



**DECC Consultation on UK Electricity
Market Reform**

A Response by EirGrid Group Plc

March 10th 2011

1. Executive Summary

EirGrid are specifically interested in the effect any changes in United Kingdom (UK) policy would have on the interaction between the Single Electricity Market (SEM) on the island of Ireland and the electricity trading arrangements in Great Britain (GB) and the impact on stakeholders in the Northern Ireland (NI) electricity industry with regard to the internal workings of the SEM.

There will be significant impacts of any policy changes in the UK especially on regional markets such as the SEM, which is a cross jurisdictional wholesale electricity market that encompasses both a region of the UK (NI) and Ireland. Any introduction of policies in NI will have potentially far-reaching implications for market participants in the SEM and for customers in both NI and Ireland.

The following key areas are addressed in the response:

Carbon Price Support (CPS)

EirGrid have already responded to the HM Treasury consultation on the CPS; however, we would like to reiterate our views here in the context of the other changes proposed.

The introduction of a CPS will almost certainly systematically raise the wholesale price of electricity in GB. With increasing interconnection and more developed regional integration across our trading arrangements, it is very likely that this effect will be felt in the SEM.

In addition, if NI generators were subject to the CPS, it would have material implications for the operation of the SEM. As NI generators would become significantly less competitive than similar generators in Ireland, they would be unlikely to be scheduled in the market; however, as they would still be required for system security reasons, they would have to be constrained on by the system operators. Being constrained on in this way and not being scheduled in the market over prolonged periods would have serious implications for the financial viability of generators in NI.

In addition, a price spread of this magnitude between Ireland and NI could compromise the ability of the SEM to promote the short-term and long-term interests of consumers of electricity on the island of Ireland with respect to price, quality, reliability, and security of supply of electricity.

Feed in Tariff (FIT) and Contracts for Difference (CfD)

To ensure investor confidence is maintained in NI over the next decade it is vitally important that a debate occurs on the merits of transitioning to a Feed in Tariff (FIT) plus Contract for Difference (CfD) arrangement. The abandonment of the Northern Ireland Renewables Obligation (NIRO) in 2017 will be of a concern to renewable generators. The transition period to a new system will create additional administrative burden on generators and suppliers and significant increased risk of an investment hiatus.

Emissions Performance Standard (EPS)

We understand that the aim of an Emissions Performance Standard (EPS) is to prohibit the construction of new coal plant or heavy carbon intensive plant without the addition of Carbon Capture and Storage (CCS). However, it is important to note that the introduction of increasingly stringent measures across the whole of the UK may raise security of supply issues. It is important that a balance is struck between incentives for increasing investment in renewable generation and flexible plant while maintaining security of supply.

Capacity Mechanisms

As DECC have referenced in the consultation, a Capacity Payment Mechanism (CPM) exists in the SEM that is designed to create the appropriate signals based on the availability of generators to provide capacity in times of tight system margin. As all generators (>10MW) in NI are part of the SEM and receive payments under this existing mechanism, the introduction of an additional targeted capacity mechanism across the UK is not suited to NI without considering similar changes in the SEM. We recommend that due consideration be given to any mechanism proposed that interferes with the internal operation of the SEM.

Impact of Renewables and Operational Performance

EirGrid has already experienced the operational and technical issues associated with high levels of renewable penetration on the island of Ireland. From this experience, EirGrid believe that a key feature of any future market reform is the need to ensure that operational security and flexibility of the power system are aligned with the market structures. The need for system flexibility and performance will become more pronounced with more wind on the all-island power system; therefore, it is important that any market reform ensures that generators are adequately incentivised to provide system performance. In order to ensure the security of the system in the future, it is likely that an improved and wider range of generator services will be required. This necessity will need to be reflected in any market reform measures.

EirGrid is already experiencing and managing up to 50% instantaneous penetration of renewable generation on the all-island power system. This level of non-synchronous renewable generation on a small lightly interconnected synchronous power system poses a number of technical and operational challenges that other larger power systems in Europe including GB have yet to experience and may not experience for another decade or so. EirGrid does not believe that the necessary performance incentives will be required in the GB market over the short to medium term as they may lead to inefficiencies and possible system security issues; however, EirGrid would welcome the opportunity to share its experience, which will become more relevant for GB in the next few years, with DECC over the coming months.

