CLIATH 2 ÉIRE	DUBLIN 2 IRELAND
FÓN (01) 603 4000	TEL (01) 603 4000
FACS (01) 603 4040	FAX (01) 603 4040
SUÍOMH GRÉASÁIN www.idaireland.com	WEBSITE www.idaireland.com

Mr. Paul Byrne,
Commission for Regulation of Utilities,
P.O. Box 11934,
Dublin 24.

May 4th 2018

Re: Consultation Paper CRU-18-063

Dear Mr Byrne,

IDA Ireland welcomes the opportunity to provide input to the CRU Transmission Development Plan Consultation. IDA Ireland client companies employ over 210,000 people directly across every region of the country, and in addition support an estimated 168,000 indirect jobs, through annual expenditures of approximately €18bn annually in the Irish economy.

As you know, IDA clients are a source of electricity demand for grid capacity. In 2017 IDA Ireland delivered 237 investments, of which 111 were new names, investing in Ireland for the first time. While IDA Ireland does not intend to comment on the technical specifics of the proposed Transmission Development Plan, we would like to take this opportunity to outline the critical role that Ireland's electricity transmission infrastructure plays in maintaining and increasing Foreign Direct Investment flows both now and into the future. In summary, our requirements of the national electricity infrastructure as they relate to the promotion of Foreign Direct Investment in Ireland include:

- The availability of electricity infrastructure that facilitates Foreign Direct Investment in all regions of Ireland, in line with IDA Ireland's mandate to promote regional development.
- Infrastructure that is made available to our clients in a cost effective manner and that demonstrates value for money when compared with international locations that we are competing with.
- A resilient and robust electricity infrastructure that helps to ensure security of supply.

- An infrastructure that benefits from pan-European connectivity in a way that enhances security of supply and price competitiveness, as well as mitigating any potential disruption associated with a ‘hard’ Brexit.

The quality of electricity infrastructure and services in Ireland in terms of price competitiveness, sustainability and security of supply, is critical to Ireland’s ability to continue to attract high quality Foreign Direct Investment and to support job creation. Ireland competes with some of the most advanced and developed countries/regions in the world, and requires energy infrastructure and service provision that is internationally competitive in this context.

Many activities within the ICT, Life Sciences, Engineering and Financial Services sectors are increasingly energy intensive. These can be strategically important to the development of the sectors in Ireland, because their location can strongly influence where a wide range of associated investments, functions and jobs also locate. Consequently, it is critical that Ireland is able to adequately meet both the current and future energy needs of clients with operations in these areas, in a manner that is competitive.

For the ICT sector, Ireland’s national enterprise policy objectives, as set out in *Enterprise 2025*, include the ambition for Ireland to be a digital economy ‘hot-spot’ within Europe. Similarly the Biopharmaceuticals sector is on a high growth path in Ireland. Both the ICT and Biopharmaceuticals sectors are on the cusp of huge technological advancements and change. Investment decisions in these sectors over the coming years will be important in determining FDI flows well into the future. The continued strong development of both sectors requires the provision of a coordinated suite of factors including key utilities such as power, skills and an efficient and expeditious legal/planning process with clear timelines for conclusion.

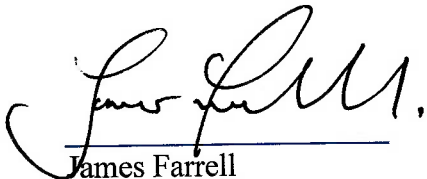
A key focus of IDA Ireland’s current strategy *Winning: Foreign Direct Investment 2015-2019*, is to achieve higher levels of investment in regional locations relative to Dublin. IDA Ireland is strongly committed to this objective and welcomes initiatives that enhance the quality of electricity infrastructure in these locations. Such initiatives can enhance the ability of IDA Ireland to achieve a greater regional spread of energy intensive investments in the future.

However, for some energy intensive sub sectors, such as data centres and large manufacturing facilities, a high concentration of investments has already located in the Dublin region in recent years. Therefore, even with substantial investment into regional locations outside the Dublin area, it is also important to recognise that companies have a strong interest and indeed logic in wanting to continue the expansion of their existing Dublin operations in the short to medium term. This is clearly demonstrated by the current level of demand coming from IDA clients for additional data centre capacity in the greater Dublin area.

