

## Comments on the Green Paper

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Extensive merger activity is taking place at the European level in the electricity generation sector, which is leading to a concentrated international environment. At the moment only mergers that increase concentration at the national level are being blocked, although that might change in the future. However, in the current context a deregulated environment in Ireland without major restructuring would be a reflection of the oligopolistic structure that is emerging in Europe. Thus, while Ireland is unusual in the isolated nature of its electricity market and the dominance of a single player, the electricity market in many other modern market economies also experiences features of oligopoly.

Deregulation has been shown to reduce generation costs mostly through labour cost abatement (Fabrizio et al., 2006). In a small system such as Ireland, this needs to be balanced by the fact that small competitors will face larger costs of capital (their portfolio is not as diversified, and their access to capital markets is limited). This issue is of particular importance for Ireland as it faces a need for continuing major investment in new generation plant. For much of the rest of the EU it is still possible to “sweat” generation assets pricing, with prices falling below long-run marginal cost (the price necessary to remunerate adequately new capital). Thus minimising risk for investors will be a major factor in reducing the cost of electricity in Ireland. The difference between the cost of capital of a diversified company (where risk is lower - initial capital investment costs would be recovered in 15 years) and a less diversified company (that would face higher risk and need to recover costs within 7 years) is of the same order of magnitude as total labour costs. Thus designing a market structure that minimises the cost of capital through reducing unnecessary risk will be crucial in Ireland.

Deregulation is not effective in reducing final electricity costs if there is no competition in supply. At the moment the only true competitor in the household supply segment, Airtricity, has pulled out. Similarly, in Northern Ireland de facto there is a single supplier for households. This means that supply of electricity in Ireland is still for all means and purposes a regulated sector and this needs to be kept in mind when analyzing and organizing the rest of the industry.

In terms of competition, the All-Island market will contribute to reducing concentration by increasing market size and the number of competitors but it must be pointed out that this is a once-off solution. Technically, it does not change the manner in which competition takes place in the industry, which is of great concern to non-ESB market participants and potential investors. Perhaps it is a failure to give proper signals to the market in this area that is of greater concern than ESB dominance per se; dominance itself is not necessarily a problem, but how dominance is handled may be. For this reason the new all-island electricity market will be a vital step in developing a more certain environment for investors. Regulation to prevent discrimination in market access as well as the transparency of that regulation will be crucial if the ESB is to remain the largest single generating firm.

While modelling work, which we have undertaken, indicates that breaking the ESB generation portfolio into three separate units would theoretically create sufficient market players to reduce the ability of any one player to manipulate the price, it would

be unlikely to create a fully competitive market. With at the most four players owning two or more power plants the market the market would still be unlikely to behave in a competitive manner without considerable regulation. Each player would know the characteristics of the other players' plant. With the pricing decisions being taken thousands of times a year each firm would develop a very good understanding of other players' cost structure and behaviour. Under such circumstances, without any collusion, the market could rapidly develop oligopolistic features.

A second problem with such a fragmented industry is that the cost structure may be raised by the loss of economies of scale. Evidence from elsewhere suggests that in larger markets, such as the UK, a more natural structure involves vertically integrated firms with a portfolio of plant supplying their own retail customers. The UK experience would also suggest that the minimum number of customers per firm would be around five million – far more than the size of the whole Irish market. These size constraints are driven by the relatively large size of efficient generating units and the need to hold a portfolio of plant to hedge against market risk. The development of a vertically integrated firm structure out of the initially fragmented GB market suggests that, while it is possible to organise an electricity market with many fragmented firms through a multiplicity of contracts, this is generally more expensive than the alternative of vertically integrated firms where risk is hedged within the firm. The design of the all-island market aims to reduce these risks for firms but it cannot eliminate them.

As a result, a simpler and probably more cost effective (for consumers) method of dealing with the issue of ESB dominance would be to pursue a solution along the broad lines of that suggested by the regulatory authorities, though involving some change in the precise terms. (As discussed below there remain some problems with the current proposals.) Our analysis has shown that if the ESB reduces the size of its generation portfolio by a net 1000 MW to 1200 MW; if the all-island market is established; if there is sufficient interconnection on the island and if a further 500 MW interconnector to GB is built; then the growth in the size of the market will see the ESB's dominant position substantially eroded over the course of the first half of the next decade. However, for the reasons given above, even if the RSI index (a measure of market power) for the ESB falls below a critical threshold there will still be a need for strong regulation to ensure that no firm abuses its position or that *de facto* collusion does not arise from what would still be a small and isolated market. The nature of the all-island market structure – with a spot market where prices will only reflect energy costs and capacity payments – should make it much easier to regulate to prevent co-operative behaviour by players.

