



Towards a Sustainable Energy Future for Ireland

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An tÚdarás Iomaíochta

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EXECUTIVE SUMMARY

Ireland is at a crossroads in choosing which path to follow for its future energy needs. This decision cannot be delayed any longer as decisions not taken now may be imposed from elsewhere. The EU Commission has made little secret of its impatience at the pace of reform of former State-controlled utilities and has signalled its willingness to impose market opening initiatives if Member States are reluctant to do so.

The publication by the Department of Communications, Marine and Natural Resources of the Energy Green Paper, *Towards a Sustainable Energy Future for Ireland*, is timely and welcome. The Green Paper has an important role in informing the national debate on energy policy which in turn should result in real and substantive change in the electricity market.

The three pillars of energy policy noted in the Green Paper - economic competitiveness, security of supply, and environmental sustainability can only be achieved by the development of a competitive electricity market. Successful reform of the market cannot occur without addressing the ESB's dominance of the electricity market.

The Competition Authority urges the Government to commit to structural reform of the electricity in its forthcoming White Paper by (i) splitting ESB generation into a number of competing groups of electricity plants, (ii) taking the ownership of Ireland's electricity grid away from the ESB and (iii) promoting competitive outcomes in the design of all-island wholesale market structures.

The recent announcement by the CER that ESB plans to dispose of 1300 megawatts worth of its plant portfolio by 2010 is to be welcomed as a first step, but it does not go far enough to ensure that a fully competitive market develops. Indeed, the Government's own consultants, Deloitte, recommend that more than 70% extra plant disposals are needed to promote competition. Additional disposals of modern and mid-merit price-setting plant must take place to ensure that this occurs.

The other remedies proposed in the Green Paper such as freeing up the ESB's landbank, increased interconnection and the advent of a single electricity market are to be welcomed but are insufficient to trigger real reform. This is because:

1. These remedies will not address the fact that the ESB, by virtue of its size and plant type, effectively controls the price of electricity 99% of the time.
2. These remedies will not address the fact that ESB's dominance requires that Irish consumers have to pay for complex regulation which is set to become even more complex unless ESB's dominance is addressed now.
3. These remedies will not address the fact that ESB's dominance and ownership of Ireland's electricity grid make Ireland an unattractive market for energy companies to invest in.
4. These remedies will not ensure that the supply of electricity will keep pace with increased demand.

Overall, these remedies will not directly address ESB's dominance, and thus their effects on electricity prices will not be felt for 5 to 10 years. Any solution which does not involve the separation of generation, transmission and supply of electricity and splitting up the ESB's generation plants will not deliver to consumers the benefits of real competition.

An efficient reliable electricity industry is an essential component of any modern economy. As an export-oriented economy, Ireland cannot afford to allow increased electricity prices to continue to erode its international competitiveness. Key sectors of the Irish economy such as pharmaceuticals and IT rely heavily on reliable, secure and competitively priced electricity. Any uncertainty as to the supply of such a key input as electricity could warrant many of Ireland's most successful companies to evaluate their location decision. It is therefore important that the decision to introduce real competition to Ireland's electricity market must be made, and clearly committed to, now.

According to recent surveys Ireland has the third highest prices for industrial users and sixth highest for consumers in the EU while Irish household prices are 46% higher than the UK. The recent Deloitte report has indicated that high costs and poor availability of power plants give rise to additional costs to the Irish economy of approximately €100 million per annum.

The alternative regulatory approach, adopted thus far and proposed for the future, which seeks to simulate competition while accommodating the ESB's dominance has led to a dysfunctional market. The ESB, which acts as the price setter for the industry most of the time, has no incentive to lower prices when input costs are falling but it can pass on any rise in its costs to the consumer without fear of a competitive response.

The current skewed structure of Ireland's electricity market has contributed to high prices, poor availability and reliability of power supply, and limited development of renewable energy. This system, if allowed to persist, will cost consumers and industry even more dearly in the future as supply fails to keep up with rising demand.

Arguments that the small size of the Irish market coupled with the requirements of scale inevitably lead to power generation being a "natural monopoly" are not supported by economic evidence. To ensure competition at the generation stage, a number of independent, roughly equally sized companies, that have a diverse portfolio of generation, could be created from the existing stock of generating plants. This structural solution is the best way of ensuring competitive pricing and provides the incentive for efficiency and innovation in the provision of electricity.

1. INTRODUCTION

- 1.1 The Competition Authority welcomes the publication by the Department of Communications, Marine and Natural Resources of the Energy Green Paper, *Towards a Sustainable Energy Future for Ireland*, and is pleased to make this submission. It also welcomes the publication of the Deloitte *Review of the Electricity Sector in Ireland*. Both the Green Paper and the Deloitte Review correctly identify the causes of the lack of competition in the Irish electricity market. Given the dynamic nature of energy supply and demand in Ireland, it is appropriate and timely that the Government should set out a clear energy policy for Ireland. Increased demand, security of supply concerns, high prices and legislative and regulatory activities at both Irish and EU level all continue to have a bearing on the Irish energy market.
- 1.2 The Competition Authority fully supports Minister Dempsey's statement that "*The current structure of the Irish electricity market gives rise to higher costs. This in turn leads to questions of dominance and the need for more competition. We need to improve competition urgently in the sector.*"¹ The Authority has frequently advocated improved competition in the electricity market in submissions to Government and the Commission for Energy Regulation (CER), in discussions with interested parties, and at conferences.
- 1.3 The three pillars of energy policy, security of supply, sustainability and competitiveness,² can all contribute to the development of a competitive electricity market. In this respect Ireland's economic competitiveness can best be assured by promoting competitive outcomes in the Irish electricity market. This will require structural changes to the market in order to promote competition in generation, increase interconnection, and increase the size of the market. Solutions which fail to accomplish these tasks will also fail to support the three pillars of energy policy: security of supply, environmental sustainability and economic competitiveness.
- 1.4 Ireland is not, *a priori*, an attractive location for investment in energy, or in energy-intensive industries. The Green Paper identifies a number of structural reasons for this:
- Ireland is a small market subject to scale restrictions;
 - There is limited interconnection; indeed Ireland fails to reach the 10% interconnection threshold required under the EU's Trans-European Networks (TEN) programme;
 - Ireland has limited supplies of indigenous fuel resources; and
 - Environmental and policy considerations limit the generation fuel mix available.
- 1.5 The persistence of a flawed market structure has contributed to high prices to end users, poor availability and reliability of generation plant, insufficient competition, tight capacity margins and limited development of renewable energy. According to Deloitte, reliance on old and unreliable ESB generation plant is costing consumers €100m

¹ Green Paper, p.6

² Ibid., p.10

per annum. The *status quo* is costing market participants and the consumer money, and unless structural change occurs, costs will only increase as new supply fails to keep up with increases in demand and increasingly unreliable plant is pushed up the merit order.

- 1.6 Structural solutions are the best way of ensuring a competitive energy market in Ireland. Approaches which do not provide for structural separation will be sub-optimal and will fail to address the problems correctly identified by the Government in the Green Paper. This submission will show why a structural solution is the most appropriate means of ensuring the development of competitive, reliable and sustainable electricity supply.
- 1.7 This submission is structured as follows:
- Section 2 considers the All Island Project and its potential to reduce barriers to entry and improve security of supply;
 - Section 3 explains why ESB³ generation plant must be split up in order to promote market-led competitive outcomes;
 - Section 4 examines the Green Paper proposal to set aside a landbank of generation sites currently owned by ESB Power Generation;
 - Section 5 addresses interconnection of the Irish market, both between the State and Northern Ireland, and between the State and Wales;
 - Section 6 appraises options for ensuring the independence of the Transmission System Operator (TSO), EirGrid, and
 - Section 7 concludes.
- 1.8 The Green Paper is absolutely correct to state that "*Without structural change the electricity market will develop and evolve slowly and improvements in plant availability and efficiency levels will happen only over a long period.*" It also correctly identifies ESB's dominance, which arises from its ownership of a large and diverse portfolio of plant, including almost all price setting plant, as a significant barrier to entry.
- 1.9 Only a structural solution will address ESB dominance. Any solution which does not involve splitting up ESB generation plant will not bring real competition to the market. Despite the progressive liberalisation of the electricity market since the passage of the Electricity Regulation Act 1999, consumers have not received the full benefits of competition, due in large part to the continuing dominance of the ESB. However, the Green Paper goes on to state that change must be delivered "*in a progressive manner*". The Green Paper proposes a number of solutions whose effects will not be felt for years. However, there is a crisis in the Irish energy market today. Solutions need to be found which can be introduced quickly and which will take effect quickly.
- 1.10 The Competition Authority is available to discuss any of the issues raised herein with the Department.