In order to achieve the objective of being a digital economy '*hot-spot*' within Europe, by 2025, Dublin will, as Ireland's one city of international scale, undoubtedly need to be central to this goal. Consequently, in conjunction with the supply constraints now emerging in the Dublin region and high levels of projected economic growth, this means that the proposed Transmission Development Plan needs to be assessed in terms of not only its technical specifics, but also critically in terms of whether it demonstrates the required level of ambition and an ability to cater for future projected demand in a range of possible scenarios.

In order to continue to support mobile international investment it is critical that the transmission infrastructure is developed in a proactive way that demonstrably provides the capacity now, and into the future, so that investors can plan with confidence on the basis that their energy requirements can be securely and competitively accommodated in a range of scenarios.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'James Farrell', written over a horizontal line.

James Farrell

Head of Strategic Policy



COMMISSION FOR REGULATION OF UTILITIES

**SSE RESPONSE TO
EirGrid Transmission Development Plan 2018**

MAY 2018

About SSE

SSE is Ireland's second largest energy utility and the country's leading developer and investor in cleaner energy infrastructure. It is part of SSE plc, a UK-listed, FTSE 100 company and the broadest-based energy utility on the London Stock Exchange. Since 2008, we have invested over €2 billion in the development of Ireland's sustainable energy infrastructure, helping to green our economy and secure our energy future.

In Ireland, SSE owns and operates 2,061MW of generation capacity, of which 768MW is from its portfolio of 28 onshore wind farms, making SSE the largest generator and provider of renewable energy in the all-island Single Electricity Market. In 2015, SSE commissioned Ireland's newest and one of its cleanest power plants, the 464MW CCGT (combined cycle gas turbine) power station at Great Island, Co. Wexford, which is generating enough greener energy to power over half a million Irish homes.¹

As such, SSE is particularly interested in the development views that EirGrid, as TSO take over both the short and medium term as it allows us valuable insight into the transmission network projects that are aimed at facilitating our proposed and current assets which contribute to Ireland's energy needs.

Introduction

SSE welcomes the opportunity to comment on EirGrid's TDP 2018 which was published for consultation by the CRU. The TDP provides vital information for industry stakeholders by setting out EirGrid view on network investment. As one of Ireland's largest developers, SSE is particularly interested in the developments that the TSO sees as important over the next 10 years.

The TDP focuses on several aspects and our comments are focused on the purpose of the document and what it is intended to bring to the table for stakeholders such as SSE. Given, that SSE is one of the largest developers on the island of Ireland we are of the strong view that the TDP and the interdependencies with other TSO publications is critically important.

The TDP is divided into seven sections which sets out the methodology which EirGrid employs to assess the needs of the network, the planned investments (both regionally and at a total level) and the environmental aspects which are considered.

¹ 232,725 tonnes of CO₂ emissions offset based on projected annual energy output of 592,176MWh and average CO₂ emissions in the Single Electricity Market of 0.393t/MWh (latest All Island Project Fuel Mix Disclosure, published 2016).

Guiding principles

As part of the TDP, EirGrid state that the development is informed by three strategic priorities which are;

- Ensuring the security of electricity supply
- Ensuring the competitiveness of the national economy
- Ensuring long term sustainability of electricity supply in the country.

It is noted that in summarising these guiding strategic priorities, EirGrid make specific reference to Interconnection as a means of delivering against strategic priority 1 and strategic priority 2. Whilst SSE does not object to this no reference made to other factors which are also important for security of supply and competitiveness. For example, the TDP makes the following statement:

“With increased interconnection there is also access to a broader generation base, which enhances the networks’ security of supply. This can potentially defer the need for additional generation to be constructed to meet security of supply standards or requirements”.

In the first instance we are of the strong view that whilst the guiding strategies are in themselves sensible, it is concerning that interconnection has been singled out as a means of delivering these. The redesign of the I-SEM Capacity Remuneration Mechanisms (CRM) is intended to ensure that sufficient capacity is installed on the system. Consumers pay for such capacity to be available at times of peak demand, whereas interconnector flows are dependent on price signals in interlinked markets. As such, it is important to distinguish interconnectors which are transmission infrastructure from generators in Ireland who have and must under the CRM be available to generate energy when required. We are of the view that the repeated reference to Interconnectors is not aligned with the core purpose of any planning document which is publicly consulted on; which is to inform stakeholders of the TSOs anticipated network needs, including reinforcements in the medium term.

