

The Internal EU Electricity Market: Implications for Ireland

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Executive Summary

The European Union is creating a single electricity market. Like the single European market for goods and other services, if the price of electricity is lower in France than Ireland, traders will export electricity from France to Ireland, thus lowering the price in Ireland. The legal architecture has been enacted. Important implementation decisions still need to be completed. An EU-wide deadline of 2014 has been set. However, Ireland has been granted transitional arrangements until 2016. On completion the scope of the single EU electricity market is likely to include wind power from the North Seas and solar power from North Africa. What are the implications for Ireland?

First, costly undersea cables have to be built so that Ireland can participate in the single EU electricity market. Without such interconnection, Ireland will not be part of the wider EU electricity market, but instead be characterised as a small closed electricity system catering for a few million people and a smaller number of businesses. The Moyle Interconnector (“IC”) already links the all-island electricity market to Scotland, while the East West IC to England is due for completion on Q3 2012. It is expected to cost €600 million. However, to fully participate in the single EU electricity market interconnection capacity will have to be at least doubled. This will not be completed until later in the decade at the earliest.

Second, participation in the single EU electricity market is likely to bring substantial benefits to Ireland. Ireland has high electricity prices by EU standards. Access to the wider EU electricity market should result in electricity prices that will be lower than they otherwise would be. Security of supply will increase through access to a greater diversity of fuels – hydro power from Northern Europe and nuclear power from Great Britain and France. There will be less need for reserve capacity to insure against supply interruption. The price benefits assume, however, no major policy failure in UK energy policy that results in higher electricity prices in the medium term that cannot be offset through increased interconnection between Great Britain and continental Europe. Such a policy failure might, for example, be Great Britain’s inability to replace a quarter of its generation capacity by 2020.

Third, there is a strong role for government in assisting in building interconnectors. The benefits of increased security of supply and a smaller reserve capacity are difficult for private firms to appropriate or capture. As more and more interconnection capacity is built to Great Britain, electricity prices in Ireland will converge to those in Great Britain. However, the returns to interconnector owners will fall, since traders will be prepared to pay only a small price to use the

interconnector – at a maximum the difference in price between electricity in Great Britain and Ireland. Hence there is a role for the State to ensure that enough capacity is built.

Fourth, the single EU electricity market will facilitate achieving the State's target of generating 40 per cent of electricity from renewable (virtually all wind) sources by 2020. Wind is a variable source of electricity. When the wind speed is too low or too high it cannot be used, and expensive thermal plants have to be ramped up; even when the wind blows at usable speeds, some of the wind generated electricity may not be used since the electricity transmission system can only use a certain proportion due to system security issues. Access to the wider EU market lessens these problems: when the wind does not generate electricity it can be imported; when the wind generates too much electricity for use in the all-island market it can be exported.

Fifth, although completing the single EU electricity market will facilitate achieving the 40 per cent renewable target in a cost-effective way, the building of additional interconnectors primarily to export renewable electricity would be costly. If all planned wind farms are completed, capacity will comfortably exceed the 40 per cent renewable target. As a result there are likely to be demands for the construction of interconnection capacity to export renewable electricity. However, if this additional capacity receives extensive public support it will feed through to higher electricity prices. To accommodate additional wind on the transmission system will require extra investment to strengthen the system, again feeding through to higher electricity prices. Finally, additional interconnection capacity is unlikely to be used when the wind does not blow, with the result that the interconnector may not be fully funded through congestion revenue and its costs will be borne by electricity consumers. One way in which a Member State that generates excess renewable electricity, such as Ireland, could capture value is through tradable renewable permits. The excess could be sold as renewable permits to a Member State for which reaching its target using domestic measures only was more costly.

Sixth, the all-island electricity market, the Single Electricity Market ("SEM"), must comply with the single EU electricity market regulations and network codes for trading over interconnectors. This may prove costly. Completing the single EU electricity market requires common rules for trading across interconnectors. This is important for encouraging trade in electricity between Member State markets. There are considerable differences between, for example, the electricity market rules in Ireland and Great Britain, which discourages trade in electricity. If these differences are not resolved then interconnectors will not be used efficiently and the benefits of the wider EU electricity market will not be fully realised. The SEM, four

years old on 1 November 2011, has worked well for consumers. The issue becomes the extent to which the essential features of the SEM, such as a mandatory pool into which all generators have to bid short-run marginal cost, can be retained, while at the same time, complying with EU electricity market regulations and network codes. Initially small changes have been made to the SEM to comply which will come into effect in 2012. However, it is still unclear whether further small changes will be required or whether a fundamental and substantial redesign of the system will be required. Redesigning the SEM is not only likely to be costly but could also create considerable investor uncertainty.

An important aspect of the EU legislation creating the EU wide electricity market is the principle of subsidiarity. Under this principle responsibility for a particular task or area is assigned to the Member State where it can be more effectively dealt with at that level. There is no a priori reason why different electricity market designs cannot be interconnected using somewhat different arrangements in terms of, for example, frequency of trading electricity. The legislation creating the EU electricity market refers to Member States not being forced to redesign their systems so as to meet the interconnection rules. Hence, the rules for the market should permit Ireland the time and space to implement the policies of the EU electricity market in a manner consistent with its needs.