

**National renewable energy action plan**

**NREAP**

**PORTUGAL**

**First progress report**

**(submitted pursuant to Article 22 of Directive 2009/28/EC)**

**May 2012**

**1. Sectoral and overall shares and actual consumption of energy from renewable sources in the preceding 2 years – 2009 and 2010 (Article 22(1)a) of Directive 2009/28/EC)**

**Table 1:**

**The sectoral (electricity, heating and cooling, and transport) and overall shares of energy from renewable sources<sup>1</sup>**

	2009	2010
RES-H&C <sup>2</sup> (%)	37.86	34.45
RES-E <sup>3</sup> (%)	38.4	41.2
RES-T <sup>4</sup> (%)	3.87	5.59
Overall RES share <sup>5</sup> (%)	24.63	24.57
Of which from cooperation mechanism <sup>6</sup> (%)	-	-
Surplus for cooperation mechanism <sup>7</sup> (%)	-	-

**Table 1a:**

**Calculation table for the renewable energy contribution of each sector to final energy consumption (ktoe)<sup>8</sup>**

	2009	2010
A) Gross final consumption of RES for heating and cooling	2 590	2 241
B) Gross final consumption of electricity from RES (a)	1 789	1 994
C) Gross final consumption of energy from RES in transport	246	349
D) Gross total RES consumption <sup>9</sup>	4 604	4 561
E) Transfer of RES to other Member States	-	-
F) Transfer of RES from other Member States and 3rd countries	-	-
G) RES consumption adjusted for target (D)-(E)+(F)	4 604	4 561

(a) Electricity production from RES harmonising hydro and wind power in accordance with Directive 2009/28/EC

**Table 1b:**

**Total actual contribution (installed capacity, gross electricity generation) from each renewable energy technology in Portugal to meet the binding 2020 targets and the indicative interim trajectory for the shares of energy from renewable resources in the electricity sector<sup>9</sup>**

	2009		2010	
	MW	GWh	MW	GWh
Hydro-electric <sup>10</sup> :	5 080	11 270	5 102	11 775

<sup>1</sup> Facilitates comparison with Table 3 and Table 4a of the NREAPs.

<sup>2</sup> Share of renewable energy in heating and cooling: gross final consumption of energy from renewable sources for heating and cooling (as defined in Articles 5(1)b) and 5(4) of Directive 2009/28/EC divided by gross final consumption of energy for heating and cooling. The same methodology as in Table 3 of NREAPs applies.

<sup>3</sup> Share of renewable energy in electricity: gross final consumption of electricity from renewable sources for electricity (as defined in Articles 5(1)a) and 5(3) of Directive 2009/28/EC divided by total gross final consumption of electricity. The same methodology as in Table 3 of NREAPs applies.

<sup>4</sup> Share of renewable energy in transport: final energy from renewable sources consumed in transport (cf. Article 5(1)c) and 5(5) of Directive 2009/28/EC divided by the consumption in transport of 1) petrol; 2) diesel; 3) biofuels used in road and rail transport and 4) electricity in land transport (as reflected in row 3 of Table 1). The same methodology as in Table 3 of NREAPs applies.

<sup>5</sup> Share of renewable energy in gross final energy consumption. The same methodology as in Table 3 of NREAPs applies.

<sup>6</sup> In percentage point of overall RES share.

<sup>7</sup> In percentage point of overall RES share.

<sup>8</sup> Facilitates comparison with Table 4a of the NREAPs.

<sup>9</sup> Facilitates comparison with Table 10a of the NREAPs.

<sup>10</sup> Standardised production in accordance with Directive 2009/28/EC and Eurostat methodology.

<i>non pumped</i>	<b>3 991</b>	<b>10 127</b>	<b>4 013</b>	<b>10 584</b>
<1MW	35	89	35	92
1MW – 10 MW	351	891	343	905
>10 MW	3 605	9 147	3 635	9 587
<i>pumped</i>	<b>1 089</b>	<b>1 143</b>	<b>1 089</b>	<b>1 192</b>
<i>mixed</i> <sup>11</sup>	1 089	1 143	1 089	1 192
<i>Geothermal</i>	<b>25</b>	<b>184</b>	<b>25</b>	<b>197</b>
<i>Solar:</i>	<b>115</b>	<b>160</b>	<b>132</b>	<b>201</b>
<i>photovoltaic</i>	115	160	132	201
<i>concentrated solar power</i>	-	-	-	-
<i>Tide, wave, ocean</i>	-	-	-	-
<i>Wind</i> <sup>12</sup> :	<b>3 326</b>	<b>7 000</b>	<b>3 796</b>	<b>8 395</b>
<i>onshore</i>	3 326	7 000	3 796	8 395
<i>offshore</i>	-	-	-	-
<i>Biomass</i> <sup>13</sup> :	<b>442</b>	<b>2 384</b>	<b>587</b>	<b>2 904</b>
<i>solid biomass</i>	422	2 301	562	2 804
<i>biogas</i>	20	83	25	100
<i>bioliquids</i>	-	-	-	-
<b>TOTAL</b> <sup>14</sup>	<b>8 988</b>	<b>20 998</b>	<b>9 642</b>	<b>23 472</b>
<i>of which in CHP</i>	272	1 370	456	1 604

N.B.: The capacity indicated above is the maximum for the corresponding years.

**Table 1c:**  
**Total actual contribution (final energy consumption<sup>15</sup>) from each renewable energy technology in Portugal to meet the binding 2020 targets and the indicative interim trajectory for the shares of energy from renewable resources in heating and cooling (ktoe)<sup>16</sup>**

	<b>2009</b>	<b>2010</b>
<i>Geothermal (excluding low</i>	<b>10</b>	<b>10</b>

<sup>11</sup> In accordance with Eurostat's new methodology.

<sup>12</sup> Standardised production in accordance with Directive 2009/28/EC.

<sup>13</sup> Only considers those meeting the applicable sustainability criteria (see the final paragraph of Art. 5(1) of Directive 2009/28/EC).

<sup>14</sup> Standardised in accordance with Directive 2009/28/EC and Eurostat methodology.

<sup>15</sup> Only considers those meeting the applicable sustainability criteria (see the final paragraph of Art. 5(1) of Directive 2009/28/EC).

<sup>16</sup> Facilitates comparison with Table 4a of the NREAPs.

<i>temperature geothermal heat in heat pump applications)</i>		
<i>Solar</i>	<b>35</b>	<b>48</b>
<b>Biomass<sup>17</sup>:</b>	<b>2 508</b>	<b>2 609</b>
<i>solid biomass</i>	1 658	1 699
<i>biogas</i>	25	32
<i>bioliquids</i>	825	878
<i>Renewable energy from heat pumps:</i>		
<i>of which aerothermal</i>	n.a.	n.a.
<i>of which geothermal</i>	n.a.	n.a.
<i>of which hydrothermal</i>	n.a.	n.a.
<b>TOTAL</b>	<b>2 553</b>	<b>2 667</b>
Of which DH <sup>18</sup>	1 206	764
Of which biomass in households <sup>19</sup>	1 161	706

\* n.a. – not available

<sup>17</sup> Only considers those meeting the applicable sustainability criteria (see the final paragraph of Art. 5(1) of Directive 2009/28/EC).