³ ESB's core businesses include ESB Power Generation; ESB Networks, which owns the higher-voltage transmission grid and owns and operates the lower-voltage distribution grid; ESB Customer Supply, ESB Independent Energy, which supplies energy to industrial and commercial users; Hibernian Wind Energy and ESB International, an engineering and consulting business which owns 70% of the Synergen generation plant in Dublin and 84% of the Coolkeeragh plant in Northern Ireland.

2. ALL ISLAND PROJECT⁴

- 2.1 The current trading system with its imbalance market⁵ represents a barrier to entry. The all-island Single Electricity Market (SEM) will improve transparency and price signals by breaking the link between generation and supply, but it will not on its own address the problems of sole or joint dominance. Dominance will, on balance, remain a barrier to entry in the SEM, and ESB will continue to control price setting plant. Gaming by market participants may limit the effectiveness of regulatory tools to mitigate dominance such as directed contracts. The SEM is a welcome development, but should be implemented along with structural separation of ESB generation plant.
- 2.2 At the same time there is an imperative to properly interconnect adjacent systems in order to bolster security of supply and to widen the pool of plants, such that electricity would be generated more efficiently. Creating regional energy markets is a project that is underway across the EU. On the island of Ireland a political decision was made to proceed to an all island energy market back in 2004. The goal is to develop a robust trading system that can potentially be integrated into a wider UK and Ireland energy market at some time in the future.
- 2.3 The SEM will be a mandatory wholesale gross pool.⁶ The system is set to come on line in November 2007. Prices paid are to be composed of two parts – a capacity payment and a payment for the electricity actually produced. This is to be welcomed as it will give better price signals, bring the system closer to economic dispatch of stations (which will in itself result in savings of tens of millions annually), reduce the risks associated with entry as opposed to the previous imbalance market, allow companies to focus on their comparative advantages whether these be in generation or supply and will likely give better incentives for alternative energy generation. A gross pool means that firms cannot hedge internally so a hedge market for differences will have to evolve. It is likely that consumers may share some of this risk with the advent of more sophisticated metering.
- 2.4 However, it is clear that at the beginning there will be two reasonably isolated systems North and South, given the single point of interconnection, and much of the market power associated with the incumbent operators in both parts of the island will remain unaddressed. The movement to the use of normal transmission lines once the stability of the SEM is established is to be welcomed.
- 2.5 In the current trading regime there is an imbalance market. New entrants have to properly co-ordinate generation and supply, whilst relying on the imbalance market whose price is normally determined by ESB. Without good information on customer profiles reliance on the imbalance market could be more frequent than expected. Generation firms have to be forward integrated into supply. New entrants face an exposure to the imbalance market if they fail to match their supply to

⁴ The All Island Project is a joint initiative by the Irish and UK governments to create a single all-Ireland energy market by improving infrastructural linkages, developing common trading arrangements and, eventually, developing a common retail market design and system.

⁵ Since electricity cannot be stored, an imbalance market is necessary to trade out any discrepancies between electricity supply and demand which occur outside of the bilateral contracts.

⁶ This means that all generators must bid into a pool, rather than directly agreeing bilateral contracts with suppliers, while suppliers will pay the same spot price on the pool.

their demand. The prices on this imbalance market are set by the ESB 99% of the time. Given that new entrants do not have access to actual consumption profiles there is always a danger that they will have to resort to top-up during peak periods. Thus, new entrant firms have diametrically opposed incentives to ESB – they would like to acquire top-up at cost whilst ESB would like to charge the monopoly price for top-up.

- 2.6 Under the SEM the previously enforced link between generation and supply is broken. Under this scenario new entrant generators' incentives are in one sense aligned with ESB Generation, since higher pool prices are good for all generators, so long as they are not constrained off the system. At the same time the position of ESB in relation to Eirgrid, the Transmission System Operator, and ESB's large and diverse portfolio makes it likely that it will attempt to ensure that all its plants are running at the expense of the new entrants. In this way the new entrant is still exposed to the strategic behaviour of the ESB. Thus, on balance the position of the ESB in generation remains a barrier to entry.
- 2.7 However, the movement to the SEM represents a risk to supply businesses and to their final consumers, which will have to be addressed through hedge markets and through some sharing of the risks with consumers, such as more changes in prices or sophisticated metering.
- 2.8 The regulators in the State (the CER) and in Northern Ireland (the Northern Ireland Authority for Energy Regulation, or NIAER) continue their work on developing the trading arrangements and on mechanisms to control the exercise of market power in the pool.
- 2.9 Even in the best case scenario the ESB will control the price setting plant⁷ 64% of the time in the SEM. However, this is only on the basis that the relevant market that the market power is being exercised on is as wide as the island of Ireland. However, it is clear that in many half-hour trading periods that there will be markets that will even be narrower than the State itself. On these markets the ESB will be a super-dominant firm.⁸ This can occur due to transmission constraints that make it impossible for a surplus in one area to be used in another area remote from the first area where there is an incipient deficit.
- 2.10 The CER and the NIAER in their documentation accept that the generally recognised approach to addressing the dominance of electricity firms is directly by separating generation assets.⁹ However, both see this as beyond their legal powers. The regulators have now had to design mechanisms to control the exercise of market power.
- 2.11 The regulators are clear about the complexity of such a task. It involves the identification in advance of all the potential markets across times of the day, year, type of plant (base-load, mid-merit or peak) and geography where any given firm will be able to exercise market power. This is a very complex task in itself. Once this is done then the regulators intend to use *directed contracts* which specify the

⁷ This is the last plant dispatched onto the network to fulfil demand, which accordingly sets the spill price.

⁸ "Super-dominance" was defined as "a position of overwhelming dominance verging on monopoly" by the European Court of Justice in the 1998 *Compagnie Maritime Belge* case.

⁹ For instance, the CER's February 2004 document, *A regulatory approach to ESB dominance*

conditions under which the firms with market power must sell a certain proportion of their output into the pool.

- 2.12 However, regulation is an ineffective substitute for competition. The regulators will be aware that once the form of the directed contracts becomes known, the regulated firms can take strategic actions to undermine their effectiveness. This will require ongoing regulatory oversight and the introduction of even more complex regulation. This process will likely cycle endlessly. At the same time consumers will be paying prices higher than they would in a more competitive market and the costs of the regulatory process will balloon and threaten to eat up any of the gains to society.
- 2.13 Moreover, the contracts as they are currently foreseen seem to only address the exercise of sole dominance. Experience from elsewhere shows that electricity pools with a low number of players are very likely to experience continued episodes of tacit collusion (or the exercise of collective dominance).¹⁰ This is due to the homogenous nature of the product, the ongoing interaction between the players and the ability to detect and credibly punish cheating from any tacitly collusive outcome. As was stated by the International Energy Agency (IEA) in its last Review of Ireland *"...a rough rule of thumb states that a market needs a minimum of four or five roughly equal generating companies and ease of entry for new parties before effective competition can take place. The UK's experience with three players showed that such a limited number of players can still influence prices in an anticompetitive manner. Ideally the portfolios of each of these companies would be diverse and spread across the resource stack to ensure that no one company can dominate production at any given demand level. In order to achieve this standard, control of ESB's generation portfolio would have to be split up ..."*
- 2.14 The actions of the regulators may even inadvertently assist the firms to tacitly (or actively) collude. This can occur if information that would otherwise be private is made public to increase transparency. Moreover, all of these actions roll back on the gains that make the SEM attractive in the first place as prices will not be driven down to costs, and hence lose some of their signalling value to market participants. This means that the controls will only reduce the exercise of market power in the present to a limited extent at the cost of increased dynamic inefficiency and an escalating regulatory burden.
- 2.15 The Competition Authority is concerned that the most obvious and first best solution to the potential to exercise market power in the pool has not been selected in the Green Paper. The Authority sees the potential for the suggested system to become highly over-regulatory with limited benefits to consumers in terms of lower prices. Moreover, the war of attrition that will continue between the firms with market power and the regulator will drive up the costs of regulation substantially. This risks making the whole venture a failure that will be incorrectly attributed to the liberalisation process itself.

