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]

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] http://ec.europa.eu/energy/res/legislation/electricity_member_states_en.htm

1.5 This report meets the obligations addressed to member states in Article 3.2 and 3.3 of the RES-E Directive and supplements previous similar reports*[2].

2 RES-E published target attainment

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

2.2 The upstream overall EU target quantified in the RES-E Directive exceeds available RES-E. It can only be achieved therefore by increasing the RES-E generating capacity or by energy efficiency gains or a combination of both.

2.3 The 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 (October 2007) approximately 1,000 MWs of installed RES-E generating capacity available. The contribution by RES-E to consumption is increasing year on year as demonstrated in the following table.

Table

Year	2003	2004	2005	2006
%RES-E	4.3%	5.2%	6.8%	8.6%

2.5 The progress recorded in the preceding table was achieved using a quota based tendering program*[3]. In 2006 Ireland proposed a change to a Renewable Energy Feed-In Tariff program*[4] to support the construction of additional RES-E production plants. The proposed program implementing a feed-in tariff mechanism was approved by the EU Commission in File N571/06*[5] in September 2007. The competent authority is now in the process of putting the program into effect. An EU Commission report (see footnote 4) indicates that at this time feed–in tariffs are the most effective means of increasing RES-E production.

2.6 The capacity required 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 1000 MWs installed. There is therefore a requirement for an additional 450 MW installed to achieve a 13.2% target. Connection offers for an additional combined capacity of 1,300 MW installed will have issued by end 2007. A

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[2] http://ec.europa.eu/energy/res/legislation/electricity_member_states_en.htm

[3] The various support mechanisms are examined by the EU Commission in "*COMMUNICATION FROM THE COMMISSION The support of electricity from renewable energy sources {SEC(2005) 1571}*" see http://ec.europa.eu/energy/res/legislation/support_electricity_en.htm .

[4] http://www.dcmnr.gov.ie/NR/rdonlyres/E260E316-B65A-4FDC-92F0-9F623BA18B55/0/REFITtermsandconditions.doc

[5] http://ec.europa.eu/community_law/state_aids/comp-2006/n571-06.pdf

combination of this additional capacity and the change to a feed–in tariff program is expected to deliver and exceed the 13.2% target by 2010.

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 published in accordance with Article 3 of the RES-E Directive, to suggest climatic conditions have had any negative impacts 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".*

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) addressed to all sectors. This strategy, where it addresses 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 1,000 MW installed, which includes large hydro plant, exceeds the estimate.

5 Guarantees of origin (GoO).

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

Historically Ireland operated a quota based tendering system to support RES-E. The support requires a generator and retail supplier (wholesale purchaser) to enter a bilateral contract for the entire output of individual generating plants. The RES-E projects supported to date were in the categories of biomass including landfill gas and small hydro and. The entire metered output qualifies as RES-E in these categories. The supplier is therefore assured that the electricity produced and purchased was RES-E, using a light administrative approach to deliver the objective of GoOs. The combination of the bilateral

contracts denoting the actual trade and the metered output as a historical fact provide satisfactory reassurance that the RES-E produced and purchased is not overstated by any generator or supplier.

The proposed introduction of co-fired electricity generating plants harnessing both renewable and non-renewable energy sources in the same generating plant is likely to require the introduction of additional administrative rules to ensure a continuing credible GoO system.

6 Future targets.

6.1 The RES-E Directive requires member states to adopt and publish national targets "*for the next ten years*".

6.2 Ireland published a White Paper "*DELIVERING A SUSTAINABLE ENERY FUTURE*"*[6] during 2007. The document includes targets for the increased consumption of electricity from RES-E in Ireland. The targets -E are -

- 15% by 2010 and
- 33% by 2020.

7 Conclusions.

The progress achieved to date (see table in 2.4) and the delivery of substantial additional connection offers (see 2.6) indicates Ireland can exceed the 13.2% target addressed to it in the RES-E Directive in the course of delivering a higher domestic target of 15% (see 6.2 above) by 2010.

END.

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[6] http://www.dcmnr.gov.ie/NR/rdonlyres/54C78A1E-4E96-4E28-A77A-3226220DF2FC/27356/EnergyWhitePaper12March2007.pdf