Coordination of planning documents

As part of the CRUs recent publication on PR4 Incentives for the TSO and DAO, the regulator emphasised that a focus of the package would be introduced as part of the Consultation Paper on CER17335 where proposals 1 to 3 of the CRU include;

Require the publication of a companion document of comparable readability to inform stakeholders how network investment needs are being identified, and how options to meet those needs are being developed, evaluated and delivered;


In addition, the TSO in 2017 also published its “Tomorrows Energy Scenarios” which is focused on the likely demand and generation scenarios that may be occur in the future. This uses a number of different scenarios from high growth and penetration scenarios. The focus of the TDP is intended to reflect how EirGrid envisages meeting the strategic challenges, or at least that is what SSE believes the document should strive to do. However, the TDP does not appear to align in any way with the Tomorrows Energy Scenarios document, and rather presents a short-term view of projects that aim to be built.

It would be useful to better understand the full range of reporting requirements that EirGrid, as TSO undertake and for the CRU to perhaps consider a consistency of approach across the suite of document. Without such consistency, it is difficult for stakeholders, from industry to the regulator to be able to hold the TSO accountable for network delivery, through for example, the 5 yearly Price Review mechanisms and the recently published incentives as proposed to apply for the remainder of PR4.

Ultimately, the TDP focuses on transmission infrastructure and without the details of scenario planning and likelihood of future demand on the network, the document fails to deliver the wider strategic understanding of the drivers of investment. In addition, from our reading it would appear that the generation and demand figures are taken from the 2016 Forecast Statement. We request confirmation as to which generation and demand figures are being used in the TDP.

Specific transmission development gaps

The TDP makes no reference to and doesn't take account of the soon to be released east coast study or the reinforcements that would be required to support offshore wind, in particular Arklow. Under ECP-1 any grid connection offer will be non-firm so there is no visibility of the ATRs that will be required. In order to stimulate future investment in large-scale projects there needs to be a clear roadmap of grid delivery to ensure investment. This would include, projects of a scale such as offshore which would not be able to connect before their ATRs are completed. We would therefore request that additional details are provided with regards to the alignment of the longstop dates in future connection offers.



There are some viable upgrades on the east coast that don't have significant planning hurdles and could be achieved within a short timeframe and could be achieved if they were considered as part of this Transmission Development Plan. This point relates back to the overall reporting structure and the linkages that each of the reporting documents intend to provide to industry. SSE is of the view that the value of the TDP lies in its alignment with longer term strategic views taken by the TSO in terms of how EirGrid sees the industry in the medium term. Otherwise, if the assessments are solely done on the basis of those requesting connection to the grid, the TDP will lack a forward-thinking element, which is critically important given that network development is a long term investment from planning through to delivery.

4th May 2018

Mr Paul Byrne
The Commission for Energy Regulation
The Exchange
Belgard Square North
Tallaght
Dublin 24

Western Development Commission (WDC) Response to the CRU Consultation on the Draft EirGrid Transmission Development Plan 2017-2027 CRU/18/063

Dear Mr Byrne,

The Western Development Commission¹ (WDC) welcomes this opportunity to make a short response to the above consultation.

The WDC is a statutory body established by government to promote, foster and encourage economic and social development in the Western Region². The WDC seeks to ensure that government policy and its implementation reflects the needs of the Region across such areas as infrastructure, natural resources, industrial and rural development.

The WDC regards the provision of a quality electricity transmission and distribution networks as important elements of the infrastructure required to underpin the economic development of the region. Because quality infrastructure is important to regional development the WDC monitors infrastructure planning and investment across a range of infrastructures.

In the case of electricity, the Transmission Development Plan is an important publication which should provide clear rationale for individual project investments and clear updates on progress on projects and changes to project plans so that monitoring of infrastructure development is enabled. Unfortunately the TDP is not a user friendly document and there are a number of points we would like to make in relation to the TDP 2017-2027. These are considered under the following headings:

- Time period covered;
- Policy References;
- Detail of Planned Network Developments and Regional Perspectives.

