Department of Communications, Energy and Natural Resources, Ireland.

- Directive 2001/77/EC - Periodic Reports

"Report on a national programme to increase the gross consumption of green electricity"

- supplementing previous reports *[1] by reporting on progress up to 2008.

1 Introduction

1.1 "DIRECTIVE 2001/77/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 September 2001 on the promotion of electricity produced from renewable energy sources in the internal electricity market", ("the RES-E Directive"), inter alia, requires the publication of report/s by member states in accordance with the requirements of Article 3.

1.2 Article 3.2 of the RES-E Directive reads-

> "Not later than 27 October 2002 and every five years thereafter, Member States shall adopt and publish a report setting national indicative targets for future consumption of electricity produced from renewable energy sources in terms of a percentage of electricity consumption for the next 10 years. The report shall also outline the measures taken or planned, at national level, to achieve these national indicative targets. To set these targets until the year 2010, the Member States shall:
> — take account of the reference values in the Annex,
> — ensure that the targets are compatible with any national commitments accepted in the context of the climate change commitments accepted by the Community pursuant to the Kyoto Protocol to the United Nations Framework Convention on Climate Change."

1.3 Article 3.3 of the RES-E Directive reads -.

> "Member States shall publish, for the first time not later than 27 October 2003 and thereafter every two years, a report which includes an analysis of success in meeting the national indicative targets taking account, in particular, of climatic factors likely to affect the achievement of those targets and which indicates to what extent the measures taken are consistent with the national climate change commitment".

1.4 Article 5.3 of the RES-E Directive reads -.

> Member States or the competent bodies shall put in place appropriate mechanisms to ensure that guarantees of origin are both accurate and reliable and they shall outline in the report referred to in Article 3(3) the measures taken to ensure the reliability of the guarantee system."

1.5 This report meets the obligations addressed to member states in Article 3.3 of the RES-E Directive and supplements previous similar reports*[2] up to end 2008.

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[1] http://ec.europa.eu/energy/renewables/electricity/ms_report_directive_2001_77_en.htm

[2] See footnote 1.

2 Target attainment

2.1 The RES-E Directive addresses a target to Ireland of a 13.2% contribution by RES-E to total gross national electricity consumption in 2010.

2.2 The previously notified[3] predicted electricity demand in Ireland in 2010, is (i) 30,898 GWh (low), (ii) 33,158 GWh (medium) and (iii) 34,123 GWh (high). The target adopted for the purpose of estimating the required RES-E generating capacity required in 2010 is the high forecast. It is estimated the 13.2% target will require an available RES-E generating capacity of 1450 MWs installed.

2.4 There is approximately 1,300 MWs of installed and connected RES -E generating capacity available (end 2008). The contribution by RES-E to electricity consumed is increasing year on year as demonstrated in the following table.

Table

Year	2003	2004	2005	2006	2007	2008
%RES-E	4.%	5.%	7%	8.6%	9.4%	12%

2.5 The installed capacity required on an isolated island system to achieve a 13.2% target is calculated at 1,450 MW installed (2.3 above refers). The available RES-E generating capacity is of the order of 1300 MWs installed. There is therefore a requirement for an additional 150 MW installed to achieve a 13.2% target as estimated. There are a further 1500 MW (installed capacity) of proposed projects with both planning permission and connection offers accepted into REFIT, the current national support for RES-E. It is estimated that 300+ MWs of this capacity will be commissioned in 2009.

3 Compatibility with climate change factors.

3.1 The RES-E Directive requires member states to consider " *climatic factors likely to affect the achievement of the target".* Climatic factors will only have an appreciable effect if the available annual resource diminishes as a continuing trend over a period. The preceding reports predicted output or capacity factors by technology as set out below –

Wind large and small scale -	34%
Wind offshore -	38%
Hydro -	50%
Biomass landfill gas -	90%
Biomass anaerobic digestion -	90%
Biomass CHP -	90%.

3.2 Nothing has come to notice since the previous reports were notified to the EU Commission in accordance with Article 3 of the RES-E Directive, to suggest climatic conditions have had a recurring negative impact in the intervening period and therefore climatic conditions have not adversely impacted on the programme to deliver the RES-E target.

4 Compatibility with climate change strategy.

4.1 The RES-E Directive requires member states to consider the "*extent the measures taken are consistent with the national climate change commitment".*

[3] See link to reports at footnote 1

4.2 The measure implementing the national climate change commitment in Ireland at the commencement of the RES-E Directive was the "*National Climate Change Strategy Ireland*", (October 2000). This strategy, where it addressed itself to the electricity market, delivers a target of 1M. tonnes of additional CO_2 savings above the business as usual case, from the use of RES-E for the first Kyoto Protocol commitment period (2008-2012). The case stated in the *National Climate Change Strategy Ireland* was settled at 500 MWs of RES-E generating capacity installed. Progress to date at 1,300 MW installed, which includes large hydro plant, exceeds the target.

5 Guarantees of origin (GOO).

The RES-E Directive (Article 5.5) requires member states to report on guarantees of origin (GOOs) in the reports required by Article 3.2 of the RES-E Directive.

Historically, in Ireland, the purchasing arrangements for RES-E between electricity producers and suppliers (wholesale purchasers) have taken the form of bilateral contracts. The RES-E projects supported to date are in the categories of biomass including landfill gas, small hydro and wind. The entire metered output of these projects qualifies as RES-E in these categories which is purchased bilaterally by suppliers. The suppliers are therefore assured at least cost with the lightest administrative burden possible that the electricity produced and purchased is RES-E which is the objective of GOOs.

The electricity market in Ireland has not supported trade in the virtual value of green electricity and does not facilitate trade in GOO unbundled from the RES-E. No market demand for GOOs has arisen within this market arrangement. Current proposals to co-fire electricity generating plants harnessing both renewable and non-renewable energy sources in the same generating plant and additional functions proposed for GOOs in Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC will require the introduction of additional rules to ensure the evolving functions of a credible GOO system as further elaborated in Directive 2009/28/EC.

6 Conclusions.

The progress achieved to date (see table in 2.4) and the completion of additional connection offers (see 2.5) indicates Ireland can achieve the 13.2% target addressed to it in the RES-E Directive in the course of delivering a higher domestic target of 15% by 2010.

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