<sup>18</sup> District heating and/or cooling from total renewable heating and cooling consumption (RES-DH).

<sup>19</sup> From the total renewable heating and cooling consumption.

**Table 1d:**  
**Total actual contribution from each renewable energy technology in Portugal to meet the binding 2020 targets and the indicative interim trajectory for the shares of energy from renewable resources in the transport sector (ktoe)<sup>20, 21</sup>**

	<b>2009</b>	<b>2010</b>
Bioethanol/ bio-ETBE	-	-
<i>Of which Biofuels, Article 21(2)<sup>22</sup></i>	-	-
<i>Of which imported<sup>23</sup></i>	-	-
Biodiesel	<b>226</b>	<b>326</b>
<i>Of which Biofuels, Article 21(2)<sup>24</sup></i>	1.3	0.3
<i>Of which imported<sup>25</sup></i>	12.3	16.8
Hydrogen from renewables	-	-
RES electricity	<b>15</b>	<b>19</b>
<i>Of which road transport</i>	-	1
<i>Of which non-road transport</i>	15	18
Others (biogas, vegetable oils, etc.) – please specify	<b>4.5</b>	<b>3.6</b>
<i>Of which Biofuels, Article 21(2)<sup>26</sup></i>	4.5	3.6
<b>TOTAL</b>	<b>246</b>	<b>349</b>

<sup>20</sup> For biofuels take into account only those compliant with the sustainability criteria, cf. Article 5(1) last subparagraph.

<sup>21</sup> Facilitates comparison with Table 12 of the NREAPs.

<sup>22</sup> Biofuels that are included in Article 21(2) of Directive 2009/28/EC.

<sup>23</sup> From the whole amount of bioethanol / bio-ETBE.

<sup>24</sup> Biofuels that are included in Article 21(2) of Directive 2009/28/EC.

<sup>25</sup> From the whole amount of biodiesel.

<sup>26</sup> Biofuels that are included in Article 21(2) of Directive 2009/28/EC.

**2. Measures taken in the preceding 2 years and/or planned at national level to promote the growth of energy from renewable sources taking into account the indicative trajectory for achieving the national RES targets as outlined in your National Renewable Energy Action Plan (Art. 22(1)a) of Directive 2009/28/EC)**

*Table 2: Overview of all policies and measures*

**Measures completed at 31 December 2010**

Name and reference of the measure	Type of measure	Expected result	Targeted group and/or activity	E/ P	Start and end dates of the measure	
					Start	End
1. Signing of a contract to operate the test area	Voluntary	Installation of wave energy demonstration projects	REN	P	2010	2010
2. Launch of a tender for up to 1 800 MW of wind power	Regulatory	1 800 MW of wind power installed	Renewable energy producers	E	2005	2008
3. Increasing and diversifying schemes for electricity production in all areas of renewable energy, particularly wind and hydro	Voluntary	By 2010, 39% of final electrical energy production will come from renewable energy sources	Renewable energy producers	E	2006	2010
4. Solar Heat Programme (homes +IPSS (Private Social Solidarity Institutions) +ADUP (public service sporting associations)	Financial	Installing 225 000 m <sup>2</sup> of solar panels in target sectors and the production of 54 MWh of renewable energy	End-user (homes and institutions)	E	2009	
5. Outdoor information campaign on the 2009 solar heat programme (radio, television and the printed press)	Information campaign	Promotion of solar heating in Portugal	End-user	E	2009	2010
6. Mandatory inclusion of biofuels in diesel. Compensatory payments from operators which must include biofuels in road fuel in the absence of the necessary certificates	Regulatory	2009 – 6% (v/v) and 2010 – 10% (v/v). However these inclusion objectives will need to be revised if no amendment is made to the EN 590 European standard on diesel, or if this standard is not replaced by a new one.	Operators selling diesel on the retail market	E	2009	2010
7. Partial or total ISP exemption for biofuels intended for road transport.	Regulatory	<u>Biofuels replacing diesel:</u> 2007 – 183 270 toe; 2008 – 252 608 64 toe; 2009 – 268 396 68 toe; and 2010 – 284 184 72 toe  <u>Biofuels replacing petrol:</u> 2009 and 2010 – 88 395 62 toe	Biofuel producers	E	2007	2010

		<u>Small specialist producers:</u> 2009 and 2010: 40 000 tonnes				
8. The use of ISP exemption for road fuel containing biofuels as a means of promoting Portuguese agricultural enterprises supporting this sector	Financial	Increase in the percentage of endogenous raw materials used in biofuel production	The agricultural sector	E	2007	2010
9. Amendment of the Portuguese Excise Duty Code (CIEC) to exempt biofuels totally or in part from ISP taxes	Regulatory	Increase in the consumption of biofuels	Economic operators	E	2006	2010
10. Transposition into Portuguese law of Directive No 2003/30/EC, on the promotion of the use of biofuels or other renewable fuels for transport	Regulatory	5.75% biofuel content in fossil fuels, expressed as energy content in 2010	Operators in the biofuels sector	E	2006	2010
11. Rail link to the port of Aveiro	Financial	Transfer to ships of 1 553 kilotonnes of goods per year, starting in 2007. Starting in 2010, rail-to-rail transfer of goods carried on the rail link to the port of Aveiro.	REFER	E	2001	2009
12. Transposition of the co-generation directive (1)	Regulatory	Promotion of cogeneration based on renewable energy	Renewable energy producers	E	2010	2010
13. 30% tax reduction in respect of amounts spent of the purchase of the following goods for personal use, with a ceiling of EUR 803: a) New RES equipment; b) Equipment and works to improve the thermal performance of buildings with a direct impact on increasing their insulation; c) Vehicles that have to be licensed and which are powered exclusively by electricity or by non-fuel RES.	Regulatory/financial	Increase in the use of renewable energy	End-user	E	2010	2010
14. 30% tax reduction in respect of amounts spent of the purchase of the following, with a ceiling of EUR 796: a) New RES equipment; b) Vehicles that have to be licensed and which are powered exclusively by electricity or by non-fuel RES.	Regulatory/financial	Increase in the use of renewable energy	End-user	E	2009	2009