Finally, this consultation raises questions for stakeholders in NI and in a wider context for the SEM. As we move towards greater regional integration, considerations of complimentary market structures will become increasingly important.

2. Introduction

EirGrid welcomes the opportunity to respond to the consultation paper “Electricity Market Reform” published by DECC in December 2010.

EirGrid Plc holds the licences as independent electricity Transmission System Operator (TSO) and Market Operator (MO) in the wholesale trading system in Ireland and is the owner of SONI Ltd, the licensed TSO and MO in Northern Ireland (NI). The Single Electricity Market Operator (SEMO) is part of the EirGrid Group, and operates the Single Electricity Market on an all island basis.

The SEM is a gross mandatory pool market for NI and Ireland. In November 2007, it replaced the previous bilateral market in Ireland and the single supplier market in NI. It was introduced to create a stable and attractive environment for investment. This, it was hoped, would attract new entrants and reduce the market concentration of the existing monopolies leading to greater levels of competition and a more efficient electricity supply for the consumer. Up to this stage, much of the new investment in generation capacity was either tendered for or supported by the relevant departments in NI and Ireland.

The drivers for the SEM were not unlike those of the old England and Wales pool. A key aspect of the SEM was structural reform and the reduction in the market concentration of the incumbent vertically integrated utilities. These organisations had served and continue to serve the electricity customer well; however, as monopolies they were not subject to levels of transparency or commercial risk necessary to drive efficiency across the industry. To date, the SEM has been largely successful in achieving its objectives. It is therefore in this context that we respond to your consultation.

2.1 Impact on Northern Ireland and the SEM

The impact on NI and the SEM of the UK Electricity Market Reform has not been fully analysed by the range of stakeholders involved. DECC have advised that an extrapolation of the impact analysis was carried out at a high level. We believe that this is insufficient to allow decisions of this magnitude to be made without further detailed analysis on the impact of implementation of packages specific to NI. It is our

understanding that DECC has assumed implementation of some or all elements of the four point plan across all regions of the UK including NI.

The key area of concern for NI and the SEM is the Carbon Price Support mechanism. The HMRC consultation indicates implementation across the board to include devolved regions of Scotland and NI. SEMO and SONI have jointly responded to the HMRC consultation in a separate letter of February 18th 2011; however we feel it is important to reiterate our view on this proposal. This mechanism would have far reaching implications for both the NI electricity industry and for the continued operation of the SEM.

A CPS, if implemented in NI, would require that NI generators include this cost in their offers to the SEM. This in turn will make NI generators significantly less competitive than similar generators in Ireland, especially those running on the same fuel. As a result, they would most likely fall out of the merit order and not be scheduled on in the market; however, for reasons of system security in NI, NI generators would still have to be run by the system operator and will therefore incur increased constraint costs.

The potential introduction of a CPS in NI introduces additional regulatory risk into the SEM where investors are no longer able to base investment decisions based on market forces, Regulatory Authority policy within the SEM or even the government departments in Ireland and NI. This additional risk raises the cost of investment in new plant within Ireland and NI and has potentially serious implications for security of supply.

A further security of supply risk would also exist through the interconnection between the SEM and BETTA markets. If SEM prices are based on generators in Ireland (i.e. generators that are not subject the CPS), this will mean that the merit position for interconnector units will most likely be export from SEM to BETTA. This will create a further risk within NI where there may not be sufficient generation to meet the exports as well as NI demand. As constraining of interconnector available transfer capacity can not be used to manage internal congestion under EU congestion management guidelines, the combination of a potential reduction in investment in generation and the likely increase in exports may have negative implications for the supply of electricity in NI.

