Reporting under the EU Directive on renewable energy: objectives and measures

1. Introduction

The Dutch government has produced this report in accordance with its obligations under Article 3, Paragraph 2 of Directive 2001/77/EC of the European Parliament and the Council of the European Union of 27 September 2001 on the promotion of electricity produced from renewable energy sources on the internal electricity market (OJ L 283). This article requires Member States to draw up and publish reports laying down national indicative target figures for the coming ten years by 27 October 2002 and every five years thereafter. The report is also required to contain a summary of the measures that have been taken or are planned at a national level with a view to achieving the target figures.

The target figures up till 2010 were established in the light of the following factors:

- the need to take account of the reference values in the annex to the Directive;
- the need for the target figures to be compatible with any national commitments arising from climate change obligations which the Community entered into under the Kyoto Protocol in the United Nations Framework Agreement on climate change.

2. Dutch objectives for renewable energy

Primary energy

The Third Energy Paper ('Derde Energienota') was published in 1996.[1] This paper stated that the objective of Dutch energy policy was to improve energy efficiency by one-third (33%) over the coming 25 years and for renewable energy sources to account for 10% of energy consumption in 2020. The Climate Policy Implementation Paper[2] subsequently sets an interim target of 5% for renewable energy in 2010.

Electricity

The Third Energy Paper expressed the expectation that the use of 10% of renewable energy would relate to a major degree to electricity. It is estimated that of this figure, 6% would represent a shift from fossil fuels to electricity. Furthermore, electricity was expected to account for 35% of primary energy consumption in 2020. From these assumptions we can deduce that in 2020 around 17% of electricity supplies must come from renewable sources ([100 ÷ 35] x 6). The Netherlands has committed itself to reaching this percentage in 2020, and has also set an interim target to be achieved by 2010 of half the target for 2020 (rounded up), which is 9% (reference value in the EU

[1] Tweede Kamer, vergaderjaar 1995-1996, 24 525, nrs. 1-2.

[2] 'Uitvoeringsnota Klimaatbeleid', deel I, Tweede Kamer, vergaderjaar 1998-1999, 26 603.

Directive).[3] For 2005 an interim target of 6% renewable electricity consumption applies, as formulated in the Ministry of Economic Affairs' 2002 budget memorandum[4].

3. Measures used to meet the targets

The Netherlands is taking various measures to encourage the use of electricity from renewable energy sources and to make better use of national production capacity. This involves reducing the price differences (generation and consumption) between fossil energy and renewable energy (demand side) and by direct encouragements to producers (supply side).

Demand side: improving the competitive position of renewable energy

The consumption of renewable energy in the Netherlands is currently encouraged by means of an ecotax exemption for most forms of renewable electricity (Fossil Energy Tax: REB, Article 36i). In 2003 the Netherlands intends to convert this exemption (zero rate) for renewable electricity covered by the REB for consumption up to 10,000 kWh into a discount of 2.9 €ct/kWh on the normal rate for this consumption category[5].
The 2,9 €ct discount is more in line with the current norms of costs of CO_2-emission reduction and the level of encouragement is closer to what is done in other European countries. The change will help create a more level playing field for renewable energy.

The Energy Premium Regulation (EPR) is another instrument aimed at increasing demand for renewable energy. The EPR used to be a tax incentive scheme in Article 36p, paragraph 2 of the Environmental Taxation Act ('Wet belasting op milieugrondslag: Wbm'), but as of 1 January 2003 it will continue as a subsidy scheme. The purpose of the EPR is to encourage investments in energy saving and renewable energy by households and housing associations. Converting the EPR into a subsidy scheme is part of the package devised by the new government[6] aimed at achieving current objectives for

[3] It is important to note here that the annex to the EU Directive containing the reference values for the national indicative target figures is in error when it comes to Dutch renewable electricity consumption in 1997. The figure of 3.45% is based on counting 100% of the electricity produced by waste incineration plants and the effects of industrial heat pumps. Since then, electricity from waste incineration plants is only considered as 50% renewable energy, and energy saved by the use of industrial heat pumps is no longer regarded as renewable (Novem: 'Protocol Monitoring Duurzame Energie', 1999). Reference consumption in 1997 should therefore be corrected to 1.77%, rounded up to **1.8%** (source: CBS/Novem, 1999).