**Measures ongoing at 31 December 2010**

Name and reference of the measure	Type of measure	Expected result	Targeted group and/or activity	E/ P	Start and end dates of the measure	
					Start	End
1. Ensure that capacity allotted at the time of writing to the various technologies (hydro, wind, biomass and others) is built and installed	Voluntary	The economic situation has caused delays in some projects, particularly wind and biomass projects. However, these should not jeopardise the execution of the contracts. A close follow-up and monitoring will continue to be made on contract execution.	Renewable electricity producers		Continuous	
2. Electrical mobility programme	Regulatory and financial	2010: 300 slow-charging points and 20 fast-charging points 2011: 1 300 slow-charging points and 50 fast-charging points	End-user/Municipalities	E	2009	
3. MOBI.E programme to promote electric vehicles	Voluntary	Introduction of electric vehicles as an alternative in road transport. Development of a pilot network covering 25 municipalities by 2012	Municipalities	P	2010	
4. Transposition and application in Portugal of directives and best practice in the area of biofuels and in particular the setting of sustainability criteria and high quality standards	Voluntary	Ensure sustainable production of biofuels	Operators in the biofuels sector	P	2010	2020
5. Promote the use of endogenous resources in the production of biofuels, increasing the link with Portuguese agriculture and solutions founded on second-generation biofuels	Voluntary	Increase in the use of endogenous resources in biofuels production and the promotion of the production of biofuels from residues, waste, non-food cellulosic material, and ligno-cellulosic material	Operators in the biofuels sector	P	2010	2020
6. Strengthening the Biomass Energy Centre, setting up a centre for research, certification and general coordination in the biomass sector in cooperation with MEE and MAMAOT	Voluntary	Increase in sustainable biomass use	Companies producing and processing forest biomass	P	2010	2013
7. Launch programmes to co-finance space heating and waste water equipment by using heat recuperators and boilers powered by biomass.	Financial	Promote the introduction and use of small biomass plant for space heating and producing hot water in homes and in suitably equipped public services	Municipal buildings, schools, IPSS		Applications on/off	
8. Set up a pilot Project on Évora as a 'smart city'		Promote the integrated management of decentralised energy production, the intelligent charging of electric vehicles and consumption management, using smart meters, and a more efficient management of network operations.	EDP		2010	2012
9. Promoting capacity through over-equipment	Regulatory	400 MW per wind plant upgrade	Renewable electricity producers	E	2010	
10. Micro-production incentives (plants of up to 3.68 kW under the preferential scheme and up to 5 kW under the general scheme)	Regulatory/financial	2010: 62 MW and 8 793 toe 2015: 165 MW and 23 447 toe	Final user (homes)	E	2007	

11. Micro-production schools: Installing micro-production systems to produce electrical energy in public schools	Financial/Voluntary	2010: 5.6 MW and 605 toe 2015: 15 MW and 1 613 toe	Portuguese state (buildings)	E	2008	
12. Improvements in the capacity of existing hydro-electric plants (Picote, Bemposta e Alqueva).	Voluntary/financial	575 MW of capacity (hydro power)	Renewable electricity producers	E	2007	2012
13. Investment in hydro-electric power using pumps; this investment is important so as to ensure proper meshing with wind resources	Financial	Construction of 10 new dams. Installed capacity of <b>1100 MW</b> and an estimated annual production of 1630 GWh to also include upgrades to eight already existing dams.	Renewable electricity producers	E	2008	2017
14. National Strategic Plan for hydro energy investments scheduled for the 2007-2020 period. Approval of the National Programme for Dams with High Hydro-electric Potential (PNBEPH).	Voluntary		Renewable electricity producers	E	2007	2017
<b>15. Special rates for electrical energy produced from RES</b>	Regulatory	Increase in amount of electricity produced from RES	PRE	E	2007	
16. Creation of a decentralised network of biomass plants (some 15 new plants)	Regulatory	100 MW of capacity	Renewable electricity producers	E	2006	2014
17. <b>Solar heating – Swimming pools:</b> Installing solar heating systems for water in swimming pools and swimming basins in seaside resorts.	Financial/Voluntary	2 301 toe in 2010 and 6 138 toe in 2015	Portuguese state (buildings)	E	2008	2015
18. <b>Solar heating – Sports facilities:</b> Installing solar heating systems for water.	Financial/Voluntary	2 301 toe in 2010 and 6 138 toe in 2015	Portuguese state (buildings)	E	2008	2015
19. Solar hot water programme for Portugal	Information campaign	<b>2005 – 2006:</b> 13 000 m <sup>2</sup> /year <b>2007 – 2020:</b> new capacity of de 100 000 m <sup>2</sup> /year	End-user	E	2003	2006
20. Creating specifications permitting the marketing of fuels with a biofuel content higher than those laid down in the current rules, with maximum levels of 20% starting in 2008 for vehicles for which such specifications are compatible.	Regulatory	Increase in the consumption of biofuels	Operators placing diesel on the consumer market/ Fuel companies	P	2008	
21. Setting a minimum content of 5% of biofuels in coloured, marked diesel starting in the second quarter of 2008	Regulatory	Increase in the consumption of biofuels	Operators placing coloured, marked diesel on the market for consumption	E	2008	
22. Modal shift for the extension of the Lisbon metro system (Lisbon Metropolitan Transport Authority)	Financial	130 428 toe in 2015	Metropolitan authority	E	2004	2015
23. Modal shift for the construction of the Porto metro system (Porto Metropolitan Transport Authority)					2006	2015

24. Increase in the use of the railway network	Voluntary	31 123 in 2010 and 33 577 toe in 2020	End-user	E	2008	2020
25. Amortisation over a four-year period of investments in solar energy equipment, with a ceiling of 25% in respect of the repayment rate and applicable amortisation. This means that solar systems can be amortised in 4 years, irrespective of any other incentives.	Regulatory/ financial	Increase in the use of renewable energy	Enterprises	E	2010	
26. Setting up an Innovation Support Fund (FAI)	Regulatory/ financial	The promotion of research and development in the field of renewable energy	Renewable energy sector	E	2008	
<b>27. Residential buildings:</b> Achieve minimum quotas in new buildings by building type. Overhaul facilities where repairs are needed.	Regulatory	34 792 toe in 2010 and 94 436 toe in 2015	End-user (residential)	E	2006	2015
<b>28. Service-oriented buildings:</b> Achieve minimum quotas in new buildings by building type. Increase the use of co-generation systems. Introduce solar heating by means of micro-production in schools.	Regulatory	32 561 toe in 2010 and 98 386 toe in 2015	Services	E	2006	2015
29. QREN – Funding of innovative pilot actions in the area of energy production (using RES) and its rational use.	Financial	Increased use of RES in transport, heating and cooling	Renewable electricity producers/ Enterprises	E	2007	2013
30. Creation of Forest Intervention Zones (ZIF)	Regulatory	Increase in available biomass	Forest owners or operators	E	2005	
31. Appliances, machines and other equipment, wholly or mainly intended for harnessing and using the sun's rays, wind, geothermal energy or other alternative energy sources will be subject to the middle VAT rate of 12%.	Regulatory/ financial	Increase in the use of renewable energy	End-user/Enterprises	E		2011

These measures prompt the following comments:

The National Plan on Dams with High Hydro-Electric Power Potential (PNBEPH) which was submitted in the National Renewable Energy Action Plan (PNAER) has been modified to reflect a number of environmental and financial questions. The PNBEPH thus now includes the construction of four dams with a power capacity of 834 MW by 2020, with a further three dams planned for the post-2020 period with a power capacity of 1154 MW. Of these dams, four are reversible.

