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Two reports from the Danish Energy Authority

2 May 2008

Report on the evolution of electricity produced from renewable energy sources

Article 3 of Directive 2001/77/EC of 27 September 2001 states that every five years the Member States must publish a report setting national indicative targets for future consumption of electricity produced from renewable energy sources. The report must also outline the measures taken or planned, at national level, to achieve these national indicative targets. To set these targets up to 2010, Denmark must take account of the reference values in the Annex to the Directive and ensure that the targets are compatible with its commitments under the Kyoto Protocol and the EU's burden-sharing agreement.

Consumption of renewable-energy electricity in 2006

The following table gives actual production of renewable energy in 2005 and 2006 together with reported figures from previous years.

In 2006 renewable energy accounted for 26.5% of domestic electricity supplies, an increase of 10% over 2000.

The largest proportion in 2006 was accounted for by wind power. At 16.8% it produced nearly two-thirds of all renewable-energy electricity. The year was a very poor one for wind, so in a normal year the percentage would be considerably higher – probably a few percent.

Table: Renewable energy's share of domestic electricity supplies

Unit: TJ	1996	1998	2000	2003	2004	2005	2006
Wind power	4 417	10 152	15 268	20 019	23 669	23 810	21 989
Hydro	69	98	109	76	95	81	84
Straw and timber	1 088	1 472	1 482	5 042	6 603	6 818	6 176
Biogas	407	682	751	994	1 013	1 045	1 008
Biodegradable waste	2 120	2 439	3 454	4 151	4 043	5 285	5 389
Total from RE	8 101	14 844	21 068	30 288	35 459	37 047	34 654
Domestic electricity supplies	128 178	125 647	126 393	126 732	127 922	129 208	130 881
% from RE	**6.3**	**11.8**	**16.7**	**23.9**	**27.7**	**28.7**	**26.5**

Source: Energy Authority's 2006 energy statistics

If the RE share is compared to Danish electricity supplies including own consumption during production we obtain an RE proportion of 27.3% in 2005 and 24.8% in 2006.

Measures to promote RE electricity in Denmark

An ever-increasing proportion of electricity consumption will come from renewable energy sources in the coming years. This was stated in the energy policy agreement of 21 February 2008, which is based on a broad political majority and sets the framework for the development of the energy sector over the next few years. The aim is that the RE share of *gross energy consumption* should increase from 15.6% in 2006 to 20% in 2011. That is equivalent to 22.4% RE measured in relation to *final energy consumption.*

Total growth of RE-based electricity production by 2012 will, according to the above energy policy agreement, be some 5.8 TWh, equivalent to about 16% of domestic electricity supplies. Since the proportion of wind power dominates, variations from a normal wind year will have a major impact on the actual RE share in individual years.

As part of the energy policy agreement the aid conditions for RE-based electricity production are being changed. This will result in the creation of new production capacity and thereby increase the RE share.

Wind power

Under the energy policy agreement subsidies to onshore wind farms are to be increased to secure continued and substantial growth.

Moreover, tenders will be invited for several new 2 x 200 MW offshore wind farms alongside the ones already agreed on, and this will generate substantial progress in this type of wind farm.

Some 1300 MW of new wind-farm capacity is expected to be created by 2012. This includes the previously agreed scrapping scheme and the current expansion of the offshore farms at Horns Rev and Rødsand. This is expected to increase the RE share of total gross energy consumption by 0.7 of a percentage point by 2012.

Straw, timber and biogas

The energy policy agreement contains an increased subsidy for the use of biomass in power stations. Use of straw and timber is expected to increase by up to 700 000 tonnes in 2011, equivalent to an increase of total RE share of 1.2 percentage points.

An increased subsidy will also be granted to biogas for new and existing plants. It is therefore expected to increase the overall RE share by 0.3 percentage points of gross energy consumption by 2011.

Biodegradable waste

The self-sufficiency rule for waste incineration at power stations is being repealed. This creates the opportunity for a cost-effective increase in waste incineration capacity and a better use of waste for energy. This is expected to increase the total RE share by 0.2 percentage points of gross energy consumption by 2011.

Fulfilment of indicative targets by 2010

The initiatives launched can be expected to guarantee attainment of 29% RE electricity, which is Denmark's national indicative target for 2010 according to the Directive.

If the RE share is compared to Danish electricity supplies including own consumption during production, which is the comparison method used in the Directive, we expect an RE share of around one-third by 2010 in a normal wind year.

24 April 2008

Report on the evolution of electricity produced from renewable energy sources

Article 3 of Directive 2001/77/EC of 27 September 2001 states that every two years the Member States must publish a report which includes an analysis of success in meeting the national indicative targets for the promotion of electricity from renewable energy sources (RE) taking account, in particular, of climatic factors likely to affect the achievement of those targets.

Consumption of renewable-energy electricity in 2006

The following table gives actual production of renewable energy in 2005 and 2006 together with reported figures from previous years.

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Forecast trends in RE electricity in Denmark

An ever-increasing proportion of electricity consumption will come from renewable energy sources in the coming years. This was stated in the energy policy agreement of 21 February 2008, which is based on a broad political majority and sets the framework for the development of the energy sector over the next few years.

Total growth of RE-based electricity production by 2012 will, according to the above energy policy agreement, be some 5.8 TWh, equivalent to about 16% of domestic electricity supplies. Since the proportion of wind power dominates, variations from a normal wind year will have a major impact on the actual RE share in individual years.

<u>Wind power</u>

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If the RE share is compared to Danish electricity supplies including own consumption during production, which is the comparison method used in the Directive, we expect an RE share of around one-third by 2010 in a normal wind year.