[4] Kamerstukken II, 2001/02, 28 000, nr. 2, p. 96.

[5] Kamerstukken II 2002/03 28 607, nrs. 1-2.

[6] Strategisch Akkoord, Kamerstukken II 2001/02, 28 375, nr. 5.

renewable energy, energy conservation and emissions of greenhouse gases[7] in a more efficient way.

Supply side: direct incentives to producers
The main reasons why the production of renewable electricity cannot meet the sharp rise in demand in the Netherlands is the unstable investment climate and problems relating to land planning and wind energy.

Certainty for investors is an essential part of a good investment climate. To date, certainty has been limited because the most important stimulation instruments for renewable electricity have been tax measures, which can change from year to year. That is why a new scheme called MEP ('Milieukwaliteit Elektriciteitsproductie': Environmental Quality of Electricity production) will be put into force[8]. This new scheme[9] will replace the present fiscal stimulation scheme for renewable electricity producers (REB articles 36o, r and u). The MEP is expected to enter into force in april 2003. Dutch producers of renewable electricity will be able to expect certain benefits from this scheme, such as a subsidy per kWh based on the difference in the operating costs of the relevant form of renewable electricity and conventional (non-renewable) electricity. Compensation will be paid by the national grid operator TenneT and is dependent among other things on the issuing of green certificates. The introduction of the MEP will increase certainty, as producers will be guaranteed of receiving a fixed payment per kWh for a period of ten years.

Regarding the problems associated with land planning, there are opportunities to remove barriers particularly by streamlining, co-ordinating, and accelerating the planning procedures required under the Spatial Planning Act. The government has started some activities in this area in 2002, which were already announced in the 2002 Energy Report[10]. One of these actions involves an exploration on how far procedures and licensing systems can be simplified for initiators of projects on wind energy. By now this exploration has been finished and a global analysis is made of the administrative and legal bottlenecks in the current procedures and regulations for these projects. Some first solutions have been are presented which will be developed further in the year 2003. In respect of offshore wind energy projects located outside Dutch territory but within the Netherlands' exclusive economic zone (EEZ), it is desirable that the full range of

[7] This is a reference to the Kyoto objectives as laid down in the Kyoto Protocol to the United Nations Framework Agreement on climate change (Trb. 1998, 170, and 1999, 110). The objective is to reduce emissions of greenhouse gases by 6% from 1990 levels in the period from 2008 to 2012 (see Kamerstukken II 1999/2000, 27 089 (R 1652), nr. 2, p. 2).
[8] Kamerstukken II 2002/03, 28 665, nrs. 1-2.
[9] Notification of the MEP scheme to the EC is in preparation.
[10] Kamerstukken II, 2001/02, 28241, nr. 2.

financial instruments should also apply throughout the EEZ. This will be achieved by making the 1998 Electricity Act applicable to facilities producing renewable electricity in this exclusive economic zone via the MEP. In addition to this an interdepartmental project group headed by the Ministry for Economic Affairs has been set up in the context of the Wind Energy covenant (BLOW)[11]. The task of this project group is to align the various policy positions and activities of the individual government departments in respect of land-based wind energy. It will offer solutions to the problems it finds. Furthermore a central helpdesk was set up to assist the various authorities in trying to find locations for wind farms in their planning activities.