¹ For more information about the organisation see www.wdc.ie

² Counties Donegal, Sligo, Leitrim, Roscommon, Mayo, Galway and Clare.

Comments on the Transmission Development Plan (TDP)

While the TDP notes that “TDP 2017 presents our view of future transmission needs and our plan to develop the network through specific projects meet these needs over the next ten years” and while it is accepted that the TDP is largely project focused, we would have concerns that it is not really a development plan and does not provide enough specific information on the context for decisions (both in terms of policy and in terms of generation and demand changes) and the basis for project decisions (this is discussed in more detail below).

1. Time period covered

This CRU consultation is on the Transmission Development Plan for 2017-2027. In the Plan it is never explained why this is the period covered. Given that this is 2018, and the final document will not be published until summer 2018 at the earliest, there should be some explanation of the time horizon chosen (i.e. why is it not a 2018-2028 plan?). The CRU also seems to be unclear about this with references to 2016, 2017 and 2018 in documentation associated with the consultation. We are aware that the data freeze was 31 March 2017. While the time period under consideration might not be considered important it does make the updates and progress with documents somewhat out of date or unclear; it is not always evident whether it is taking full account of decisions made, for example, in 2017.

2. Policy references

In line with the discussion of time horizons above, as it is a ten year development plan rather than a progress report, it would be expected that there should be some acknowledgement of EirGrid’s long term planning work and how this might impact on developments to 2027. However, ‘Tomorrow’s Energy Scenarios’ is not even referred to in the TDP 2017-2027. There needs to be some clarity as to how these areas of EirGrid’s work (long term scenario planning and project development planning) relate to and inform each other.

National Policies

The TDP refers to the national energy policy outlined in the White Paper “Ireland’s Transition to a Low Carbon Energy Future 2015 – 2030”. It notes that “Investment in the transmission system is necessary to enable Ireland’s transition to a low carbon energy future. In this regard, the TDP is developed to support government objectives and enable this energy transition” but it does not make any reference to other key policies such as the Draft Renewable Electricity Policy and Development Framework.

Nor does it specifically refer to other key government policies driving change over the next 30 years, including the most significant of these: *Project Ireland 2040*. This incorporates both the *National Development Plan* (NDP) which is the capital investment programme and the *National Planning Framework* (NPF), which will also incorporate the *Regional Spatial and Economic Strategies* (RSES).

Project Ireland 2040: National Planning Framework

The NPF is the government’s high level strategic plan for shaping the future growth and development of our country to the year 2040. It is a framework to guide public and private investment. The framework estimates that there will be an additional million people living in Ireland in 2040 and it contains regional targets for population increase, and guidelines on where people should live and where employment should be focused. These long term targets should be

an important part of the EirGrid planning process, and there should be some indication of how the framework and its targets for population and employment will impact on grid development in future.

In addition the NPF has stated objectives in relation to energy and grid development including a clear national policy objective:

National Policy Objective 47 In co-operation with relevant Departments in Northern Ireland, strengthen all-island energy infrastructure and interconnection capacity, including distribution and transmission networks to enhance security of electricity supply.

There is other discussion of energy and electricity network development in the NPF including the following:

In the energy sector, transition to a low carbon economy from renewable sources of energy is an integral part of Ireland's climate change strategy and renewable energies are a means of reducing our reliance on fossil fuels. The forthcoming Renewable Electricity Policy and Development Framework will aim to identify strategic areas for the sustainable development of renewable electricity projects of scale, in a sustainable manner, compatible with environmental and cultural heritage, landscape and amenity considerations. The development of the Wind Energy Guidelines and the Renewable Electricity Development Plan will also facilitate informed decision making in relation to onshore renewable energy infrastructure.

While EirGrid's planning may already be taking this into account, it is important the TDP refers to this policy context and acknowledges the objectives of the NPF in relation to population and employment as well as to future energy electricity.

Following the publication of the NPF, work is ongoing to prepare the Regional Spatial and Economic Strategies (RSES) for each of the three regions. These will give a clearer regional indication of areas of population and employment growth. In future, these should also be taken into account in network planning.

