IWEA Response to

CER Consultation on "Criteria for Gate 3 Renewable Generator Connection Offers"

22nd February 2008

Summary of IWEA Recommendations

1. Gate 3 should not seek to place a limit on the volume of renewable generation developed by 2020. To the extent that there may be technical issues, not directly related to the connection process, these should be considered separately and not used to stymie this process.
2. A minimum target volume of firm capacity should be offered each year to facilitate delivery of national energy targets.
3. All offers should have deemed firm dates to ensure efficient management of network development risks.
4. All applications received by 17th December should be included in Gate 3. This would be a more transparent criteria and would remove potential disputes around the operators' processes to bring applications to completion.
5. The timeframe for commencing the issue of Gate 3 offers is too long. Efforts to expedite this must be investigated. There should be an incentive on the System Operators to speed up this process. To this end the early setting of target dates for the issuing of firm offer quantities may be worth exploring.
6. Distribution connections should be contestable where there is unanimous agreement from a group.
7. Consultation on the appropriate "planning criteria" for use in the GDS approach should be prioritised. In particular the possibility of offering access where constraint levels are expected to be small and it may be more efficient to compensate for them rather than to invest in network to eliminate them should be examined. The GDS approach should be expanded to include strategic distribution planning.
8. Spare capacity at a node should be offered to the first project in the queue at that node even if the available capacity does not meet the full needs of the applicant.
9. Non firm capacity should be offered where firm access is not feasible and it is practical to facilitate non firm access. The level of non firmness should be identified in advance.
10. Any spare capacity at a node resulting from lack of uptake of a Gate 2 offer or otherwise should be offered to the next participant in the queue at that node as soon as practical.
11. Every effort should be made to deliver offers to applicants that have been in the process for several years. This is a complex and important issue that warrants careful consideration.
12. The current standard connection agreement should be reviewed by a representative expert working group to deliver a more balanced allocation of risk.

Contents

Introduction

The imperative to increase the utilisation of renewable resources to reduce damage to the environment and dependence on imported fossil fuels has been repeatedly underlined in recent months. The Government white paper sets a target for Ireland to supply 33% of energy from renewable sources by 2020. The recently published all island grid study illustrates our potential to achieve levels of 42%. The EU has also outlined targets for member states to reduce CO2 emissions. Increasing the levels of wind generation in Ireland will be central to the achievement of these targets.

The availability of predictable and dependable connections will be an essential enabler to the delivery of renewable energy. This consultation process on the Gate 3 Connection process is a welcome opportunity to develop a policy framework for delivering connections and offers for connections in a manner that facilitates the development of renewable energy. It is apparent that further work on the technical detail of the Gate 3 process will be required following this consultation process. This response concentrates on the high level policy issues raised by the current consultation paper. It is the IWEA's intention to provide comments on the more detailed aspects of the proposed process once there is a better understanding of that process.

Developing a functioning wind farm is a complex project with many interdependent tasks. These include securing a suitable site, acquiring planning permissions, procuring suitable turbines, securing a connection agreement, ensuring the whole package is commercially viable and meets the requirements of banks and other investors etc. It is necessary for developers to have a comprehensive integrated project plan that encompasses all these issues to ensure successful delivery.

The impact of slippage or changes in key assumptions on any of these aspects will be amplified throughout the entire project. For example, planning permission will have expired for over half the projects in Gate 2 before their grid connection is available. It is frequently not feasible, and, particularly for small developers financially impossible, to carry out "substantial works" sufficient to obtain an extension of planning permission several years in advance of connection. Some project planning permissions expired before they had a valid connection offer in place. In these circumstances it can be very difficult to secure an extension to planning and an otherwise sound project may be abandoned. Similarly potential delays to connection issues must be considered when placing orders for turbines and negotiating finance. The integrated nature of these projects means that the risk in one area impacts on several other areas of the project and disproportionally impacts on overall project risk and cost.

