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Letter from:	Permanent Representative, Permanent Representation of Portugal to the European Union, Brussels
Date:	Brussels, 29 October 2007
To:	Mr Mathias Ruete, Energy and Transport DG
Ref.:	Proc. C-630 003144

In accordance with Directive 2001/77/EC, I enclose the third report on progress towards achieving the indicative targets for electricity production from renewable energy sources in Portugal.

Directorate-General for Energy and Geology

Third report on progress towards achieving the indicative targets for electricity production from renewable energy sources in Portugal

(2005-06)

October 2007

Third report on progress towards achieving the indicative targets for electricity production from renewable energy sources in Portugal

Under Article 3(3) of Directive 2001/77/EC, every two years the Member States are to publish a report including an analysis of success in meeting the national indicative targets for electricity production from renewable energy sources.

The third report, which is now published, shows the trend in electricity production in power plants producing electricity from renewable energy sources (RES) and sets out the relevant legal framework for the promotion of RES.

Electricity production in power plants using RES

The following table shows the historical development of electricity produced from renewable sources.

Units: GWh	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Total hydro - corrected (HPI=1)*	13 175	15 322	13 700	13 237	14 744	13 254	14 728	15 140	15 232	14 358
Wind	39	88	122	168	256	362	496	816	1 773	2 925
Biomass (with cogeneration)	1 035	1 021	1 075	1 030	1 065	1 166	1 069	1 206	1 286	1 464
Biomass (without cogeneration)			3.2	7.1	21.4	41.9	42.9	52	64	71
Municipal solid waste			157	514	511	521	549	524	592	514
Biogas	1.3	0.6	1.1	1.6	2.2	2.5	2.3	14	31	33
Photovoltaic	0.7	0.8	1.1	1.4	1.6	1.8	2.6	3.0	3.0	3.0
Geothermal	51.0	58.0	80.0	80.0	105.0	96.0	90.0	84.0	71	85
Wave/tidal										
Total	14 302	16 490	15 140	15 039	16 705	15 446	16 981	17 839	19 052	19 453
Gross prod. and import balance (GWh)	37 106	39 258	42 427	44 695	46 748	48 006	49 646	51 586	53 399	54 521
% of renewable energy (Directive)	38.5%	42.0%	35.7%	33.6%	35.7%	32.2%	34.2%	34.6%	35.7	35.7
Total hydro - actual	13 175	13 054	7 631	11 715	14 375	8 257	16 054	10 147	5 118	11 486
HPI (base year Directive – 1997)	*1.00*	*0.85*	*0.557*	*0.885*	*0.975*	*0.623*	*1.090*	*0.664*	*0.336*	*0.800*

* Precipitation clearly has a significant effect on the results obtained in the production of electricity from RES. For this reason, the hydraulic productivity index (HPI) for the base year (1997) is taken as the reference value.

In Portugal, rainfall is, beyond doubt, the climatic factor with the greatest impact on electricity production from RES, given the large share made up by hydroelectricity, which represented 74% of the total electricity production from RES in 2006.

The growth of wind power, resulting from the entry into service of new wind farms in 2005 and 2006, should be highlighted.

[TABLE]

Growth in installed wind power

MW

Year

Between 2004 and 2006 Portugal's installed wind-power capacity rose by 53% a year on average, with an installed capacity at July 2007 of 1 939 MW.

Legal framework for the promotion of RES

Resolution of the Council of Ministers (RCM) No 169/2005 of 24 October 2005 laid down a National Energy Strategy with the following objectives:

– To ensure security of energy supply by diversifying primary sources and energy services and promoting energy efficiency throughout the supply and demand chain;

– To stimulate and foster competition with a view to protecting consumers and promoting competitiveness and efficiency in enterprises both in the energy sector and in Portugal's production sectors;

– To provide for an environmentally friendly energy process as a whole by reducing the impact on the environment at local, regional and global level, in particular in terms of the carbon intensity of GNP.

To achieve those aims, the National Energy Strategy involves various policy strands, which will translate into instruments to be defined and adopted by legislative and regulatory means. The policy guideline for renewables involves expanding these energy sources, in particular by stepping up and diversifying the use of renewable sources of energy to produce electricity, with special focus on wind power and hydroelectric potential still to be exploited, and raising the target for wind power to 5 100 MW. The following measures were taken in accordance with those guidelines:

- Decree-Law No 33-A/2005 of 16 February 2005 revised the prices paid for energy produced by renewable-energy power plants and delivered to the public electrical grid, and laid down the procedures for allocating the power available on the grid and the time required to obtain authorisations to establish such power stations.