¹⁰ See, for instance, Sweeting, A., 2004 "Market Power in the England and Wales Wholesale Electricity Market 1995-2000", available online at <http://web.mit.edu/ceepr/www/2004-013.pdf> or Bunn, D. and M. Martocchia, 2005. "Unilateral and collusive market power in the electricity pool of England and Wales" in *Energy Economics* 27:2

- 2.16 The Competition Authority urges the Minister to vigorously address the position of ESB generation on the market in order to ensure that consumers on the island of Ireland (both domestic and commercial) will benefit from the large savings that real competition in electricity generation will bring. This is the only certain manner in which to ensure that the key goal of economic competitiveness can be achieved in the short to medium term.

3. SPLITTING UP ESB GENERATION PLANT

Introduction

- 3.1 Ireland's energy needs are barely being met, and immediate remedies are needed to promote badly-needed extra generation capacity. Long term recommendations will not work to solve problems which are harming Ireland's competitiveness, energy sustainability and security of supply today. If competition is to develop successfully in the Irish market in the near term, and if the European Commission decides to require structural reforms, as Commission President Barroso and Commissioner Kroes have recently stated, the ESB must be split up.
- 3.2 The recent announcement by the CER that ESB plans to close or divest 1,300 MW of existing generating plant by 2010 is certainly to be welcomed as a first step on the road to creating a competitive market. However, further separation will be required in order to ensure the development of sustainably competitive alternatives to the ESB. According to the CER, this disposal of plant would reduce the ESB's market share to 40%. Even with a 40% market share, the ESB will still be in a very strong position in comparison to its competitors by 2010. In its recommendation to the Government, Deloitte states that 2,234 MW of ESB capacity should be disposed – over 70% more than the current proposed disposal – in order to create a competitive market.
- 3.3 Competition in generation ensures the cheapest price for electricity as each firm competes to supply each megawatt at its lowest possible price. The lack of competition in generation makes it much more difficult for real competition to take root in the supply market, and gives the ESB the ability to effectively control the price of electricity. Splitting up ESB will also reduce the possibility of collusive behaviour by generating plants in the new wholesale trading arrangements, and reduce the need for intrusive and complex regulatory measures.

ESB Dominance must be addressed

- 3.4 The Competition Authority has argued on numerous occasions in the past that ESB is dominant, or to use the economic term, holds significant market power in the market for electricity generation in the State. The Department recognises in the Green Paper that ESB is dominant, arising from its ownership of a large and varied plant portfolio, including practically all price-setting plant.¹¹ It is not in dispute that ESB is in a dominant position. By virtually any standard (market share, HHI, RSI),¹² ESB is dominant. The Authority is not alone in reaching this conclusion. In recent years, Deloitte, the Organisation for Economic Cooperation and Development, the International Energy Agency, the Economic and Social Research Institute, the Department of Enterprise, Trade and Employment, IPA Consulting, Goodbody Stockbrokers and DKM Economic Consultants have all found that ESB occupies a position of dominance in the

¹¹ Green Paper, p.19

¹² The Herfindahl-Hirschman Index, or HHI, calculates concentration levels in a market by summing the square of each firm's market share percentage. Thus a market with one firm would have a HHI of $(100 * 100) = 10,000$, while a market with four roughly-equally sized firms would have a HHI of $(23*23) + (27*27) + (24*24) + (26*26) = 2510$. The Residual Supply Index, or RSI, is used to determine the importance of any one supplier in meeting demand.

market. Deloitte has identified that ESB's dominance arises from a range of factors, including:¹³

- Ownership of a large, diverse portfolio;
- Ownership of almost all price-setting plant;
- Ownership of generation sites with favourable access to cooling water, grid and fuel infrastructure;
- High supply market share;
- Brand strength; and
- Extensive information and market intelligence advantages.

3.5 To date, liberalisation of the electricity generation market has not delivered effective competition. Four large scale Independent Power Plants (IPPs) have been commissioned in the past five years, one of which, Synergen, is 70% owned by ESB, while potential players such as Ireland Power and ePower have withdrawn from the market in recent years. The ESB retains the vast majority of generating plant in the country, while the new Tynagh and Aughinish power stations have signed ten-year off-take contracts with the ESB. Only Virdian's Huntstown plant has entered the market without relying on ESB supply off-take contracts, and this is because it sells electricity directly to its own supply arm, Energia. In this respect, Dr. Dieter Helm is correct in stating that "*Entry by independent power producers is now more likely to arise for cosmetic reasons (to give the illusion of competition), and then only on the basis of long-term power purchase agreements with dominant incumbents.*"¹⁴ The consequent effect is that investment in generation has not kept pace with increased demand.

ESB Dominance is a Barrier to Entry

3.6 The ESB retains significant market power in generation through its price-setting ability, which it maintains in particular through its ownership of mid-merit plants. During the second quarter of 2006, ESB plant set the marginal price of electricity, known as the EPUS Spill Price,¹⁵ over 99% of the time, with Aghada unit AD1 alone acting as the price-setting plant over 20% of the time.¹⁶ Until ESB price-setting plant is split up, independent generators will act as price-takers rather than price-makers, a further disincentive to investment.

3.7 Generating plants fall into three categories:

- Baseload plant tends to run continuously all day, every day to satisfy normal demand conditions. It tends to be the cheapest plant to run, or the plant which takes longest to power up and power down.
- Mid-merit plant is medium-cost generation capacity which is dispatched onto the grid to meet periods of higher demand over

¹³ Deloitte, p.13

¹⁴ Helm, D., 2003. "The Scope and Limits of Competition and Regulation in the Irish Electricity Market." *ESRI Quarterly Economic Commentary*, Spring 2003: p.4

¹⁵ The Ex-Post Unconstrained Schedule, or EPUS, Spill Price is the highest decremental price paid to a generator for energy provided in excess of its contracted amounts. This price is calculated ex-post i.e. after the actual day, and all generators receive this price.

¹⁶ "Generator Units setting the EPUS derived Spill Price" ESB National Grid Quarterly Review, Summer 2006.

the day, such as mid-morning and early evening. Mid-merit plant typically generates electricity for a few hours every day.

- Peaking plant tends to be the most expensive plant, which can power up and down quickly in order to respond rapidly, flexibly and reliably to demand fluctuations. Peaking plant is normally gas-fuelled, and may run for a very small proportion of the time.
- Price-setting plants are generally mid-merit or peaking plants which are only called on to generate electricity in response to heightened demand at certain times of the day.

3.8 ESB's dominance currently erects a huge barrier to entry to the electricity market, in both generation and supply and renders the Irish market particularly unattractive for potential investment in generation. Market entry has tended to take place only with the assistance of distortionary regulatory tools designed to mimic market conditions, such as Virtual Independent Power Plant (VIPP) auctions,¹⁷ or guaranteed off-take contracts, which lead to suboptimal outcomes. This indicates that the Irish energy sector must be so unattractive to investors that apparently profitable opportunities are passed up.