The GDS approach proposed in the consultation paper is a welcome move towards more strategic development of infrastructure. This response builds on that framework to explore means of increasing the efficiency of the overall renewable development process.

Comments on Gate 3 process

There has been a significant level of interest in developing wind energy in Ireland over the last ten years. Much of this has been characterised by a large number of relatively small developments. The traditional offer process was not considered an efficient means of processing large numbers of small interacting connection applications. The gate process was introduced to overcome this technical problem.

To achieve national renewable targets and meet our international emissions commitments the gate 3 connection process must enable the delivery of a substantial volume of renewable developments over the next twelve years. It is important to recognise that the successful delivery of a significant volume of connection offers in this timeframe will not be sufficient in itself to ensure the delivery of generation projects. The timing, predictability and dependability of offers will be crucial to facilitating the overall development requirements.

As the penetration of renewable energy increases other technical issues may arise and warrant separate consideration. To the extent that these give concern they should be identified and studied to ensure the continuing progress of the energy industry. It would not be appropriate to set an artificial limit in the gate process to avoid these issues.

Over the past number of years substantial research and experience has consistently tackled technical issues as they arise and moved target penetration levels upwards. This trend will continue as technology and operating knowledge improves. It is important that the Gate 3 process does not artificially stall this trend. Hence, rather than using Gate 3 as an effective barrier to delay the imperative to make progress, issues relating to system operation and dynamic modelling should be studied in their own right.

Requirements from Gate 3

The key requirement from Gate 3 is a well timed predictable and dependable programme of connection offers. This will allow developers to plan and deliver sound projects in a robust and efficient manner. The volume and schedule of offers must enable achievement of national targets. This may be achieved by setting out target volumes of capacity to be made firmly available each year over the next twelve years.

To allow certainty to project developers it will be necessary for these offers to have deemed firm dates. This essentially allows the network operators to manage the risk of delays to deep reinforcements as part of a portfolio. This should provide more effective risk management as the network operators are best placed to manage and control these risks.

In circumstances where it is not possible to make firm access available, there is considerable merit in continuing the practise of providing non firm access where it is practical to do so. The practise of advising on the degree of constraints expected in these circumstances is also very useful. It would also be useful to use these studies to define the degree of “non firmness” of

offers available. For example, if a project proceeds on a non firm basis following an indication that constraint levels would not exceed 7% then the development should be compensated for any constraints in excess of this level. This would allow developers to definitively quantify and model the risk they are exposed to during the period of non firm access.

GDS Proposal

The strategic approach to delivery of infrastructure envisioned for the GDS approach is welcome. To be effective this approach must take cognisance of the overall development framework and the level of interest in renewable projects. It should recognise the impact that uncertainty and delays in connections may have on other issues such as planning permission, turbine procurement and securing capital.

There is a concern that large discrete gates may not be the most efficient means of processing applications. The more continuous incremental approach in the GDS proposal merits further examination. All nodes should be regularly examined for firm and non firm offer opportunities. This should feed in to a regular (annual) cycle of connection offers. This process should start immediately and any spare capacity identified should be offered as soon as possible. To the extent that some Gate 2 offers are not accepted the capacity should be offered to a further applicant as soon as practical.

The GDS approach relies heavily on a regular assessment of the available capacity at nodes. This assessment is performed relative to a specified set of planning criteria. This means that the planning criteria are a fundamental driver of the volume of capacity available. Due to the differing characteristics and requirements of renewable generators relative to conventional plant and demand it may be appropriate to use a less stringent set of planning criteria for the purpose of evaluating available capacity at nodes. These criteria should recognise more sophisticated network operational strategies including the "toolbox of solutions" presented at EirGrid's 2007 customer workshop. The criteria should also recognise that network reinforcement is not necessarily the most efficient solution in cases where the anticipated constraint levels may be quite small. In this situation it may be cost effective for the system operator to compensate for the constraints costs rather than build the network. It is recommended that a consultation process to consider these issues and to identify the appropriate planning criteria be prioritised.