- A public call for tenders was published in July 2005 under Decree-Law No 33-A/2005 for the supply of 1 800 MW of electricity to the public electrical grid from new wind farms.

- A public call for tenders was published in March 2006 under Decree-Law No 33-A/2005 to deliver 100 MW of electricity to the public electrical grid from 15 thermoelectric power plants using forest biomass, with special emphasis on priority areas for the management of forest fuel where there are no investment plans as yet. The aim is to promote the valorisation of forest biomass in conjunction with the timber and paper-pulp industries. The call seeks to achieve two aims: to increase the share of electricity generated from renewables through a network of forest-waste collection plants and to contribute to keeping forests clear and so reduce the risk of forest fires. The forecast is for annual consumption of around one million tonnes of waste from forest management and production activities.

- Contracts for reception points for 922 MW from major new hydroelectric plants were awarded at an estimated investment of over €1 billion.

- A licence was awarded for the establishment of the Moura photovoltaic power plant, Europe's largest, with forecast production of 76 GWh a year.

- Work was begun on a maritime area for the establishment of pilot projects to develop new technologies utilising this energy potential and permitting the establishment of an industrial cluster dependent on wave energy.

  Operation commenced of the world's first wave-power plant with a capacity of 4 MW.

  Under Order-in-Council No 736-A/2006 of 26 July 2006, CEO (Companhia de Energia Oceânia S.A.) was authorised to install the infrastructure for an electricity generating system that harnesses sea-wave power using Pelamis wave-energy converters in a public maritime area off Aguçadoura (on Portugal's central-western coast).

  Law No 57/2007 of 31 August 2007 provides the legal basis for government use of public maritime areas, including territorial waters, for the production of electricity from sea-wave power in an area demarcated to that end.

- In early 2007 new targets for renewable energy were approved:

  – Electricity generated from renewable energy sources is to rise from 39% to 45% of consumption in 2010, with significant development of all sectors;

  – Biofuels are to rise from 5.75% to 10% of road-transport fuel consumption in 2010;

  – 5% to 10% of the coal used in the Sines and Pego power plants is to be replaced by biomass or waste by 2010.

- Decree-Laws Nos 101/2007 of 2 April 2007 and 288/2007 of 17 August 2007 lay down amendments and provide for measures to simplify and streamline licensing procedures in the electricity sector, and in particular in renewable-energy plants.

- Decree-Law No 225/2007 of 31 May 2007 amending Decree-Law No 33-A/2005 of 16 February 2005 provides for a set of measures involving renewables under the National Energy Strategy, and in particular clarifies the procedure for assessing environmental impact, revises the criteria for paying for energy produced from renewables and simplifies licensing procedures.

The following table gives the average indicative tariffs per power-generating technology.

TECHNOLOGY	AVERAGE INDICATIVE TARIFF Decree-Law No 225/2007 (€/MWh)	
	up to 5 MW	over 5 MW
Wind	75	74
Hydro up to 10 MW	77	75
Photovoltaic > 5 kW	317	310
Photovoltaic • 5 kW	450	
Solar-thermo-electric • 10 MW	273	267
Photovoltaic micro-generation • 5 kW	470	
Photovoltaic micro-generation > 5 kW and • 150 kW	355	
Forest biomass	109	107
Animal biomass	104	102
Biogas involving anaerobic digestion of MSW/WWTP (municipal solid waste/waste water treatment plant), livestock effluent and agri-food waste	117	115
Landfill gas	104	102
MSW (incineration)	54	53
Waste-derived fuel (incineration)	76	74
Demonstration wave power up to 4 MW	260	
Pre-commercial wave power up to 20 MW		191
Commercial wave power – first 100 MW		131
Commercial wave power – subsequent 150 MW		101
Commercial wave power – thereafter		76

- A plan was drawn up with a view to building 10 new dams (+ 1 000 MW) in addition to the Baixo Sabor dam.

- The government approved a new simplified system for the production of electricity using micro-generation plants, also known as "*Renováveis na Hora*" ("instant renewables").

- Consideration was given to tax breaks for renewables in the 2008 state budget.

Under the Third Community Support Framework, the Support Measure for the Use of Energy Potential and Rationalisation of Consumption (MAPE) gives financial incentives for investment projects to produce electricity and thermal energy from renewable energy sources. In 2005-06, 43 investment projects of a total capacity of 767.8 MW were approved. The financial incentive given was €108.5 million, corresponding to a total investment of €1 172.6 million.