As regards the 15 forest biomass power plants, awards were made in the case of 11 plants (76 MW) of which four are already licensed (19 MW). Construction of these is expected to be completed in 2014; two are already in operation (5 MW) and two have been shelved (4 MW). Financial and legal issues have blocked the signing of contracts in the case of two plants (20 MW).

**2.a Please describe the progress made in evaluating and improving administrative procedures to remove regulatory and non-regulatory barriers to the development of renewable energy (Art. 22(1)e) of Directive 2009/28/EC)**

The licensing of renewable energy electricity generating installations is essentially governed by Decree-Law No 189/88 of 27 May 1988 laying down the rules for electrical energy production by natural persons or by legal persons governed by public or private law, and by Decree-Law No 312/2001 of 10 December 2001, which lays down the detailed rules for the management of reception capacity in public service electricity grids.

In addition to this basic legislation there is a set of provisions which, in addition to laying down the rules for authorising public network connections, also contains provisions which allow the planning of the development of renewable energies and simplification of procedures for granting licences to connect generating installations to the national grid, for example Decree-Law No 288/2007 of 15 July 2007, which allows the allocation of a production licence prior to the environmental compliance report for the draft implementation plan (RECAPE).

The planning instruments for electricity transmission and distribution networks are the *Planos de Desenvolvimento e Investimento da Rede de Transporte* (PDIRT – Plans for the Development of and Investment in the Transmission Network) and the *Planos de Desenvolvimento e Investimento da Rede de Distribuição* (PDIRD – Plans for the Development of and Investment in the Distribution Network). These are medium-term plans prepared by system operators demonstrating the future development of networks to meet the needs not only of consumption and production but also of installed capacity in production centres based on renewable energy sources (RES).

The Directorate-General for Energy and Geology (DGEG) is the body responsible for connections to the network and for approving projects for producing electrical energy based on RES and is a one-stop-shop for non-hydro projects.

The legislation which applies in this case is, as mentioned above, Decree-Law No 312/2001 of 10 December 2001. This act clearly explains all the steps that need to be taken, including the request for prior information, the conditions for connection to the electrical grid and the award of the electricity production plant operating licence.

The PIP (*Pedido de Informação Prévia* – request for prior information) procedure has been little used recently in view of the limitations of the electricity reception capacity, thus making it possible to respond immediately to all connection requests. In view of this, lately the procedure for allocation of the reception point for electricity has been by tender under Article 14 of Decree Law No 312/2001 of 10 December 2001, and available network reception capacity has been identified from the outset, thus making it possible to overcome any doubt as to whether there is any available spare capacity for the purposes of prior information.

Hydroelectric plants require authorisation to use water resources for energy production, granted by the relevant *Administração da Região Hidrográfica* (ARH) (administrative authority for the catchment area), subject to DGEG authorisation.

These procedures, by their nature, require other potential stakeholders to be heard and – where other such stakeholders exist – mean that, pursuant to the Water Framework Law and Decree-Law No 226-A/2007 of 31 May 2007, a tender procedure must be initiated, resulting in longer licensing periods. Despite this, the ARHs' efforts in this area must be acknowledged, in terms of the proposals they have submitted to simplify licensing procedures or to clarify procedures, in particular through work on the manuals of procedures.

### Simplified licensing regimes

#### – Micro-generation

Micro-generation is governed by Decree-Law No 363/2007 of 2 November 2007, amended and republished by Decree-Law No 118-A/2010 of 25 October 2010, and by an Order of the SEEI of 26 November 2010 which laid down the procedure for applications for registration.

Micro-generation concerns the bringing into line of low-power RES electricity generation installations up to 3.68 kW or 11.04 kW (for blocks of flats) and to promote solar hot water, with clear rules laid down in the legislation and in the website for authorising such installations.

The main features of this scheme are:

- Annual programme with dates fixed in advance and made public in order to harmonise the implementation and entry into operation of the installations across the year;
- Simplification of the entire process;
- Licensing through the *Sistema de Registo de Microprodução* (SRM – micro-generation registration system), an electronic platform where public authorities and producers may interact, accessible via the renewable industry portal Portal Renováveis na Hora: <http://www.renovaveisnagora.pt>;
- Automatic allocation of power;
- Inspection of installations requests by SMS.
- Installation operation certificate issued within 120 days, and interconnection to a network within a further 30 days; and
- a fixed cost for the whole process.

These production facilities linked with consumption installations entail energy efficiency measures, with the resulting benefits reducing the need for new network investment and avoiding losses in the distribution network as a result of decentralised production.

Since the beginning of the programme in 2008 the quota of power available annually has always been achieved since supply has been exceeded. Under Decree-Law 363/2007, 10 339 installations, totalling 35 MW, have been licensed. After the amendments introduced by Decree-Law 118A/2010, 10 330 installations, with a total output of 37 MW, were licensed.

#### – Mini-generation

Mini-generation is governed by Decree-Law No 34/2011 of 8 March 2011 and by an Order of the SEEI of 21 April 2011, which laid down the procedure for applications for registration.

Mini-generation concerns the bringing into line of low-power RES electricity generation installations from 3.68 kW or 11.04 kW (for blocks of flats) to 250 kW associated with the implementation of energy efficiency measures.

As for micro-production, licensing is carried out through a Sistema de Registo de Miniprodução (SRMini), accessible via the Renováveis na Hora portal at: <http://www.renovaveisnahaora.pt>

With this measure operators may request the issue of the operating licence within the period of 190 days for low-voltage (LV) installations, and 250 days for medium-voltage (MV) installations, with the latter being connected to a network within a further 30 days.

Since the beginning of the programme in June 2011, 236 mini-generation installations were licensed to date, totalling about 13.5 MW.

#### – Offshore RES projects

In 2008 the Government established, by Decree-Law No 5/2008 of 8 January 2008, a pilot zone with capacity to receive about 250 MW from wave energy, with the aim of contributing to the development of this technology, simplifying administrative barriers, easing burdens and reducing the length of time for decisions through a simplified procedure. This type of energy may be produced under one of three schemes: as a concept demonstration scheme, as a pre-commercial scheme or as a commercial scheme.

A managing body was also set up entrusted with running the pilot area, charged with kick-starting the process, allocating licences and authorisations, including the authorisation to use the corridor for the deployment of infrastructure for connection to the associated public grid, and putting in place the appropriate means to publicise and promote the pilot area nationally and internationally.