Generation Shortfall in the Irish market

3.9 Generation shortfalls may well be worse than those predicted by EirGrid in its *Generation Adequacy Report*. Plant availability is still well below benchmark standards, and forced outages due to plant breakdowns keep almost one-fifth of generation capacity out of commission. This will require rapid investment in generation. Such investment must be better incentivised for two key reasons: firstly, to increase the level of choice in the market, and secondly to increase the overall amount of generating stock, given the average demand increases predicted in the EirGrid Generation Adequacy Report.

3.10 Generation shortfalls have been an annual feature of the electricity market in recent years, and have only been averted by leasing mobile generation plant. According to EirGrid, new generating capacity will be required from 2009 onwards in order to ensure generation adequacy. This assumption is based on the following predicates for the period 2006-2009:

- New generation at Sealrock, Tynagh and Huntstown comes on-stream as expected;
- Plant availability is significantly above 2003-2005 averages, and
- There are no unexpected plant closures.¹⁸

3.11 However, plant availability, currently at 79%, has not risen significantly above 2003-2005 levels, and is nowhere near the availability levels of 87% recorded in early 2002.¹⁹ In contrast, Huntstown 1 recorded availability levels of 92% in 2004.²⁰ Forced

¹⁷ VIPP capacity is capacity generated by ESB but ring-fenced by the CER for auction to independent suppliers at a discounted rate.

¹⁸ Generation Adequacy Report 2006-2012, p.80

¹⁹ EirGrid Generation System Availability chart. Available online at <http://www.eirgrid.com/EirgridPortal/DesktopDefault.aspx?tabid=SO%20-%20Generation%20System%20Availability>

²⁰ Deloitte, p.86

outage rates have been rising steadily since mid-2005 and are now at approximately 18% of centrally-dispatched generation units.²¹ Due to unprecedented levels of demand, ESB is forced to retain in operation plants which have long since become technologically obsolescent, contributing to higher prices. Deloitte has estimated that poor generation availability costs market participants an additional €55-€70 million per annum.²²

- 3.12 Moreover, unscheduled plant closures have already occurred; the *Irish Times* reported on November 3rd 2006 that the thermal plants at Poolbeg would not be available to generate electricity until mid-December, with one plant not having supplied any power since January 2006. It seems, therefore, that ESB generation adequacy is below the level expected by EirGrid. Rapid investment both in new plant and in upgrading existing plant is of paramount importance to ensure sufficient generation. However, in order for new plant to be commissioned by 2009, based on lead-in times for recently-commissioned plant, construction would have had to commence in 2005. As this has not occurred, more immediate solutions are required.

What exactly should be done?

- 3.13 Dominance in generation can only be addressed by separating out ESB generation plant, either by splitting ESB Power Generation into a number of competing entities, or auctioning off reasonably-sized plant portfolios, particularly in the context of the all-island gross pool expected to commence operations in November 2007. Either way, it is essential that ESB reduce control of price-setting plant to a level where it is no longer dominant in price-setting. This is the most important step to take if competition in generation is to be promoted and assured. Competition will help to engender the cost and operational efficiencies which lead to better, market-led, outcomes.
- 3.14 A range of structural options is open to the Government to promote competition in generation. The Green Paper states that the Government does not intend to atomise the ESB Group. Presumably this refers to Deloitte's Alternative 5²³ for structural separation, which would involve the auction of a range of ESB plants on a standalone basis. The Competition Authority understands that the Green Paper does not support what it refers to as the atomisation of the ESB. However, the Authority proposes that other structural alternatives are available that would achieve market-driven results without atomisation. In that regard, although they were framed in the context of bilateral trading regime, Deloitte proffers a number of useful alternative options. The Competition Authority sees merit in Deloitte's Alternatives 2, 3 and 4, all of which involve divestment of a material amount of ESB generation plant. Deloitte's preference for its Alternative 4 - Portfolios and Separation, addresses a number of

²¹ Ibid.

²² Ibid.

²³ The Deloitte Report outlines five alternatives for structural reform in the Irish electricity market involving varying levels of divestment of generation and supply portfolios:

Alternative 1 – Status Quo (no change)

Alternative 2 – Private Generation

Alternative 3 – Balanced Portfolios

Alternative 4 – Portfolios and Separation

Alternative 5 – Atomisation and Privatisation (greatest change)

concerns raised by the Authority, as it would result in the creation of three generation portfolios, and would also remove transmission and distribution assets from ESB ownership. The Authority holds no view on whether the generation assets should be held in private or public ownership.

Promoting Competition in Generation

- 3.15 The Green Paper recognises that deficiencies in market structure exist²⁴ and that the current market structure contributes to high prices.²⁵ Accordingly, it states that "*There is a strong case, from both the security of supply and market imperatives, for embarking on a process of structural change in the electricity sector*"²⁶ and lays out as one of its policy objectives "*Enabling competition by reforming institutional arrangements and market structure*".²⁷ The Competition Authority fully concurs with the Green Paper's analysis of the central importance of market structure in promoting competition.
- 3.16 The Green Paper correctly identifies that failure to implement structural change will lead to:
- Slow improvement in plant availability;
 - Slow improvement in efficiency levels;
 - No effective downward pressure on price;
 - Little incentive for new entry; and
 - Intensive, heavy-handed regulation.
- 3.17 Having correctly identified the problem, the Green Paper prescribes a number of remedies including, among others, the following policy actions:
- Retention of a strong commercially viable ESB;
 - Strategic electricity assets, including networks and certain generation assets, to stay in State ownership in long run;
 - Reduction of market power held by any one player in price-setting generation plant; and
 - Consideration of establishing a State-owned landbank of current and potential generating sites.
- 3.18 While it is noted that market power in generation should be reduced, the Green Paper does not say specifically how this should take place. The Green Paper, having correctly identified that structural change is necessary, goes on to state that the ESB will be retained as a strong, commercially viable entity, that atomisation of the ESB will not be countenanced, and that certain generation assets will stay in State hands in the long run. The Green Paper clearly indicates what aspects of the market will *not* change, but it is less clear what aspects *will* change. The Government should give a clear and unambiguous undertaking that it will split up ESB generation assets in order to promote market entry by giving clear positive signals to investors.

²⁴ Green Paper, p.19

²⁵ Ibid., p.18

²⁶ Ibid., p.93

²⁷ Ibid., p.87

- 3.19 The Green Paper speaks of delivering change "*in a progressive manner*". If change is to be accomplished, it must be done quickly. The Green Paper makes medium-term and long-term recommendations for problems which have existed since the commencement of the liberalisation process. Implementing recommendations which will only take effect in five to ten years' time leaves Ireland open to two risks. Firstly, prices will increase to a level which consumers deem unacceptable. This is a particularly important consideration for mobile international capital which can and does invest in locations characterised by cheaper infrastructural costs. Ireland cannot afford to allow increased electricity prices to continue to erode its international competitiveness. Secondly, EU Competition Commissioner Neelie Kroes and Commission President José Manuel Barroso have both clearly signalled in recent months that they are considering measures to require the break-up of integrated energy companies. Should this transpire, the Government will be obliged to split up the ESB.
- 3.20 Any future Government White Paper should avoid references to "progressive change", which can sometimes mean vague, unfocussed and protracted discussions in the place of real action. Instead, the Government should set clear deadlines for the achievement of structural separation, the sooner the better. This will allow all stakeholders to accurately assess progress towards stated goals against meaningful benchmarks, in preference to reliance on a vaguely-articulated aspiration to achieve a goal which is itself unclear.