In addition to the MEP Bill, the Netherlands has two other instruments aimed at stimulating renewable energy consumption by supply-side measures:

- The Energy Programmes Subsidy Decree (BSE)[12]. Part of this is the Dutch Renewable Energy (DEN) programme run by NOVEM (Ministry of Economic Affairs agency and responsible for implementing the scheme). The main thrust of this scheme is the stimulation of research, development and demonstration projects in the field of renewable energy. Applicants submit applications for the tender in which they are tested by a set of criteria to determine which applications have the highest scores. Applications with the highest scores are considered for subsidy. The activities that NOVEM undertakes and contracts out as part of the DEN programme contribute to the policy aims on renewable electricity.
- Schemes to encourage investments in corporate renewable energy projects. These are the energy investment deduction (EIA, Article 3.42 of the 2001 Income Tax Act) and the 2001 energy investment deduction regulation based on it[13]. The CO_2 reduction plan[14] and the 2001 CO_2 reduction plan regulation based on it[15] of which renewable energy is an important part.

[11] The BLOW covenant, signed July 2001, presented to the House of Representatives on 30 August 2001. (Tweede Kamer, 2001, Niet-dossierstuk, nr. ez00000455).

[12] Decree adopted on 8 December 1997, Stb. 623, most recently amended in the decree adopted on 7 December 2001, Stb. 663.

[13] Stct. 2000, 249, most recently amended in the regulation of 5 February 2002, Stct. 28.

[14] Besluit subsidies CO_2-reductieplan', Stb. 1998, 397, most recently amended in the decree of 27 August 2001, Stb. 405.

[15](Stct. 2001, 174, most recently amended in the regulation of 13 September 2001, Stct. 178.

4. Achievement figures for renewable energy[16]

In the Netherlands 42 PJ of renewable energy was domestically produced (Table 1). Total primary energy consumption in 2001 was 3,144 PJ, so 1.3 % of Dutch primary energy consumption came from domestically produced renewable energy sources. The domestic production of renewable energy in 2001 rose by 11% with regard to 2000, as can be seen in Table 1.

Table 1: Primary energy saved (PJprim) as measured in 2001

In accordance with the 'Protocol Monitoring Duurzame Energie'				
DOMESTIC PRODUCTION	**1990**	**1995**	**2000**	**2001**
Hydro power	0.70	0.73	1.18	0.97
Wind energy	0.46	2.62	6.86	6.81
Photovoltaic solar energy	0.00	0.01	0.07	0.11
Thermal solar energy	0.07	0.17	0.41	0.48
Heat pumps	p.m.	0.24	0.63	0.80
Heat/cold storage	0.01	0.07	0.47	0.66
Recurring energy sources	**1.26**	**3.84**	**9.62**	**9.83**
Bio-energy	**15.40**	**17.06**	**28.07**	**32.13**
i.e. Waste incineration	6.31	5.58	11.59	12.86
Biomass incineration	6.48	6.51	10.67	13.44
- local – heat	6.48	6.48	7.40	7.40
- local – eelectricity	0.00	0.00	1.49	1.49
- Co-combustion	0.00	0.03	1.78	4.55
Biomass gasification	0.00	0.00	0.00	0.00
Biomass fermentation	2.62	4.97	5.80	5.82
TOTAL DOMESTIC PRODUCTION	**16.66**	**20.89**	**37.68**	**41.97**

[16] This section is based on figures from CBS/Novem (2002).

Contribution of generated renewable electricity
In the Netherlands 3016 GWh of renewable electricity was generated in 2001 (Table 2). Total electricity consumption in 2001 was 107,139 GWh, so 2.8 % of the consumed electricity in the Netherlands was covered by renewable electricity generated in the Netherlands.

Table 2: Electricity Production (GWh) from renewable energy sources as measured in 2000 en 2001

In accordance with the 'Protocol Monitoring Duurzame Energie'		
DOMESTIC PRODUCTION	**2000**	**2001**
Hydro power	142	117
Wind energy	829	825
Photovoltaic solar energy	7,7	13,1
Thermal solar power	-	-
Heat pumps	-	-
Heat/cold storage	36	53
Recurring energy sources	**1015**	**1008**
Bio-energy	**1601**	**2007**
i.e. Waste incineration	923	1036
Biomass incineration	378	670
Biomass gasification	-	-
Biomass fermentation	300	302
TOTAL DOMESTIC PRODUCTION	**2616**	**3016**

Source: CBS/Novem (2002)

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