Project Ireland 2040: National Development Plan 2018-2027

The National Development Plan acknowledges the role of the State Owned enterprises (SOEs) like EirGrid in making investments. It notes that

The ultimate objective of the investment [in regulated network infrastructure] is to assist in ensuring a long-term, sustainable and competitive energy future for Ireland. This investment in the networks will deliver positive benefits for the overall economy, as it is a fundamental component in providing the energy/power capacity to support new investment and jobs whilst seeking to deliver that capacity in an affordable manner to ensure that Ireland remains competitive from an energy cost perspective. Investment in these assets is acknowledged as an important enabler of economic growth and, as such, the sector has a critical role to play in meeting priority infrastructural needs.

While this does not give specific direction in relation to capital investment, the TDP should acknowledge the capital investment policy context with in which it is operating.

Other policies

In addition to the NPF and the NDP, both the Action Plan for Jobs and the IDA 2015-2019 strategy place important emphasis on the development of enterprises throughout the regions. Some of these can be expected to have significant power loads, but again this is not referred to in the context of how and where future development might take place.

3. TDP 2017 Planned Network Developments and Regional Perspectives

The TDP considers projects at a regional level, and as the BMW region is most closely aligned with the WDC region, this is largely the focus of the comments in this section.

A chart is provided on regional generation and demand balance for the region. The demand and generation estimates are given for 2026 (as they were for TDP 2016). However, a lower demand estimate is used in TDP 2017 (1247MW compared to 1290MW in 2016). There is no discussion of this change at regional level, particularly given that higher projections for demand in the next ten years are given in TDP 2017 compared to TDP 2016 (Table 3.1). Meanwhile, the same generation forecast for 2026 is given in both TDP 2016 and TDP 2017, and yet it is noted later in the TDP that a significant number of generation connection offers which were not taken up, impacting on the need for some investment (Grid West). However, this reduction in estimated generation is not referred to or apparent in these figures.

As the TDP is a ten year rolling plan, if the TDP is to be of use to readers changes in the plan from year to year should be clearly highlighted.

In each of the regional sections, background to the projects is provided but in most cases the reader is then required to turn to the appendix to find any update or changes in progress. A summary of project progress should be included alongside each project. There should be clarity about changes made to projects, new projects since last year and delays or difficulties which have arisen. For example the reinforcement of the transmission network in Donegal (p74) seems to be a new project since TDP 2016 and should be stated as such.

In relation to Grid West, which is now shown along with the North Connacht 100kV reinforcement project, reference is made to generation offers which were not taken up. The amount of the reduction in generation connection should be stated, with further information on expected generation capacity in the region in future.

As noted above, for information on projects the reader is required to then turn to the appendices to find progress information the projects. This does not make for a user friendly document.

In Appendix B, CP 0816, the North Connacht Reinforcement Project, is noted as being on hold and the footnote notes that it will be used to replace the Grid West Project. However, as there is no table for projects which have been cancelled, this is the only reference to Grid West here.

However, on page 115, in Table C-2 on projects in the BMW planning area, the Grid West Project continues to be included with an ECD of 2020 and then with a footnote that it is to be replaced. If it has been cancelled this should be stated in the table rather than in the footnote. The North Connacht Reinforcement project which was already in progress as a project, and which is now to replace Grid West, is not mentioned in Table C-2 at all.

Similarly in Appendix D Table D-2 which lists projects in European RegIP NS 2015 the Grid West project is listed in the table with only a footnote to say it has been replaced by another project.

As noted, the TDP is an important means of monitoring progress for infrastructure investment, and yet key information is hard to find, may only be in footnotes, and is not made easily available. The model being used for the TDP publication needs to be addressed by the CRU in future years, so that a more meaningful document which provides both context for developments and details of project changes and progress is available.

Clarity about developments, with contextual information and sufficient data underlying decisions are essential for people and organisations to gain an understanding of key investment decisions, ongoing projects and to monitor progress. Otherwise the purpose of the TDP consultation process and publication is unclear.

Yours sincerely

Dr Helen McHenry

Policy Analyst

helenmchenry@wdc.ie

T: 094 986 1441

M: 086 605 3264