The Benefits of a Structural Solution

- 3.21 Dividing ESB Power Generation plant would encourage plants to compete against each other, leading to greater efficiencies in the production of power. Plant separation is the only effective way to promote real competition, lower barriers to entry, and promote investment in a market which is not, *a priori*, an attractive location for investment, due to Ireland's small size, limited interconnection, heavy reliance on fossil fuels, especially natural gas, and the continuing dominance of the ESB. Structural separation is the only solution which will indicate to potential investors that the Government has a credible strategy for tackling ESB dominance.
- 3.22 A structural solution has the key benefit of addressing ESB dominance immediately rather on a long-term, incremental basis. Competition in generation would be promoted in two ways. Firstly, the new companies created from the "old" ESB would start competing with each other and secondly, the barrier to entry erected by ESB dominance would be removed, encouraging more firms to enter the market. Since newer plants are likely to be more profitable, given lower operation and maintenance costs, investors will be further incentivised to enter the market.
- 3.23 This will promote both sustainability and security of supply. Deloitte has indicated that high costs and poor availability of plant give rise to additional costs of approximately €100 million per annum.²⁸ Efficiencies gained from competition would ultimately lead to lower prices for consumers, as firms pass cost advantages from efficiency gains onto their customers in order to retrench and win new market share.

²⁸ Deloitte, p.92

- 3.24 Breaking up ESB Power Generation would also reduce the risk of collusive behaviour by generating plants. A generator with a large plant portfolio can profitably raise the system marginal price for each of its stations by having each individual generation plant raise its bid price by an agreed amount. Alternatively, generators could use outages to disguise instances of strategic unavailability, which would allow available generators to recover a higher per-MWh payment. The potential for such direct or indirect collusive behaviour in generation would be greatly reduced in a market scenario characterised by competition in generation.
- 3.25 A structural solution will ultimately support the goal of better North-South and East-West interconnection by reducing reliance on UK markets to "import" competitive prices into Ireland. Electricity will only be imported through the interconnectors where Northern Ireland or UK prices are cheaper than Irish prices. Without structural change, this is likely to be the case during most trading periods. Accordingly, electricity flows are likely to be from East to West most of the time, leading to congestion on the interconnector due to limits on Irish import capacity.
- 3.26 This will also have ramifications for the wind energy market. If electricity is constantly being imported, Irish wind energy will not be exported, leading to restrictions on wind generation development until network capacity is able to facilitate the wide capacity margins necessary to accommodate wind generation on the network. With separation, these assumptions no longer hold. Electricity will be more likely to flow in both directions, reducing the salience of Irish import capacity during each trading period, and allowing for the export of wind energy, thereby reducing barriers to entry and expansion caused by capacity limitations on the network.

Structural separation will reduce the need for regulation

- 3.27 The Green Paper correctly states that intensive regulation has inherent limitations for all stakeholders: *"Unbundling and market opening have not addressed ESB's perceived and actual dominance in the market. The current situation requires an undesirable level of heavy regulation to create a functioning market, an approach which exacerbates the classic problem of information asymmetry between regulator and the incumbent."*²⁹ Regulation is not a substitute for competition, and the current market structure does not foster competition.
- 3.28 A structural solution will reduce the need for the costly and intrusive regulation characteristic of markets dominated by one firm. Where market power does not exist, there is accordingly no need for economic regulation to control market power. Regulation will be confined to matters of environmental protection, safety and standards, rather than controlling and directing market behaviour. This will allow generation firms to become more responsive to consumer demand and will reduce their regulatory burden. In heavily-regulated markets the burden of regulation can be significant and adds to a firm's cost base.

²⁹ p.19

Competition in Generation and competition in supply are linked

- 3.29 Competition in supply can be improved in two ways. Firstly, a solution such as Deloitte Alternative 4³⁰ would immediately promote competition in supply by creating three Public Electricity Supplier (PES) entities, which would compete against each other, while providing for increased competition with non-PES suppliers. Secondly, the new wholesale pool trading arrangements due to commence in November 2007 are likely to facilitate competition in supply, as suppliers will be able to purchase from a pool, rather than seeking bilateral contracts with a limited number of generators. This will reduce the likelihood of foreclosure where generators or suppliers are unable to find trading partners upstream or downstream. Increased competition in supply will also allow generators to engage in better risk management.
- 3.30 A further benefit arises in that incentives produced by hedge contracts between ESB Generation and ESB PES will be realigned correctly. Currently, the incentives to hedge are distorted by the fact that ESB Generation and ESB PES share an economic commonality and are therefore not hedging as fully independent, separate entities. Were separation to occur, this restriction on independence of decision-making would be removed and hedging could occur based solely on the strategic objectives and risk profiling of each company.

Structural change brings Security of Supply and efficiency benefits

- 3.31 Structural separation will enhance security of supply by rendering the Irish market more attractive to potential entrants. Generation adequacy in Ireland has been persistently low in recent years, while forced outage rates are currently 18% of total installed capacity. It is clear that new generation plant is necessary to ensure continued security of supply into the future, as increased interconnection is unlikely to suffice for this purpose. However, in an environment which is inimical to new investment, it is difficult to see how projected generation shortages in the near future will be addressed. Investment in generation can best be promoted by removing the most significant barrier to entry to the Irish market, ESB dominance in generation. Only when this occurs are investors likely to be satisfied that they will be treated on an equal footing with other firms. If investment is promoted, consumers will become less dependent on old, unreliable ESB plant to avoid capacity shortages. Newer plants will have higher availability and lower forced outage rates, leading to increased security of supply from domestic generation.
- 3.32 Splitting up ESB generation plant would not only promote competitive outcomes, but would also promote efficiency and security of supply. Where one firm is dominant in electricity generation, responsibility for ensuring security of supply is concentrated in the hands of that one firm. Accordingly, any firm-specific shocks have a high probability of interrupting supply to the entire country. In order to ensure that the lights don't go out, it is prudent to ensure that a number of firms share responsibility for security of supply, such that any firm-specific disruptions to generation do not have a systemic impact which interrupts supply across the vast majority of the network.

³⁰ Alternative 4 recommends the removal ESB Networks from ESB ownership and the sale by auction of two generation portfolios and three supply portfolios

4. THE LANDBANK PROPOSAL

- 4.1 Following a recommendation made by Deloitte, the Green Paper recommends "*Consideration of establishing a State-owned landbank of (current and potential) generating sites to incentivise the development of new independent generation capacity.*"³¹ The Competition Authority supports the landbank proposal, but recommends that it should be implemented in conjunction with structural reform measures. The landbank proposal is a medium to long-term solution which, on its own, is unlikely to reduce ESB's dominance.
- 4.2 Although the proposal is not explained in detail in the Green Paper, Deloitte envisages that such a landbank would consist of all ESB generation sites, as well as sites which may not currently have generation plants, but are earmarked as potential sites for development. This bank of land transferred from the ESB would be managed by the CER, in conjunction with EirGrid as a profit-neutral entity. According to Deloitte, the development of a landbank would facilitate competitive access to generation sites where there is development potential for new generation, thereby removing a barrier to entry to the generation market.
- 4.3 In principle, the Competition Authority supports any proposal which purports to reduce barriers to entry to the generation market. Easy access to sites with established grid connections at attractive locations on the grid could certainly be expected to attract market entry. However, a number of important caveats need to be pointed out.
- 4.4 Any new initiative to reduce barriers to entry and promote investment must be seen to be credible by investors. In order for the landbank concept to be seen as credible, it must firstly be accompanied by separation of ESB generation plant, and secondly, ESB must not be allowed to construct new plant on the landbank until it ceases to be dominant in the market.
- 4.5 The creation of the land bank is likely to be a time-consuming process, given the need to draft legal agreements and covenants to transfer property rights and entitlements from the ESB to a new profit-neutral entity. Indeed, the Green Paper recognises as much when it speaks of delivering change "*in a progressive manner working with all the stakeholders*".³² It can be expected that time will also be required to resource the new functionality at the CER required to administer the landbank. It is also likely that lengthy discussions will take place with both ESB management and ESB staff as to the property transfer process and any potential effects this may have on the working conditions and benefits of ESB personnel. Accordingly, the landbank proposal, while extremely useful, if it comes to pass, will not address competition concerns in the short to medium term. The proposal should only be implemented as a medium-term complement to the breaking up in the near future of ESB generation plant.
- 4.6 The landbank solution will only bear rewards in the medium term, due to the lengthy time horizons involved in securing planning permission and in commissioning generation plant. Assuming the existence of a landbank, it is useful to consider lead-in times for two stations recently

³¹ Green Paper, p.94

³² Green Paper, p.93

constructed on existing ESB sites, Lough Ree Power at ESB's Lanesboro site in Longford and West Offaly Power at ESB's Shannonbridge site. Even assuming minimum lead-in time on planning applications and transmission connections due to the prior existence of generation plant at both locations, 3 years and 10 months elapsed between the submission of an initial planning application (in March 2001) and commercial operation (in January 2005) in the case of West Offaly Power. The process took one month less in the case of Lough Ree Power. Given the cumulative time involved in establishing the landbank, consulting with stakeholders, especially the ESB, securing planning permission, constructing plant and final commissioning, it seems unlikely that new generation constructed on the landbank will begin commercial operations prior to 2012 at the earliest.