It should be noted that, before the pilot area was set up, a number of opinions from bodies with responsibility for the sea coast were needed to set up a project of this type, namely from: IH - Instituto Hidrográfico, INAG - Instituto da Água, ICNB - Instituto de Conservação da Natureza, IPTM - Instituto Português e dos Transportes Marítimos, IPIMAR - Instituto de Investigação das Pescas e do Mar, DGEG - Direção Geral de Energia e Geologia, REN - Rede Eléctrica Nacional, and EDP - Eletricidade de Portugal.

At present, it is not necessary, when granting concessions for hydroelectricity, for operators to seek a licence for the private use of public-domain water resources when they pursue their activity relating to the production of electricity within the pilot area.

#### – Mini-hydro schemes

The current process for establishing mini-hydroelectric generating installations as referred to above requires permission to use water resources, as provided for in Law No 58/2005 of 29 December 2005 (Lei da Água – Water Law) and Decree-Law No 226-A/2007 of 31 May

2007, and the allocation of capacity to feed power into the public service electricity grid and identification of the relevant reception points for the production of electricity from RES.

Obtaining such rights and administrative authorisations involves dealing with different authorities and different legal schemes, so it became essential to simplify those procedures so that one step was all that was required in order to obtain the necessary authorisations to operate mini-hydro installations and make full use of their potential.

To that end, the Decision of the Council of Ministers (RCM – Resolução de Conselho de Ministros) No 72/2010 of 2 September 2010 launched a public procurement procedure ensuring that the various licensing authorities' procedures are co-ordinated.

These regionally-based joint initiatives made it possible to authorise two things at once: use of water resources (*títulos de utilização dos recursos hídricos* – TURH) for certain sections of river; and the proper level of power to be fed into the relevant area of the grid in order to produce energy, thus contributing to strengthening coordination of the licensing bodies involved.

Pursuant to that Decision, Decree-Law No 126/2010 of 23 November 2010 introduced detailed rules for the establishment of hydroelectric installations of up to 20 MW installed capacity.

The definition of zones where these operations were to be established took into account the studies already drawn up or in preparation by the ARHs, in particular as regards water resource planning at sub-basin level, to ensure the necessary balance between the economic development furthered by such uses and preservation of the water resources and the environment, in particular as regards avoiding significant impact in environmentally sensitive areas, without prejudice to the requirement for environmental impact assessments or assessments of effects on the environment in accordance with the applicable legislation.

ARH therefore defined the sections of rivers where such hydroelectric installations were feasible and set the power level for interconnection to the public electricity grid for each section while at the same time ensuring connection capacity to the public grid for the power to be tendered for, which was examined by DGEG and defined by network operators.

The ARHs listed the river stretches where the installation of hydro-electric plant was viable and established the connection power to the electrical network for each stretch. This also guaranteed the connection capacity to the network for the power that was put out to tender, which was assessed by the DGEG and defined by the network operators.

This tendering exercise resulted in the award of 78 MW distributed among various lots drawn up by the ARHs of the North, the Centre and Lisbon and Vale do Tejo.

Moreover, RCM No 72/2010 laid down special rules governing the expropriations necessary for such hydroelectric installations with the aim of ensuring their completion and operation as soon as possible, thus ensuring swift expropriation procedures, whilst observing private rights in accordance with the law.

Decree-Law No 126/2010 of 23 November 2010 was enacted in order to achieve the abovementioned objectives.

Action to improve current procedures:

A working group comprising the following bodies was set up by the Secretary of State for the Environment and Land-Use Planning and the Secretary of State for Energy: Agência Portuguesa do Ambiente (Portuguese Environment Agency – APA), the water catchment authorities for the regions Lisboa and Vale do Tejo (ARH-LVT), Instituto da Água (the water authority – INAG), Comissão de Coordenação e Desenvolvimento Regional (the Commission for coordination and regional development – CCDR), Direção Geral de Energia e Geologia (DGEG) and the Portuguese National Engineering and Geological Laboratory (Laboratório Nacional de Engenharia e Geologia – LNEG).

This working group made the following recommendations:

General:

- Strengthen DGEG's role as interlocutor in all licensing procedures, coordinating the interactions between the various actors involved.
- MEE/DGEG to examine first the economic viability and interconnection to the public grid.
- MAMAOT (Ministry of Agriculture, Sea, Environment and Regional Planning)/APA to examine only those applications which meet network interconnection conditions and economic viability criteria.
- Creation of an electronic platform to provide support for the operation of the one-stop shop for monitoring each process application.
- Optimisation and simplification of procedures.

Hydroelectricity licensing procedures:

- Creation of regulations for the environmental impact assessment procedure and issue of the environmental impact declaration by CCDRs, with the exception of environmental impact analysis for the Natura 2000 network.

Licensing procedure for hydroelectric plants:

- Proposal to link the environmental impact assessment procedures with the issue of public-domain water resource use permits (Títulos de Utilização do Domínio Hídrico - TUDH) to consider whether the procedures might be merged.
- Although the improved model licence has brought improvements to the procedure, there are still a number of aspects which require an immediate practical solution (transitional arrangements) – these concern earlier TUDH applications which are still in the ARHs' hands. It is necessary to define procedure to be followed.

- Need for a planned *ex-ante* analysis of installation/authorisation of mini-hydro schemes (particularly in the North and Centre regions); the management plans for river basins should be the starting point when taking into account the needs of production, the availability of network connection, the management of water resources and the integrity of river and freshwater ecosystems.
- Creation of a simplified TUDH scheme for situations to be defined and determined by the MAMAOT.
- Creation of simplified scheme for granting TUDH for micro and mini-generation (with its own simplified set of rules)

**2.b Please describe the measures in ensuring the transmission and distribution of electricity produced from renewable energy sources and in improving the framework or rules for bearing and sharing of costs related to grid connections and grid reinforcements (*Art. 22(1)f) of Directive 2009/28/EC*)**

In a effort to give some definition to national energy guidelines and ensure that the Portuguese electricity grid is managed efficiently, the REN - Portugal's national energy transmitter - has devised and applied a strategy to expand and strengthen the MAT electricity transmission network as a whole including its interconnectivity with the distribution network

These guidelines are in step with Europe's energy strategy and are set out in the National Energy Strategy (NES). These documents set out what is aimed for as regards the harnessing of existing natural resources, with a particular emphasis on electrical energy production from renewable sources.

With this in mind the REN is in very close contact not only with the potential promoters of such schemes but also with other bodies, the competent government bodies in particular, in order to identify those regions with the greatest energy potential (especially where hydro and wind power are concerned). A plan to extend and strengthen the network was devised in line with the needs that were identified. One of the outcomes of this plan was a significant increase in the REN's investment needs; around EUR 30 million per year has been allotted for the inclusion of renewable energy sources over the last few years.