Further, the introduction of Targeted Capacity mechanism including generators in NI could lead to a reduction in Capacity Payments within the SEM. This is because the total capacity payments for SEM are calculated by multiplying a capacity requirement by the fixed cost of a Best New Entrant (BNE) peaking generator¹. This cost is calculated by working out an annualised cost of investment and subtracting forecast revenues that this plant would receive from other mechanisms. If the BNE generator is again found to be a NI generator, and is eligible for payments under the targeted capacity mechanism, this will reduce the BNE Cost per kW and thereby, reduce the entire amount available through the CPM for all generators in the SEM. Again, this would undermine the ability of the SEM to provide price signals based on internal market considerations or regulatory policy on the island of Ireland. EirGrid note that DECC have not assumed that the capacity mechanism will be rolled out in NI due to the existing CPM arrangements in SEM.

2.2 Operating a Sustainable Power System

Facilitating the development of a low carbon electricity system, while maintaining the appropriate levels of security, will require a portfolio that is technically complimentary. Ensuring adequate capacity levels alone will not guarantee a secure system. As our generation portfolio moves to increasing levels of variable renewable generation, other performance requirements become increasingly important especially flexibility.

EirGrid has experience of operating the power system at up to 50% instantaneous renewable generation. This will likely occur in GB towards the end of the decade and on the European mainland in the following decade. As a result we believe our experience will be of benefit to our neighbours in the coming years.

In our view, in order to ensure that the benefits of renewables and other low carbon generation options are fully realised, it is essential to create the correct conditions for investment for low carbon capacity that is technically complementary. Low carbon forms of generation such as nuclear and CCS may not have sufficient flexibility to complement the variable nature of renewable generation.

¹ Fixed Cost of a Best New Entrant Peaking Plant, Capacity Requirement & Annual Capacity Payment Sum for the Calendar Year 2011 (<http://www.allislandproject.org/GetAttachment.aspx?id=f257d2d6-229c-4538-9d22-4f4a5ec54114>)

The long term contracts option must be further debated in the context of implementation across the UK. NI will decide on whether to implement the proposed Feed in Tariff plus Contracts for Difference scheme given that the RO will close to new entrants on March 31st 2017, but will continue to reward existing generators until 2037. It is envisaged that an implementation date of 2014/2015 would be feasible. However, the parallel operation of both FIT and RO schemes may increase the administrative burden on generators and suppliers.

More detail is required around the feasibility of an auction system as a method for determining the levels of FITs and also the actual operation of the CfDs with respect to renewables. DECC have used the term 'vintaging' to indicate a phasing out of the Renewables Obligation in 2017, which would mean a decreasing pool of capacity on one scheme for a further 20 years until 2037. In addition there are questions around the treatment of generators who wish to add additional capacity post 2017 but who are tied to the RO support scheme.

DECC have stated that the working assumption is that the EPS (Emissions Performance Standard) will be applied across the UK including NI. The introduction of the EPS level Option 1 at 600gCO₂/kWh or Option 2 at 450gCO₂/kWh may result in unintended consequences for plant other than those for which the policy was intended. It is important to note that the introduction of increasingly stringent measures across the whole of the UK may raise security of supply issues. A balance must be struck between incentives for increasing investment in flexible plant while maintaining security of supply.

2.3 Interconnection considerations

The successful integration of European electricity markets will require a major effort to modernise and expand member states' electricity grids and to increase interconnection between member states. Investment in interconnection projects, either directly linking member states or in the context of super-grid projects such as the proposed North Sea Countries Offshore Grid Initiative and Ireland-Scotland Links on Energy Study (ISLES) project will be critical to achieving the creation of a single, competitive internal electricity market.

In this context, it is important that the final measures included in the Market Reform package are consistent with the EU Third Package and facilitate the creation of the

internal electricity market. As part of the France–United Kingdom-Ireland (FUI) regional market group, the electricity reform package should form part of the steps to the establishment of an effective regional market. The proposals should be evaluated to ensure that they are not erecting barriers to trading between member states.

For successful market integration in the FUI region, there needs to be effective cooperation between the member state stakeholders such as Governments, Regulators, TSOs and MOs. Market and network access rules need to be compatible to attract new investment to increase interconnection capacity for trading. EirGrid believe that these considerations should underpin the Market Reform decision-making process.