A recent statement by both government and regulator sets out a limited divestment package for the ESB. In return for the closure/divestment of 1,300MWs of capacity, the ESB will be allowed to construct a new CCGT in the South of the country. There are two points to be made regarding this decision. First, the figure of 1,300MWs is not enough and does not include the right type of plant. The ownership of price-setting plant is key to this strategy but has not been sufficiently addressed. The ESB is a monopoly in the supply of mid-merit capacity. Although some of the plant in the package could be considered mid-merit (if available) is it for closure or divestment? New entry and or change of ownership in the mid-merit area will be important if the problem is dominance is to be addressed.

With regard to indices that attempt to represent certain characteristics of the market, it is important to realise that they cannot be the sole basis on which to make decisions. For example, the Residual Supply Index (RSI) only takes into consideration supply side limitations. The RSI is based on ESB's available capacity, which is a point of contention itself. Whether to include generators that are "out of service" with unplanned maintenance is a serious issue since this can affect the outcome. If included, since this supply should be available, the ESB's RSI will be lower than would be observed in reality. This is one reason that the ESB would be anxious to shed capacity with low availability. The message here is that all of these descriptive figures play a role but only in the context of the individual market in question. In fact, one does not really need to analyse data to know that the market is heavily dominated by the ESB or that the system would not be able to meet demand without the ESB. Thus, thresholds of 1.2 for the RSI and 1,800 for the HHI should not be taken as definitive.

## **Other Issues**

Biomass – a limited resource – should be used where it is more efficient. At the moment this is in heating, and not in electricity generation. Biofuel is unlikely to be economic in the foreseeable future. Spending money (including foregoing taxes) on supporting general deployment of biofuel in the coming years would be a serious waste of resources, resources that could be much more effectively deployed elsewhere to meet the needs of energy policy.

There should be a greater effort put into managing electricity demand. All new connections should be provided with a time-of-day meter. This would have two advantages:

1. It would allow the use of time-of-day pricing in the medium run, once a sufficient number of the meters were installed.
2. It would provide useful data on electricity consumption, at a time when consumption patterns in Ireland are changing rapidly and significantly.

On the Kyoto Protocol, if Ireland is serious about making progress towards meeting its commitments it needs to take real action. For sectors not covered by emissions trading this means reflecting the true price of carbon through a tax. For sectors covered by emissions trading it will be vital to move to the auctioning of all permits after 2012. It is not an efficient solution for Ireland to tax labour (e.g. income tax) or all goods and services (e.g. VAT) and use the money to import permits. The economy emits more carbon than is efficient, and international competitiveness suffers. If, instead, there is a carbon tax the revenue is available for recycling domestically (a welfare gain compared to the alternative) and people can choose the socially optimal level of emissions for their circumstances.

On the emissions trading regime, we have previously indicated that the current system of grandparented allowances is extremely inefficient. Because of the multiple allocation rounds it provides a perverse incentive for dirty plant to stay in business (and get future allowances). It also causes distortions that are difficult to deal with in the context of the all-island market. The fact that the revenue (from the higher prices) accrues to the firms rather than to the exchequer or the public is a further factor reducing welfare. Because the value of allowances used will be reflected in the price of goods and services affected the scope for distortions is great. Extension to the

airline industry will further distort markets and reallocate resources as windfall gains to businesses.

The green paper states that principal factor contributing to high generation costs is fuel mix. This needs to be explained. We will always tend have higher generation costs but the point is to distinguish between what is systematic (cannot do anything about, e.g. price of oil) and what is unsystematic (can change in order to reduce price differential to transportation costs). It is these unsystematic aspects of costs that we should be focussing on. It is the other points that are mentioned that are worth exploring in this regard:

- Small market size – low levels of interconnection
- High demand growth
- Low reserve margin
- Investment in networks
- High dependency on fossil fuels (fuel mix) – plant mix