- 4.7 Secondly, the creation of a landbank will not, on its own, be sufficient to promote market entry. In this regard, the Government should bear in mind Deloitte's own warning that its recommendations are not presented as modular "*whereby one aspect of reform can be implemented in isolation and so careful consideration needs to be given where actual implementation departs from the full set of reforms presented.*"³³ The landbank proposal will only be useful as part of a larger programme of structural reforms involving breaking up generation plant.
- 4.8 Absent generation separation, the creation of a landbank will not promote investment or reduce barriers to entry because it will leave ESB dominance in the market unaltered. Even with low entry barriers, market entry is unlikely where investors perceive that they will be price-takers in a market dominated by an incumbent.
- 4.9 In order for the landbank concept to facilitate competition, ESB will have to be excluded from consideration for the construction of new plants on the landbank, at least until such time as ESB ceases to hold market power. Such a requirement could be avoided, however, were ESB generation plant to be broken up in the near future.
- 4.10 While the landbank concept is a useful one, its impact, if implemented, will only be felt in the long term. As part of a broader solution, the creation of a landbank can help facilitate both economic competitiveness and security of supply. However, in order to facilitate competition, ESB (and possibly Viridian) may have to be prevented from constructing plant on landbanks until issues of dominance have been satisfactorily addressed.

³³ Deloitte, p.184

5. INTERCONNECTION

- 5.1 Ireland's electricity market is limited by its low levels of interconnection. Indeed, Deloitte specifically attributes part of high Irish electricity prices to limited interconnection.³⁴ The Green Paper recognises that increased physical interconnection is necessary in order to compensate for our small size at the very end of a supply chain stretching as far as Russia. To this end, the Competition Authority welcomes the Government's intention to construct a second main North-South interconnector to bring transfer capacity to over 600MW, as well as the construction of a 500 MW East-West interconnector, both by 2012, and notes that interconnection "*is a key strategic priority for the Government.*"
- 5.2 However, interconnection on its own will not suffice to create a competitive market as it will not address ESB dominance, nor is it a timely solution to a problem which already exists. Further interconnection must be accompanied by other structural measures in order to ensure that all three energy policy pillars detailed in the Green Paper are addressed.

Interconnection is very limited

- 5.3 A distinctive feature of the Irish electricity market at present is its lack of integration into wider EU markets. Interconnections currently account for 6% of total peak needs, the third-lowest total for any EU Member State.³⁵ The EU Trans-European Networks (TEN) programme recommends that interconnections exceed 10% of peak capacity in order to assure security of supply.
- 5.4 The Irish transmission system is currently interconnected to the Northern Ireland transmission system. The State is also indirectly interconnected to the UK market by means of the 450MW capacity Moyle interconnector. There are currently three North - South interconnectors:
- The main 220/275 kv interconnector from Tandragee to Louth
 - A 110 kv interconnector from Letterkenny to Strabane
 - A 110kv interconnector from Corraclassy to Enniskillen
- 5.5 Electricity trading and transfer takes place predominantly along the Louth-Tandragee interconnector. The two 110 kv interconnectors are designed to provide support to either system for certain conditions or in the event of an unexpected circuit outage. However, due to limitations on interconnection and transmission systems, the Net Transfer Capability (NTC) from Northern Ireland is only 330 kv.³⁶ Available interconnector capacity is currently severely restricted by conditions elsewhere on the networks, which inevitably limits the extent of physical trade possible between the two jurisdictions. Such interconnection as currently exists therefore has only a limited impact on the Irish market.

³⁴ Deloitte, p.9

³⁵ Deloitte, p.218

³⁶ EirGrid Generation Adequacy Report 2006-2012, p.50

Benefits of Interconnection

- 5.6 Even so, interconnector trading has brought mutual benefits to the both electricity systems since its reinstatement in 1995 through shared reserve costs, access to external generation sources and limited trading opportunities to market participants in both the State and in Northern Ireland. Further interconnection can be expected to bolster these mutual benefits.
- 5.7 The main benefit of increased interconnection consists of ensuring sustainability and security of supply. Extra interconnection will improve security of supply in the first instance by lessening dependence on indigenously-generated electricity which is fuelled predominantly by natural gas. Interconnection will allow for the importation of electricity generated with a range of other fuels, not just natural gas, and will also reduce our reliance on indigenous fuel sources.
- 5.8 Interconnection will also contribute to security of supply by providing a means of supporting further wind generation without compromising grid integrity.³⁷ Constraints have been placed on wind generation due to the need to ensure sufficient excess capacity to accommodate variable levels of wind-generated electricity on the grid. This has occasionally proven difficult to accomplish on a network which is already severely capacity-constrained, particularly in winter. Further interconnection will allow for better management of the capacity required to support more extensive wind generation. Accordingly, interconnection reduces a significant barrier to entry to the wind generation market by mitigating capacity constraints which can delay or deter potential market entry.

Limits of Interconnection

- 5.9 However, increased interconnection will, on its own, be insufficient to fully address ESB dominance. The argument that interconnection will suffice to reduce ESB dominance is predicated on the assumption that the construction of extra interconnection will lead to the creation of a single Ireland/UK electricity market in which ESB would be a minor player. Current installed capacity in Ireland is approximately 6,400 MW, according to EirGrid.³⁸ ESB is the dominant power generator in Ireland, measured by market share, HHI or RSI, and is recognised as such by the Department in the Green Paper. Installed capacity in the UK, by comparison, was some 74,000 MW in December 2005.³⁹ Accordingly, in an Ireland/UK market of 80,000 MW installed capacity, ESB's share would amount to under 6% of total installed capacity. While market share data is not of itself definitive proof of the existence or absence of market power, it would be unlikely that a firm with such a low market share would be found to have significant market power.
- 5.10 This analysis is incorrect, as it assumes that increasing interconnection to 1100 MW in total⁴⁰ will reduce ESB dominance by creating an integrated market and thereby importing UK levels of price and competition into Ireland. It is arguable whether the provision of a

³⁷ Deloitte, p.191

³⁸ Generation Adequacy Report 2006-2012, p.11

³⁹ Plant capacity: United Kingdom, DTI statistic. Available online at <http://www.dti.gov.uk/energy/statistics/source/electricity/page18527.html>

⁴⁰ 500 MW capacity on the East-West interconnector and Government commitment to increase North-South interconnector capacity to 600 MW.

handful of high-voltage interconnectors will really create a single, integrated all-island market. Three high-voltage lines along with two back-up lines will not turn the ESB from a big fish in a small pond to a minnow in an ocean. While interconnectors function to link markets, they also become potential bottlenecks as capacity is funnelled into a limited number of transfer points. Within fully-integrated markets, however, there is a wider range of transfer nodes from Point A to Point B, encompassing both low-voltage distribution and high-voltage transmission lines.