At the same time efforts have been made in the area of research and development so as to ensure the necessary technical conditions for maintaining the security and quality of consumption, in light of the high level of volatility and irregular nature of this type of production. An important part of this work is the creation of technical requirements for irregular producers so they may connect to the grid.

The rules on assuming and dividing up the costs for connections to the grid are laid down in the Regulation on commercial relations in the electricity sector. The commercial rules on establishing connections to grids for producing or consuming electrical energy are set out in chapter X of this Regulation (p. 67), and in particular:

- Grid operators must provide connections from plant producing electricity, in line with the reception capacity of the electricity grids, and in accordance with applicable legislation;
- Identification of electricity production plant (by output) that must be connected to distribution or transport grids;
- Responsibility for connection charges:
  - private connections are to be paid for by the applicant; and
  - global development of a grid to ensure that energy policy guidelines which are the responsibility of the operators of the grid are followed, with the charges being passed on within the wider operation of the system.

In addition, the implementation of connection projects is supervised by the grid operator, which must also provide the necessary technical support.

The division of costs associated with access to the electricity distribution grid is also subject to the Regulation on commercial relations in the electricity sector. In the specific cases of micro-production and mini-production, the connection is made at the associated client's connection point, with the costs of the client's connection divided as laid down in Article 91 of the Regulation.

The costs arising from connections to the electricity production centre planned for the pilot area, created by Decree-Law No 5/2008, are an exception to the rules described above.

The Regulation also provides for producers with installed capacity of less than or equal to 50 MVA to connect to the grid with the only condition being the reception capacity in the upstream transport network.

The operator of the distribution grid launched the Inovgrid project in the city of Évora. This project provides the electricity grid with information and intelligent equipment capable of automating energy management and thus improving the quality of the service.

The Smartgrids concept has the potential to help further integrate RES producers in the grid given that information provided quickly on the status of the grid helps to attract a larger number of connected producers compared to today's limited numbers that are the result of conservative criteria.

**3. Please describe the support schemes and other measures currently in place that are applied to promote energy from renewable sources and report on any developments in the measures used with respect to those set out in your National Renewable Energy Action Plan (Art. 22(1)b) of Directive 2009/28/EC**

Figures from the years covered by the report (2009 and 2010) are required to properly understand changes in schemes to promote energy from renewable sources.

**Table 3a: Support schemes for renewable energy in 2009**

RES support schemes year n (e.g. 2009)		Per unit support	Total (M€)*
Biofuels (biodiesel)		€/m <sup>3</sup>	
	Tax exemption (major producers)	280	79,7
	Tax exemption (small specialist producers)	364.41	2.1
RES electricity		€/MWh **	
	Production incentives – feed-in tariff (additional cost above market rates)		
	Micro-generation (photovoltaic)	592.9	6,3
	Photovoltaic	283.1	39.4
	Biomass	65.5	20.0
	Biogas	61.3	4.4
	Renewable co-generation	42.5	69.7
	Wind	49.1	366.0
	Mini-hydro (up to 10 MW)	42.9	34.9
	Municipal solid waste	35.7	16.3
Solar Thermal			
	Investment subsidies (capital grants or loans) (€/unit)	n/a	90
IRS deductions (RES equipment)			
	Tax exemption/refund	n/a	n/a
Total annual estimated support in the electricity sector		51.6	557.0
Total annual estimated support in the heating sector			90
Total annual estimated support in the transport sector			81.8

\*The quantity of energy promoted by the per unit support gives an indication of the effectiveness of the support for each type of technology

\*\*Average extra cost compared to the average market price of EUR 44.61/MWh in 2009

**Table 3b: Support schemes for renewable energy in 2010**

RES support schemes year n (e.g. 2010)		Per unit support	Total (M€)*
Biofuels (biodiesel)		€/m <sup>3</sup>	
	Tax exemption (major producers)	280	103,6
	Tax exemption (small specialist producers)	364.41	1.6
RES electricity		€/MWh **	
	Production incentives – feed-in tariff (additional cost above market rates)		
	Micro-generation (photovoltaic)	584.7	21.6
	Photovoltaic	291.9	48.7
	Biomass	69.4	42.4
	Biogas	68.2	6.3
	Renewable co-generation	52.5	91.8
	Wind	53.0	479.0
	Mini-hydro (up to 10 MW)	50.0	68.1
	Municipal solid waste	42.2	19.1
Solar Thermal			
	Investment subsidies (capital grants or loans) (€/unit)	n/a	9.5
Total annual estimated support in the electricity sector		57.5	777.0
Total annual estimated support in the heating sector			9.5
Total annual estimated support in the transport sector			105.2

\*The quantity of energy promoted by the per unit support gives an indication of the effectiveness of the support for each type of technology

\*\*Average extra cost compared to the average market price of EUR 38.74/MWh in 2010

**Table 3c Support schemes for renewable energy in 2011P**

RES support schemes year n (e.g. 2010)		Per unit support	Total (M€)*
Biofuels		€/m <sup>3</sup>	
	Obligation/quota (5% energy content )	-	-
	Penalty (€/toe of missing biofuel)	2000 €/toe	
	Tax exemption (small specialist producers)	364.41	1.6
RES electricity		€/MWh **	
	Production incentives – feed-in tariff (additional cost above market rates)		
	Photovoltaic	290.8	54.4
	Biomass	61.1	42.0
	Biogas	58.7	8.9
	Renewable co-generation	43.3	78.2
	Wind	41.7	380.3
	Mini-hydro (up to 10 MW)	39.6	40.2
	Municipal solid waste	32.2	15.6
Total annual estimated support in the electricity sector		n/a	619.7
Total annual estimated support in the heating sector			0
Total annual estimated support in the transport sector			1.6

\*The quantity of energy promoted by the per unit support gives an indication of the effectiveness of the support for each type of technology

\*\*Average extra cost compared to the average market price of EUR 51.84/MWh in 2010

A study of tables 3a, 3b and 3c demonstrates the following:

- ISP exemptions were granted to biofuels used in fossil fuels in Portugal in the transport sector. This support scheme was rescinded by Decree-Law No 117/2010 of 25 October 2010 in the case of major producers after a number of energy content targets were set for the 2011 – 2020 period (see Article 11 of Decree-Law No 117/2010). Tax exemption was only

maintained for small specialist producers as laid down in the Portuguese Code on Special Taxes on Consumption.

In the case of electricity production from renewable sources, FITs are established according to which technology is used; subsequently the value of the additional cost of these FITs over and above market prices is entered in the tables.

- In the case of the heating and cooling sector, a financial support campaign for the installation of solar panels in homes was launched in 2009; another for SMEs was launched in 2010. In 2011 there was no action whatsoever to support such RES systems.

