

***Presentation to the Joint Oireachtas Committee on
Agriculture and Food
28th January 2004***

Chairman, Members of the Committee,

I am very pleased to have this opportunity to meet with you this afternoon. The Commission for Energy Regulation operates under the Electricity Regulation Act, 1999 and the Gas (Interim) (Regulation) Act, 2002.

To begin with, I would like to provide you with some context regarding the various government and independent statutory bodies involved in the field of renewable energy.

The Renewable Energy Division of the Department of Communications, Marine and Natural Resources is responsible for implementing all measures necessary to increase the penetration of renewable energy technologies in electricity production. At present, the Government provides support for renewable energy under the Alternative Energy Requirement (AER) competition. AER awards successful green generators a 15 year Power Purchase Agreement with ESB. Since the Programme was launched in 1995, six AER competitions have been held. The technologies supported include wind energy, small-scale hydropower, combined heat and power (CHP) and biomass.

The Department has recently launched a consultation process on a renewable support mechanism post-AER.

Our role in relation to the AER Competition has been in licensing applicants. In addition, the additional cost of AER over and above the cost of conventional generation is recovered from all customers in the market irrespective of whether they are supplied by ESB or one of the independent suppliers, through the Public Service Obligation (PSO) levy, which we calculate based on S.I. 217 of 2002. In line with our duty to consumers

under our Act, we are conscious of the impact this has on the overall cost faced by final customers. The total costs for the 2003 PSO for AER was €6.6m and in 2004 €16.1m, an increase of €9.5m or over 150%. We anticipate the impact of this on the average electricity tariff will not be insignificant. As the level of renewables increases the ability of consumers to absorb these increases must be considered.

Sustainable Energy Ireland (SEI) was established under the Sustainable Energy Act, 2002. Its functions include advancing the development of renewable sources of energy. The Authority's Renewable Energy Information Office (REIO) provides an independent information and advice service for renewable energy developments.

Background on Renewables and CER

Since our establishment we have endeavoured to carry out the functions and meet the duties laid down in our Act. Under the Electricity Regulation Act the Commission has to exercise its powers having regard to the need to promote the use of renewables or green energy. Renewable energy is broadly defined in the Act and covers eleven sources of energy such as wind, hydro, biomass, waste (including waste heat), biofuel, geothermal, fuel cells, tidal, solar, wave.' To date, the main focus of development has been in exploiting the potential of wind energy since wind is at present the most economic of these technologies.

Since February 2000, the market has been 100% open for green energy. This means that everyone has the right to purchase electricity from a green supplier. The market for conventional or brown electricity will not open to 100% until February 2005. To date I have made a number of key decisions in order to assist in the promotion of renewables and I am happy to see the high degree of interest in the sector.

I have agreed on a number of occasions to amend the Trading and Settlement code (the rules under which all players in the market must operate) in favour of the green sector. For instance, for increased flexibility and in recognition of the fact that the wind does not blow all the time I have

permitted the renewable sector to mix green and non-green electricity in their sales in the market and also in their trades across the Interconnector. However, the Act stipulates that the holders of green licences must balance their green sales with green energy production and I have established that this should be done within a 5% margin on an annual basis. Further, this balancing period is initially set at 2-years to assist new entrants.

As a measure of our success a green supplier – Airtricity - is the third largest supplier of electricity in the market, currently supplying 28,000 businesses with green electricity. The vast bulk of our authorisations and licences are issued for green electricity. Since its establishment, the Commission has authorised the construction of 320MW of wind and issued Licences to Generate to 275MW of wind.

The Commission is mindful of renewables in the design of the new Wholesale Market Arrangements for Electricity (MAE), which is the new wholesale market which will come into effect in February 2006. Indeed there are clear benefits for renewables under the new trading arrangements, such as a guaranteed market for generators, implicit capacity payments, simple bidding strategies and no requirement for balanced schedules.

The Commission was pleased to approve the funding of the Grid Upgrade Development Programme for Renewables known as the Cluster Scheme for €30m in April 2003. In addition, I am interested in the promotion of the full spectrum of renewable technologies. With this in mind I am examining the potential for promoting new technologies such as tidal and wave energy through the establishment of a special R&D Tariff.