Interconnection does not create single markets

5.11 EU precedents further indicate that the presence of limited interconnection is unlikely to lead to the creation of markets which are greater than national in scope. In a number of decisions in merger cases, the European Competition has determined that electricity markets at both the retail and wholesale levels are national, rather than international, in scope. A useful comparison is the Spain-Portugal market. Like Ireland, Portugal is weakly interconnected to a single, larger neighbouring market, Spain. Import capacity accounts for 8% of total Portuguese capacity; the equivalent figure for Ireland is 6%.⁴¹ Numerous analyses have indicated that both the Spanish and Portuguese wholesale and retail markets remain national in scope, due specifically to limited interconnection.⁴²

5.12 The Commission also discounts the possibility of an Iberian wholesale electricity market being created in the near future, despite an initiative to create an Iberian wholesale trading system, MIBEL, which has been partly in operation since July 2006.⁴³ It should be noted also that the operation of MIBEL was originally scheduled to commence three and a half years earlier, in January 2003. In its ENI /EDP / GDP decision of December 2004, the Commission states that "*It is highly unlikely that the wholesale electricity market will effectively be Iberian in scope in the near future*" due to a wide of range of factors including uncertainty surrounding the operation of MIBEL, limited interconnection capacity, the presence of regulatory barriers and the harmonised functioning of system operators.

5.13 Other barriers to the creation of an Iberian market are identified by the Commission which are particularly relevant to Ireland⁴⁴

- The projected level of interconnection between Spain and Portugal is not likely to allow effective integration of both markets in the near future due to low levels of interconnection, even providing for the construction of interconnectors. This will make it likely that congestion will occur on the interconnectors.
- Generation mixes in Spain and Portugal are different and will remain so. It is unlikely that rapid generation convergence will take place

⁴¹ European Commission Report on Progress in Creating the Internal Gas and Electricity Market - Technical Annex to the Report from the Commission to the Council and the European Parliament, p.89

⁴² These include the Commission's decisions in the proposed ENI/EDP/GDP merger, the EnBW / EDP / CAJASTUR / Hidrocantabrico merger, the RWE/Hidroeléctrica del Cantábrico merger, the EDP /Cajastur/ Cáser / Hidroeléctrica del Cantábrico merger, the Grupo Villar Mir / EnBW / Hidroeléctrica del Cantábrico merger and the Enel / Viesgo merger.

⁴³ Trading on spot markets and future markets commence on July 3rd, 2006.

⁴⁴ These barriers are described in greater detail in the Commission's ENI / EDP / GDP merger decision at pp.28-36.

between the two markets. This is likely to act as a strong driver for import demand, leading to congestion on the interconnectors, rather than price convergence.

- EDP as the main generator in Portugal has the ability to artificially reduce the interconnection level available to competitors. This allows EDP to strategically exert market power, and influence price formation, due to insufficient interconnection and the vagaries of the proposed MIBEL congestion management scheme.
 - Frequent congestion on the interconnectors will create different competitive conditions between Spain and Portugal, as bottlenecks will prevent the existence of a permanent single price area. Furthermore, congestion will create different competitive conditions even outside of bottleneck periods.
- 5.14 The Commission's analysis clearly demonstrates that providing limited extra interconnection in a market characterised by dominance in generation will fail to create a single market, will fail to address dominance, and will fail to import the lower prices in a neighbouring market.
- 5.15 While this analysis may not be surprising in the case of poorly-interconnected markets such as Spain and Portugal,⁴⁵ the Commission has also concurred with a finding of the Danish Competition Authority that wholesale electricity markets in Denmark were national in scope, despite high degrees of interconnection with both Germany and other Scandinavian countries.⁴⁶ This indicates that interconnection will not address ESB dominance because it will not create a single market.

Interconnection and Price Convergence

- 5.16 Data from other EU Member States indicate that interconnection, by itself, does not automatically lead to price convergence. A cursory analysis of Eurostat data indicates that, while price differentials between Ireland and the UK are high compared to highly-interconnected markets such as the Netherlands and Germany or Sweden and Finland, they are lower than for other highly-interconnected markets, notably France and Germany, or, in the case of industrial prices, Lithuania and Latvia. Moreover, while Spain and Portugal, neither of whom meet the EU Trans-European Networks Programme (TEN) target of 10% interconnection, show smaller differentials than Sweden/Norway and France/Germany, the Commission has concluded that their prices are nevertheless poorly correlated. While the figures are not conclusive, they do indicate that member states should not rely on interconnection alone to import competition, and, accordingly, lower prices, into their domestic markets.
- 5.17 Unless the Irish market were to become fully integrated with the UK market, the issue of ESB dominance in the market will not be fully mitigated by interconnection. Other structural remedies will also need to be implemented in order to promote competition, including horizontal separation of generating plant, especially mid-merit price-

⁴⁵ EU Merger Decision Case No COMP/M.3440 ENI / EDP / GDP, December 9th 2004.

⁴⁶ *Ibid.*, p.16

setting plant, vertical separation of the ESB, and strengthening the independence of EirGrid.

- 5.18 Interconnectors are also prone to gaming behaviour on the part of supply companies using the difference in trading regimes to arbitrage across interconnectors. While the common trading regime to be established under the SEM should mitigate arbitration opportunities, gaming is still likely to be a feature of trading flows on the North-South interconnectors, given strategic linkages between trading behaviours on the North-South and Moyle interconnectors.
- 5.19 The addition of approximately 800 MW capacity by means of the North-South and East-West interconnectors is equivalent to the addition of another two generation plants onto the network. However, given the generation capacity which the ESB will retain absent structural separation, it is unclear what effect increased interconnection will have on pricing. Price formation may take place on the basis, post 2007, of an Irish market characterised by ESB dominance, or ESB/Viridian joint dominance; however, where structural separation occurs it is more likely that pricing will be set with reference to pricing in the competitive UK market.
- 5.20 Deloitte recognises that interconnection is a medium-term solution, given the timescales involved in commissioning, cable-laying, grid reinforcements and securing of planning permission.⁴⁷ The problems of market power exist today; however, further interconnection will not occur until 2012 at the earliest. Irish consumers should not have to accept the continued existence of market power until then.

Conclusion

- 5.21 The primary goals of greater interconnection are ensuring security of supply as well as greater sustainability. In contrast, the effect on competition of interconnection alone is likely to be somewhat marginal. Broadening the extent of geographic markets can enhance competition, and in the electricity sector this could be achieved through greater interconnection with Northern Ireland, the UK, Europe and beyond. However, it can only do this as one part of a broader strategy of structural change.
- 5.22 Interconnection will not address ESB dominance for two reasons. Firstly, the proposed East-West interconnector and the additional North-South interconnector will not on their own lead to the creation of a single UK-Ireland market, in which Irish consumers would experience lower UK prices and ESB would become a minor player in a larger market. Secondly, the problems of ESB dominance exist today, yet solutions based on further interconnection will not alter the market structure for at least six years. Reliance on interconnection alone is therefore by definition an unsuitable means of addressing current issues of dominance, and will not promote the development of vigorous competition.