By 2012, interconnection between the SEM and GB will increase to 1GW. While this represents just over 1% of the generation capacity in GB, it represents a more sizeable 10% of combined generation capacity of Ireland and NI. Therefore, any changes in UK policy could have a significant impact on electricity trading in the SEM.

EirGrid is currently developing a 500MW electricity interconnector between Ireland and Wales, and is also working on major upgrades to the transmission network, as part of its GRID25² strategy. EirGrid group are seeking to ensure that any regional approach taken optimises the use of interconnection and delivers benefits for end customers in GB, NI and Ireland.

The potential benefits of further interconnection are well understood, and include enhanced security of supply, increased competitiveness, reduced production costs, and the ability to integrate greater quantities of renewable generation resources.

The viability of any interconnector project is strongly dependent on the trading mechanisms that are in place between the systems at either ends of the interconnector. The decision to introduce any potential distortion or changes to the cost structure of generation on either island should be thoroughly examined to understand any potential changes in interconnector flows. It is imperative that all key stakeholders in GB, NI and Ireland work together to deliver on a co-ordinated SEM-BETTA trading solution to maximise the benefits of interconnection, with increased

² EirGrid Grid Development Strategy, GRID25. is a major initiative to put in place safe, secure and affordable electricity supply throughout Ireland.

efficiencies in capacity allocation through coordinated auctions and increased trading opportunities leading to improved system security.

2.4 Regional Integration

Emerging EU policy is to support further interconnection between power grids, leading to enhanced market integration, first at regional level but ultimately across Europe as a whole. EirGrid and SONI as the transmission system operators and market operator in SEM have key roles to play in the development and implementation of any regional integration solution between GB and SEM within the FUI region. Any potential BETTA market changes which could hinder the successful integration of the FUI region should be reviewed and consulted upon at this level.

The importance of regional integration of electricity markets is central to the European Commission's vision of a single electricity market for Europe as stated in Section 2.3 above and there has been a significant amount of work done in the past number of years. This has been achieved via ERGEG's Electricity Regional Initiatives and from bilateral and multi-lateral initiatives between Member States to cooperate and co-ordinate on cross-border issues. The Third Energy Package places firm obligations on TSOs to cooperate and co-ordinate on cross border capacity allocation and congestion management.

The vision of a European target model will require TSOs, MOs, regulators and other stakeholders in neighbouring markets to develop a coordinated approach to cross border capacity allocation, with policy decisions being made in cooperation with, or at least in consideration of, neighbouring markets. EirGrid supports this co-ordinated approach and considers that policy decisions taken in one market should fully take on board the implications for neighbouring markets.

The target model outlines the vision for regional European integration as agreed by all stakeholders in the Project Coordination Group (PCG) under the remit of the Florence Forum³. It does not prescribe a one-size fits all approach but rather looks to develop a common and co-ordinated approach to congestion management and capacity allocation throughout Europe, within regions initially but also between regions where this is feasible and appropriate. The target model provides a roadmap for GB and other markets to follow, to ensure European electricity markets are

³ http://ec.europa.eu/energy/gas_electricity/forum_electricity_florence_en.htm

converging, and provides an indication of the direction they should be taking to ensure greater co-ordination. Each market is at different stages of development and maturity and the appropriate approach for GB will not necessarily be the same as for other markets in Europe. This provides the flexibility for GB to adopt a regional market solution that is tailored to its needs in cooperation with other neighbouring electricity markets.

EirGrid would like to affirm its commitment to the intention of moving towards market coupling between GB and SEM to facilitate greater regional integration. We look forward to working with our own and neighbouring Regulatory Authorities and TSOs to develop a roadmap for delivery of a solution which leads to greater integration with Europe.

3. Consultation Questions

The response above details our key concerns with the issues raised in this consultation. Following a review of the detailed questions we believe our main concern, namely the impact of the measures proposed on NI and the SEM as outlined in this paper, is best considered in response to the question below:

28. Will the proposed package of options have wider impacts on the electricity system that have not been identified in this document, for example on electricity networks?

This response predominately relates to the “wider impacts” of the proposals. While some of our concerns have been identified in the consultation, we believe that further detail and consideration is required in these regards.