Wind Connection Moratorium

I would now like to move on to discuss the present moratorium on wind farm connections to the electricity networks. I have agreed to this moratorium based on the advice of ESBNG, who are the operators of the transmission system.

Operators of electricity grids are conservative by nature and quite rightly will not countenance anything that might jeopardise the integrity of the system.

We have seen a number of system blackouts around the world in the last year or so, nearly all triggered by network problems. They have now advised me that the number of MWs, which could now potentially be connected, could impact on the stability of the system. I have to take full account of that advice and could not lightly discount it. All offers to connect are on the basis that the stations meet the requirements of the Grid Code. None of the proposed wind farms meets these requirements. Up to now what has happened is that developers have applied to CER for derogations from the Code and generally we have agreed.

The Code is a technical document containing the rules governing the operation, development and use of the Transmission System. The main provisions that wind farms struggle to comply with are Fault Ride Through, Voltage and Frequency among others. I will mention Fault Ride Through only. Fault Ride Through deals with the reaction of power stations to faults (often caused by lightning) on the Transmission System. Wind farms trip off the system unlike conventional plant which remains connected and continue generating electricity. This provision is to prevent load shedding.

At present there are 166MW of wind on the system. Between signed connection agreements and live offers there is over 600 additional MW, which, if all were built, would total 775MW on the system. There are 422MW of further applications in process. At present on the island about 3% of installed capacity is wind. With the extra offers now available this could rise to 10% and would reach over 16% if all potential projects outlined above were connected. This contracted percentage is higher than all other European countries except Denmark. However, Denmark is fully interconnected both with the UCTE System (i.e. the wider European mainland network with 550,000MW) and with the Nordel System of 90,000MW by over 4500MW of interconnection. The island of Ireland at present has about 7000MW installed capacity with very limited interconnection. Our system is very small. Reliability of the power system depends on generators contributing to this.

Wind has specific technical characteristics. It is intermittent and cannot be controlled. There will be periods when there is no wind and hence no

production from wind farms. This requires backup generation to be on stand by. Yesterday morning for example wind was contributing less than 20MW out of a demand of almost 4000MW. Sudden surges also create problems.

ESBNG have stated that the reasons for the moratorium are system reliability and stability issues and relate to maintaining the supply-demand balance following faults, the technical nature of wind turbines and the dynamic stability of the system.

It is worth noting that ESBNG have advised that the moratorium has nothing to do with grid capacity issues. The Grid capital investment programme has nothing to do with this situation.

On the 3rd December 2003 ESB National Grid requested an interim pause on wind connections to the end of the year. The Commission expressed its concern that any future remedial measures are necessary and proportionate to the threat facing system reliability by the scale of wind connections. In keeping with our policy of openness and transparency the Commission requested the National Grid to host a public forum to outline the issues. This meeting was held on 17th December 2003 and was attended by a large number of interested parties. In addition, the Commission held a Public Consultation process on the pause. 20 submissions were received and have been published. On the 19th December the Grid requested an extension of the pause for 3 months. The Commission sanctioned this subject to a number of agreed actions taking place during this period.

Agreed Actions

1. We have secured an Accelerated Programme for the Grid Code Review for Wind. ESB National Grid has agreed to prepare this for our approval by the 9th of April.

2. We have committed ourselves to undertaking a survey into wind connections agreed to date in order to assess projected timeframes and potential system impacts.
3. We have requested the National Grid to produce a detailed programme and timetable for the modelling of wind generation plant and the impact of greater penetration of wind on the transmission system.
4. We have also asked the National Grid to submit a detailed work plan on the programme of work for the next three months, which will be published. We are strongly committed to actively monitoring progress and to ensuring timelines are respected.
5. In addition, we have established a representative working group containing both the transmission and the distribution system operators, Sustainable Energy Ireland, the Irish Wind Energy Association and Meitheal na Gaoithe to monitor progress.

Conclusion

Within a few months we will have reached a position where long-term decisions can be made. It is essential that we continue to have reliable high quality electricity to supply our economy and consumers having due regard for the environment.