But in 2011 there were a number of other tax advantages, such as:

- a reduced VAT rate of 13% for RES equipment; and
- a personal income tax allowance of 30% of the value of the purchase of RES equipment with a ceiling of EUR 803.

There is no information available as regards the burden of the above schemes on the public purse given that their application is not limited exclusively to RES and the impossibility of calculating the value of installing energy-producing equipment from renewable sources.

### **3.1. Please provide the information on how supported electricity is allocated to final customers for purposes of Article 3(6) of Directive 2003/54/EC (Art. 22(1)b) of Directive 2009/28/EC)**

ERSE, the national regulator, drew up a document on the principles of, and good practice in, electrical energy labelling with the aim of harmonising the calculation and presentation of information on the energy sources used in the production of electrical energy for the consumer and the corresponding environmental impact.

Law 51/2008 of 27 August 2008 and the Regulation on Commercial Relations (RRC) make it mandatory for all electrical energy suppliers to include information on the following in their invoices:

- the origin (mix) of the electrical energy that they acquire for sale to their customers; and
- the environmental impact associated with the supply of their electrical energy.

Electrical energy labelling has two basic objectives:

- Inform the consumer about the product with a view to making consumption a more conscious act and in particular as regards the primary energy resources used in electrical energy production and the environmental impact associated with its supply. The customer is thus made responsible for his choice of energy; and
- help suppliers differentiate themselves from each other so as to promote competition in the retail market.

The ERSE drew up a document containing principles, good practice and a series of guidelines considered a minimum to ensure quality energy labelling. Although this document – ERSE's Recommendation No 2/2011 – contains a minimum set of rules, there is nothing to prevent any energy supplier from taking extra steps with a view to differentiating itself from its competitors.

For more information on energy labelling please see the following link:  
<http://www.erse.pt/pt/desempenhoambiental/rotulagemenergetica/Paginas/default.aspx>

- 4. Please provide information on how, where applicable, the support schemes have been structured to take into account RES applications that give additional benefits, but may also have higher costs, including biofuels made from wastes, residues, non-food cellulosic material, and ligno-cellulosic material?) (Art. 22(1)c) of Directive 2009/28/EC)**

In the case of biofuels produced from residues, wastes, non-food cellulosic material and ligno-cellulosic material, the system in place in Portugal provides for double counting when biofuels vouchers (BVs) are issued as laid down in Article 21(2) of Directive No 2009/28/EC.

As mentioned above, ISP exemption for small specialised biofuels producers was maintained. It should be noted that such producers must use more than 60% of residues in the production of biofuels. These producers are not given support on the basis of double counting while they benefit from ISP exemption.

- 5. Please provide information on the functioning of the system of guarantees of origin for electricity and heating and cooling from RES, and the measures taken to ensure reliability and protection against fraud of the system (Art. 22(1)d) of Directive 2009/28/EC)**

Decree-Law No 141/2010 of 31 December 2010 created the body responsible for issuing guarantees of origin (EEGO) for renewable energy (electricity and heating).

In accordance with this Decree-Law, guarantees of origin may be issued for electricity and heating at the producer's request as long as the production unit has not been granted any support for either investment or production.

A handbook of procedures for the EEGO is currently being drawn up ahead of the body being set up.

**6. Please describe the developments in the preceding 2 years in the availability and use of biomass resources for energy purposes (Art. 22(1)g) of Directive 2009/28/EC)**

**Table 4: Biomass supply for energy use**

	Amount of domestic raw material (*)		Primary energy in domestic raw material (ktoe)		Amount of imported raw material from EU (*)		Primary energy in amount of imported raw material from EU (ktoe)		Amount of imported raw material from non-EU countries(*)		Primary energy in amount of imported raw material from non-EU countries (ktoe)	
	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010
<b>Biomass supply for heating and electricity:</b>												
Direct supply of wood biomass from forests and other wooded land for energy generation (fellings etc.)**	442 (kton)	1 024 (kton)	89	208	-	-	-	-	-	-	-	-
Indirect supply of wood biomass (residues and co-products from the wood industry etc.)**	786 (kton)	796 (kton)	205	207	-	-	-	-	-	-	-	-
Energy crops (grasses, etc.) and short rotation trees (please specify)	0	0	0	0	-	-	-	-	-	-	-	-
Agricultural by-products / processed residues and fishery by-products**	52 (kton)	44 (kton)	18	18	-	-	-	-	-	-	-	-
Biomass from waste (municipal, industrial etc.)**	1 103 (kton)	1 091 (kton)	198	192								
Other (specify)												
<b>Biomass supply for transport:</b>												
Common arable crops for biofuels (please specify main types)	-	-	-	-	-	-	-	-	-	-	-	-
Energy crops (grasses, etc.) and short rotation trees for biofuels (please specify main types)***	5.3 (kton)	2.2 (kton)	4.6	2.0	-	-	-	-	253.3	321.5	223.9	284.2
Others (used oils)	5.5 (kton)	4.8 (kton)	4.4	3.8	1.5 (kton)	-	1.4	-	-	-	-	-

\*Amount of raw material if possible in m3 for biomass from forestry and in tonnes for biomass from agriculture and fishery and biomass from waste

\*\*\*The definition of this biomass category should be understood in line with table 7 of part 4.6.1 of Commission Decision C (2009) 5174 final establishing a template for National Renewable Energy Action Plans under Directive 2009/28/EC

**Table 4a:**

**Current domestic agricultural land use for production of crops dedicated to energy production (ha)**

Land use	Surface (ha)	
	2009	2010
1. Land used for common arable crops (wheat, sugar beet etc.) and oil seeds (rapeseed, sunflower etc.)	426	4 357

2. Land used for short rotation trees (willows, poplars) (please specify main types).	-	-
3. Land used for other energy crops such as grasses (reed canary grass, switch grass, Miscanthus), sorghum (please specify main types).	-	-

\*MAMAOT data for oilseed crops

It should be noted that oilseeds grown on agricultural land in Portugal, as set out in table 4, is not intended exclusively for the production of biofuels. The main purpose of agriculture on this land is the production of protein meal for the animal feed industry, or oils (such as sunflower oil) for the food industry, which commonly ends up being used for biofuel production.

As table 4 demonstrates, in 2010 Portuguese agriculture contributed around 0.5% of the raw materials used in biofuel production, with the expectation that in 2011 this percentage may drop to zero.

**7. Please provide information on any changes in commodity prices and land use within your Member State in the preceding 2 years associated with increased use of biomass and other forms of energy from renewable sources? Please provide links to relevant documents describing this impact in your country where these are available (*Article 22(1)h of Directive 2009/28/EC*)**

There is no evidence of price movement resulting from the hike in the consumption of biomass (forest residual or woody) for energy purposes.

The hike in consumption in this sector has been compensated by the decreased consumption of the same raw materials in other sectors and in particular in the wood panel sector and at sawmills treating wood, both areas that are working at rates a great deal below their productive capacity.