⁴⁷ Deloitte, p.15

6. NETWORK UNBUNDLING

- 6.1 The Green Paper indicates that one of the Government's policy targets with respect to the competitiveness of energy supply is the legal and functional unbundling of ESB Distribution System Operator (DSO) by July 1st, 2007. To promote effective competitive outcomes, both the Transmission System Operator (TSO) and the DSO must be able to carry out their roles with complete independence. While the separation of grid operations in line with EU legislation is to be welcomed, the Government should be careful, in implementing this proposal, not to repeat the mistakes of the past when it unbundled the TSO, EirGrid. Despite operating as Ireland's TSO since July 1st, 2006, EirGrid is not fully independent in its functions. The Competition Authority concurs with Deloitte that *"It is important that the full separation of EirGrid from the ESB Group is completed as soon as possible. The delays in full separation have had a negative effect on the perceptions of market participants and investors in the operation of the Irish electricity sector."*⁴⁸
- 6.2 The role of EirGrid in the electricity network is fundamental, as it is responsible for the coordination of delivery of electricity to the end user. Specifically, its role in coordinating the dispatch of plant gives it great power in the electricity market. It is therefore necessary to ensure that true non-discriminatory access to the grid develops, as this is vital to the development of effective competition. The European Transmission System Operators (ETSO) and the Union for the Co-ordination of Transmission of Electricity (UCTE) have both stressed the importance of TSO independence for high standards of operational design and system security.
- 6.3 Market entry in electricity generation is unlikely to occur where potential entrants perceive that the incumbent enjoys more favourable access to the grid than it is likely to. Such concerns will only be avoided where network operators enjoy full legal, managerial and operational independence. EirGrid does not currently have operational independence due to the way in which the relationship between the ESB and EirGrid was legislated for. Because responsibilities for design, construction and maintenance of the transmission network are divided between EirGrid and the ESB, the possibility exists for ESB to frustrate EirGrid in developing the network to benefit itself, for instance by delaying preliminary work for procurement, detailed project design and specification, project construction or project review. Shared responsibility also allows the ESB to continue to heavily influence the availability of transmission circuits. This sends strongly negative signals to investors, whose enthusiasm for funding construction of generating plant may be curbed by potential discriminatory behaviour influencing their possibilities of access to the network.
- 6.4 Only a truly independent TSO, or, for that matter, DSO, will send the correct signals to potential market entrants that all generating plant will be treated equally, as the motivation for discriminating in favour of incumbent generators is removed by structural measures, and investment is incentivised. If the system operator remains linked to the incumbent power provider, this has a chilling effect on the market.

⁴⁸ Deloitte, p.198

- 6.5 Ensuring the independence of EirGrid and the DSO will increase the receptivity of the market to competition, leading to increased efficiency and consumer welfare, and stronger national competitiveness, and will also lead to less, and simpler, regulation.

Inadequacy of the Infrastructure Agreement Approach

- 6.6 The Infrastructure Agreement approach taken in Statutory Instrument 445 of 2000, and perpetuated in Statutory Instrument 60 of 2005, has not been effective in delineating and apportioning responsibilities between EirGrid and ESB. It fails to unambiguously place responsibility for the transmission network on EirGrid. Even if the current Agreement were to be fully implemented, the ESB would still have a role to play in planning and construction of the network, giving a less than optimal solution. The Infrastructure Agreement must create incentives and penalties to make the system work in favour of new entry.
- 6.7 So long as the current unsatisfactory arrangements persist, such that transmission asset ownership, operation and management are concentrated within a dominant incumbent with monopoly powers in key market sectors, the incentive for market entry is inhibited. Additionally, the ability of EirGrid to discharge its functions in an independent manner, so that non-discriminatory third-party access to the grid is ensured, is called into question.
- 6.8 On the grounds that even the perception of market power or its exercise can act as a barrier to entry, it would be prudent to ensure the complete and unfettered separation of both EirGrid and the DSO from ESB. Only when this has occurred can investors, consumers, regulators, government, potential entrants and other interested parties be assured that market mechanisms will operate freely, fairly and without prejudice to any market participants.

S.I. 60 of 2005 – A Missed Opportunity

- 6.9 EU regulations presented a clear path to resolve some of the structural impediments in the Irish electricity market. However, this opportunity has not been taken, and the non-competitive *status quo ante* has been allowed to persist. Far-reaching reform of network ownership and operation needs to be implemented, as part of a broader suite of structural reforms in the market.
- 6.10 S.I. No. 60 of 2005, the European Communities (Internal Market in Electricity) Regulations, designed to implement EU Directive 2003/54/EC, and amend and update the Electricity Regulation Act, 1999, and the European Communities (Internal Market in Electricity) Regulations, 2000 (SI 445 of 2000), represented a golden opportunity to resolve some of the structural impediments in the Irish electricity industry and deprive consumers of effective competition.
- 6.11 The independence of EirGrid is currently provided for under regulation 9 of SI 445 (as amended), while the Infrastructure Agreement is governed by regulation 18, as amended. The new EU Directive does not envisage the exact type of structure described in SI 445, but Article 10.2(c) of the Directive specifically demands the removal from integrated electricity undertakings of the type of powers granted to the ESB by Irish legislation. At the very least, S.I. 60 of 2005 should have ensured that the provisions stated here were enshrined in Irish law,

such that effective decision-making rights rest with EirGrid. However, this has not happened. The relevant paragraphs in the new legislation are, in all key respects, identical to those laid out in S.I. 445 of 2000. This means that decision-making rights remain both are partial and encumbered.

Ensuring full DSO and TSO independence

- 6.12 The best means of complying with the independence principles of the Directive, however, is total, complete, unencumbered separation of the ESB and EirGrid, that is, going beyond the decision-making independence specified by the Directive, to full legal separation. Any other solution will be sub-optimal, not only because it will act as a disincentive to investment, due to concerns about discrimination and uncertainty in future, but also because it will require the imposition of an expensive, cumbersome and complex regulatory framework to enforce compliance, especially on the part of the ESB. Full separation of each party is a more efficient, streamlined solution which will incentivise investment, decrease the regulatory burden, and allow each party to concentrate wholeheartedly on its core competencies.
- 6.13 Merely meeting the minimum required by the Directive is insufficient in a market which, by virtue of its small size and geographical position, is not a priori an attractive place for energy investment. The option of ignoring the evidence and simply perpetuating the existing structure is not one which can be sustained in the long run.
- 6.14 In unbundling the DSO, the Government should be careful to ensure that it is given full operational independence. Any legislation providing for DSO independence should also amend S.I. 60 of 2005 in order to provide EirGrid with full operational independence.

7. CONCLUSION

- 7.1 The Green Paper is an important step forward in the national debate on energy policy, and is a useful stepping stone towards real and substantive change in the industry. In order to ensure that the Government achieves its goals, as set out in the Green Paper, it must ensure that structural solutions are implemented at the generation, networks and supply levels of the electricity industry.
- 7.2 Accordingly, the Government should ensure that ESB generation plant is split up to ensure that price-setting power no longer rests constantly with the ESB; EirGrid's independence should be bolstered by amending S.I. 60 of 2005, and ESB dominance in supply must be addressed in order to promote competition in both supply and generation.
- 7.3 The following table indicates that only breaking up the ESB will have a positive effect on each of the three pillars of energy supply enunciated in the Green Paper. Other courses of action offer second- or third-best solutions which only partially meet the Government's goals, or fail to meet them altogether:

Goals	Economic Competitiveness	Security of Supply	Environmental Sustainability
Break up ESB	☺☺☺ Immediate and large effect on prices	☺☺☺ Increased certainty for new entrants	☺ New entrants are likely to wish to have a mixed portfolio
Keep a strong ESB	☹☹☹ Large negative impact even in the long term on the level of competition.	☹ It is in the interests of a monopoly to keep a small reserve margin	☹☹☹ Will have a negative effect on independent green energy projects
Consider a landbank	☺☺ Any impact will only be felt in the medium term at the earliest. The extent of the impact will likely be heavily influenced by the ESB (if it is to happen at all)	☹ Is still controlled by the ESB. Is not likely to increase investor confidence absent other measures.	
Interconnection	☺ Only limited impact and only at a delay of at least 6 plus years	☺☺☺ Large positive impact on security of supply	☺ Important benefits greater due to implicit reliance on a more diverse generation portfolio. Increased ability to trade in green energy

- 7.4 Structural reform works in practice. It is not a radical, a difficult, or even a novel approach to addressing uncompetitive electricity markets.

It has been successfully tried and tested around the world, as the numerous international case studies in the Deloitte Report attest. Since the first major network utility divestment, involving the "Baby Bells" in the USA in 1982, numerous economies have recognised that structural reform provides an efficient, reliable and comparatively simple means of successfully reforming uncompetitive markets. Ireland is in the fortunate position of being able to draw on worldwide experiences of structural reform in implementing a programme of structural separation. The Competition Authority therefore recommends that a comprehensive programme of structural reforms take place in the Irish electricity market to promote competition in generation and supply, provide the conditions for lower prices to end users, reduce barriers to entry, end ESB dominance, ensure security of supply and promote sustainability.

