

Electricity Prices in Ireland

John Kirby

Not since the 1970s oil crises has the price of energy been more relevant than today. Until recently the ESB was the sole public electricity supplier. Its mandate was to supply electricity to the people of Ireland on a break even cost basis. This kept prices below the EU average in the 80s and 90s but there was no money for investment in transmission and distribution networks.

Forward on to 2009 and Ireland's electricity prices are amongst the highest in Europe. Our industrial electricity prices are now 24% above the EU average. Ireland has the second most expensive industrial electricity prices of the EU-14. The Irish economy is on the floor. We have priced ourselves out of competitiveness in almost every sector. Energy prices are often quoted by industrialists as having a negative impact on Ireland's ability to attract foreign investment. The pressure to reduce the cost of electricity is not going to go away. The question for the electricity industry is two-fold, how to reduce our carbon footprint while maintaining reasonable prices.

Infrastructure Investment

Rapid industrial expansion along with acceleration of the housing boom and an increase in foreign investment in the mid 1990's corresponded with the ESB embarking on a massive refurbishment of its networks infrastructure. Investment in network assets tripled from 1990 to the year 2000 and almost quadrupled in the next 5 years. These investments amount to approximately €6.4 billion for this decade. Network renewal projects along with implementing a smarter network will continue to impact the cost of electricity. These costs are justified by the improved infrastructure and reliability of supply. This expenditure will also accommodate the 4,000MW of wind that is due to come online by 2020.

Planning

In recent years, planning objections have made the construction of infrastructure extremely difficult in Ireland. Planning issues have become so troublesome that nothing less than a radical new approach involving all interested parties will solve it. This may require government intervention setting rules authorising where and how transmission/distribution corridors can be erected enabling

investors to plan projects and set a date for completion. In this way projects would not be held up in the courts and we could avoid the many controversies like we have seen recently. The costs associated with these holdups are inevitably paid by the consumer. It is obvious from media coverage that the Irish public are being poorly served on these controversial issues. One suggestion has been to underground all transmission lines. This would result in multiples of the costs of overhead lines. Apart from cost differentials there are technical problems associated with underground transmission which have not been highlighted. Among these are system behaviour and fault location and repair. This would drive electricity prices to unaffordable levels. To date, no political leader of standing has been prepared to tell the Irish people that building an all underground transmission and distribution network is a financial option we cannot afford.

Industry Liberalisation

The Commission for Energy Regulation (CER) is an independent body responsible for overseeing the liberalisation of Ireland's energy sector. Liberalisation of the electricity market was introduced in response to an EU directive. This has seen new generation and supply companies enter into the market. Liberalisation has caused price increases. Among the reasons is that in order to create a profitable market for new entrants guarantees and incentives must be offered.

There is also the cost on the ESB of separating the company into individual business units in order to comply with market regulation. As ever in Ireland some of the biggest beneficiaries have been the consultants and lawyers. The costs of establishing and operating the market are being carried by the bill payer.

An intriguing question at this stage is whether the current and future price of electricity is more or less than would have been the case if market opening had never happened. This is a legitimate question as many observers believe that the Irish market is just too small for this model.

Subsidies

The public Service Obligation Levy (PSO) is charged to all bill payers and is in place to recover costs to suppliers that purchase electricity from renewable or indigenous sources. At present the bill payer is subsidising wind and peat generation through the PSO levy. A paper recently published by the CER says our indigenous and renewable power generators will have to be subsidised by €175 million for 2009/2010 of which peat stations will receive €93 million. At present peat stations are run at maximum output. The question is: do they need to do so? Peat

stations could still play an active role if they were only to run at economical times and enter their marginal price into the market like other generators do. Using our peat stations more judiciously would reduce this large subsidy and could shave 1 million tonnes from system emissions over the year.

The Renewable Energy Feed In Tariff (REFIT) is in place to support new renewable energy generating plants. REFIT is a mechanism whereby governments promote the use of renewable energy sources by guaranteeing the generators a minimum price for their electricity. The cost of REFIT was over-estimated in previous years. The price of fossil fuels reached record high levels and so wind generators could compete with other generation sources without having to rely on financial support from REFIT. Since the summer of 2008 oil prices have fallen dramatically though are recently showing an upward climb. This has resulted in wind losing competitiveness and REFIT costs increasing. In the short term, as more wind comes online, REFIT payments will have to increase. However, if the price of oil continues to creep up, these payments will reduce.

According to the CER REFIT will cost €39 million for 2009/2010. Perhaps a mechanism should be in place whereby if the price of fossil fuel was to increase and wind power became a cheap power source; a percentage of the wind farm owner's profits would be used to refund the costs of REFIT to the consumer. After all, it is the bill payer who carries all of the financial risks for the wind farm owner.

Fuel prices

The price of oil and gas are directly correlated – the gas price is indexed to oil. Ireland on average generates 55% of its electricity from natural gas. In total 88% of our electricity is generated using fossil fuel. This is a higher percentage than any other EU country. The rise in the price of oil from below \$20 a barrel in 1999 to \$140 a barrel in 2007 has had a profound impact on the cost of producing electricity in Ireland. This has added to our loss of competitiveness and strengthens the case for Ireland to continue its ambition to install enough wind turbines to produce up to 40% of our electricity needs.

Wind becomes competitive with the price of oil between \$70 and \$147 a barrel. Factoring in the possibility of the price of the fossil fuels rising beyond our control, having wind available reduces the risk of electricity price rises due to increases in fossil fuel price.

The Nuclear Option

One wonders if we are missing an opportunity regarding nuclear generation. Apart from helping to reduce our CO₂

emissions in line with EU targets, the nuclear option could also drive down the price of energy. The low cost of electricity in France is attributed to 78% of electricity generation coming from nuclear power. Once again, the Irish public is poorly served by the media and the political establishment. There seems to be an irrational fear to initiate an adult discussion on what nuclear power could do for Ireland. As things stand, Ireland is at the mercy of our fossil fuel suppliers. The vulnerability of our energy supply was evidenced in events quite recently in central Europe. One hopes that our energy planners were watching.

In Conclusion

The high operational cost along with the small size of the Irish market means Ireland will always lack the economies of scale available elsewhere in Europe. However, opportunities will be available for the smarter consumer to manage his/her own usage and have greater control over the final price on their electricity bill.

John Kirby is a 3rd year Electrical Engineering student at University College Dublin and a member of ENI 2009, an undergraduate summer research project team.

<http://eni.ucd.ie>