As described the GDS process offers spare capacity at a node to the first project (in date order) whose full requirement may be satisfied by the available capacity at that node. This may mean that a relatively large project at the start of the queue may be leapfrogged by a series of smaller projects that applied later. It is recommended that whatever spare capacity exists should first be offered to the first project in the queue at that node.

The strategic planning approach envisaged in the GDS model should be evaluated for application to the planning of the distribution system. This would facilitate more efficient overall network

analysis and the effective development of distributed generation where this is the optimal solution.

The process for combining applications needs to be clarified; this is a particular concern under the current rules where larger projects are at a disadvantage relative to smaller ones.

In circumstance where a project is associated with a node and there is a significant delay expected before capacity becomes available at that node the applicant should have the right to apply to be associated with a different node.

Administrative Issues

The consultation paper proposes that the cut off date will be based on the number of "complete" applications in the process by 17th December. However, there may be significant interaction between developers and two different network operators to bring an application to the point where it is considered complete. This may give rise to a contentious process where parties may raise disputes if they are excluded on this criterion, this may delay the progress of the overall process. It is proposed that all applications received by 17th December would be included in the process. There may be a need to specify a date by which these applications would need to be made complete to avoid undue delays.

The proposed timeframe for processing applications is unreasonably long and may undermine many of the positive aspects of the proposal. Based on the timeframes outlined in the GDS approach it would appear that offers may not issue until 2011. It is important that this timeline is clarified and that offers are provided as early as possible.

While the GDS approach may be effective in delivering a large number of offers in a relatively short time, it is important that efforts are made to deliver a response to projects that have been in the process for a long time. This is a complex and important issue and warrants detailed consideration.

The Gate structure was introduced to deal with a large number of small applicants. There may be merit in considering very large wind farms in a manner more similar to conventional plant.

Autoproducers have significantly different characteristics to conventional plants and can deliver a very efficient means to reduce emissions with less network requirements where suitable sites may be found. The criteria for processing autoproducers should have regard to these characteristics.

Gate 3 provides an opportunity to review the Connection Agreement, the current contract places an onerous share of the risk on the connecting party. This greatly adds to the difficulty of securing project finance. It is recommended that a process utilising a representative expert working group be formed to address this issue.

Related Issues

Contestability of shallow transmission connections has proved very successful in allowing developers to manage cost and time risks. It is recommended that these benefits be made available to parties connecting to the Distribution system. Where the connection is for a group the right to contest the construction may only be exercised when there is unanimous agreement to exercise this right.

As the levels of renewable generation increase the interaction between renewable and conventional plant will increase. Greater flexibility of conventional plant facilitates the integration of renewable and a system of rigorous and transparent Grid Code compliance is necessary to facilitate the continued evolution of the power system.

The consultation paper estimates a 35% capacity factor for future wind developments. As penetration levels increase some of the sites that will be developed will not be as attractive as some of the earlier sites. In practise this may drive a requirement to connect larger volumes of capacity to realise the same renewable energy contribution.

The criteria used in Gate 2 for extension of existing windfarms should be included within Gate 3. It is also recommended that any "Outliers" from Gate 2 left waiting for a grid offer, should be included in gate 3 and that the criteria for identifying outliers should not be as rigid.

Conclusions

The delivery of a substantial volume of renewable electricity generation is essential for Ireland to meet its national and international energy targets. Securing a connection offer is one of the key project requirements. This paper has outlined the need for a framework where a sufficient number of predictable and dependable connection offers are made available.

It is worth noting that only 58MW of wind generation was connected to the system in 2007[1]. If this trend were allowed to continue Ireland would miss its national energy targets by a significant margin. The IWEA is committed to working with all stakeholders to develop a framework that ensures delivery of these targets.

[1] Based on connected wind table as of 21 December 2007 on EirGrid website