Meanwhile the health problem associated with pine wood nematode has resulted in an increased number of trees of this species being felled which, in turn, has increased supply of the raw material on the market.

As regards the price of cultivating land in Portugal, energy crops are only used experimentally, which means that the data available is insufficient to draw any conclusions.

**8. Please describe the development and share of biofuels made from wastes, residues, non-food cellulosic material, and lingo cellulosic material (Article 22(1)i) of Directive 2009/28/EC)**

*Table 5: Production and consumption of Art.21(2) biofuels (Ktoe)*

<i>Article 21(2) biofuels<sup>27</sup></i>	<b>2009</b>	<b>2010</b>
Production of biodiesel	1.3	0.3
Consumption of biodiesel	1.3	0.3
Production of PPD biofuel*	4.5	3.6
Consumption of PPD biofuel*	4.5	3.6
Total production Art. 21.2 biofuels	5.8	3.9
Total consumption Art. 21.2 biofuels	5.8	3.9
% share of Art. 21.2 fuels from total RES-T	2.38%	1.16%

\*Corresponds to the sterification of cooking oil and animal fat

**9. Please provide information on the estimated impacts of the production of biofuels and bioliquids on biodiversity, water resources, water quality and soil quality within your country in the preceding 2 years. Please provide links to relevant documents describing this impact in your country where these are available (Article 22(1)j) of Directive 2009/28/EC).**

Given that the quantity of Portuguese agricultural material used in biofuel production is under 1%, it would appear that biofuel production in Portugal has no impact at all on biodiversity, water resources or soil quality.

**10. Please estimate the net greenhouse gas emission savings due to the use of energy from renewable sources (Article 22(1)k) of Directive 2009/28/EC)**

*Table 6:  
Estimated GHG emission savings from the use of renewable energy (t CO<sub>2</sub>eq)*

<b>Environmental aspects</b>	<b>2009</b>	<b>2010</b>
<b>Total estimated net GHG emission saving from using renewable energies<sup>28</sup></b>	<b>8 094</b>	<b>8 877</b>
- Estimated net GHG saving from the use of renewable electricity*	2 390	2 744
- Estimated net GHG saving from the use of renewable energy in heating and cooling**	5 288	5 525
- Estimated net GHG saving from the use of renewable energy in transport***	416	609

\*The GN conversion factor was used rather than that recommended by the Commission (56.1 g CO<sub>2</sub>eq/MJ)

\*\*The conversion factor recommended by the Commission was used (87 g CO<sub>2</sub>eq/MJ)

\*\*\*The diesel conversion factor was used (74.1 g CO<sub>2</sub>eq/MJ)

**11. Please report on (for the preceding 2 years) and estimate (for the following years up to 2020) the excess/deficit production of energy from renewable sources compared to the indicative trajectory which could be transferred to/imported from other Member**

<sup>27</sup> Biofuels made from wastes, residues, non-food cellulosic material, and lignocellulosic material.

<sup>28</sup> The contribution of gas, electricity and hydrogen from renewable energy sources should be reported depending on the final use (electricity, heating and cooling or transport) and only be counted once towards the total estimated net GHG savings.

**States and/or third countries, as well as estimated potential for joint projects until 2020 (Article 22(1)l) and m) of Directive 2009/28/EC)**

*Table 7:*

**Actual and estimated excess and/or deficit (-) production of renewable energy compared to the indicative trajectory which could be transferred to/from other Member States and/or third countries in [Member State] (ktoe)<sup>29 30</sup>**

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Actual/estimated excess or deficit production (Please distinguish per type of renewable energy and per origin/destination of import/export)												

**11.1. Please provide details of statistical transfers, joint projects and joint support scheme decision rules**

The existence of a reliable and entirely unobstructed interconnection in the Pyrenees could help square Portugal's objectives of promoting electrical energy production from RES, with the pressing need of countries in central and northern Europe to guarantee their energy security – an energy security that is increasingly founded (and this trend can only become more pronounced in the future) on the supply of electricity from non-fossil fuels.

Portugal thus argues that flexibility mechanisms should be backed up by the physical transfer of the energy involved in these mechanisms. The necessary investments are therefore required to remove the bottleneck in the Pyrenees and so create an effective and workable connection between the Iberian Peninsula and the French electricity grid. In the absence of these investments it is unlikely that Portugal will make use of these mechanisms in the near future.

**12. Please provide information on how the share for biodegradable waste in waste used for producing energy has been estimated, and what steps have been taken to improve and verify such estimates (Article 22(1) n) of Directive 2009/28/EC)**

As regards municipal urban waste, the information presented took account of the Community recommendation that 50% of the raw materials should be considered renewable, with the data used that which is supplied annually directly by the electricity producers.

Meanwhile, data for biofuels made from used oil is not in our view an estimate as it is the result of information supplied directly by producers on the basis of the whole of the raw material used.

**Reply to pursuant to Article 22(3) a) to c) of Directive 2009/28/EC**

In their first report, Member States shall outline whether they intend to:

<sup>29</sup> Please use actual figures to report on the excess production in the two years preceding submission of the report, and estimates for the following years up 2020. In each report Member State may correct the data of the previous reports.

<sup>30</sup> When filling in the table, for deficit production please mark the shortage of production using negative numbers (e.g. –x ktoe).

- a) establish a single administrative body responsible for processing authorisation, certification and licensing applications for renewable energy installations and providing assistance to applicants

The DGEG (which reports to the Ministry for the Economy and Employment) is the only organisation that grants licences to operators for power plants, except in the case of hydro schemes which require a hydro use permit from the competent ARH (which reports to the Ministry for Agriculture, Marine Affairs, the Environment and Land-use Planning) before the licence from the DGEG is sought.

A web page for registering requests, consulting the status of such requests and licensing procedures, is being developed in an effort to make the process more transparent, clearer and more accessible to the interested parties. The web page is currently in its test phase.

- b) provide for automatic approval of planning and permit applications for renewable energy installations where the authorising body has not responded within the set time limits

Not planned.

- c) indicate geographical locations suitable for exploitation of energy from renewable sources in land-use planning and for the establishment of district heating and cooling.

Given Portugal's prevailing climate, the use/creation of a municipal heating grid is not considered a viable option from an economic perspective. In specific areas with geo-thermal potential, this power could be harnessed in small heat distribution grids by agricultural, industrial or service-sector facilities.

### **Other information relevant to the NREAP**

In view of the current state of Portugal's economy the likely macro-economic trends from now until 2020 have been revised. This downward revision of Portugal's economic growth has as a consequence a sharp contraction in energy consumption compared to that which was estimated when the NREAP was drafted.

Work on revising the Portuguese NREAP has begun with a view to bringing it into line with this new reality; the final version will be submitted to the Commission for its approval.