Assessment of climate change policies in the context of the European Semester

Country Report: Portugal

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The report provides an overview of current emission trends and progress towards targets as well as policy developments that took place over the period May 2012 to January 2013.

The content of the report represents the state of knowledge in February 2013, specific updates were made adding the latest official greenhouse gas emission data by the European Environment Agency (EEA).

Please feel free to provide any comments or suggestions to the authors through the contacts listed above.

Short summary

- ***Background:*** *Promotion of renewable energy has been a key element of the Portuguese energy strategy in the past years, reemphasized in the National Energy Strategy; however, climate-related policies lost priority in the political agenda due the economic crisis and required fiscal consolidation.*
- ***GHG target:*** *The 2011 non-ETS emissions were below of the 2013 emission allocation and according to the latest national projections Portugal is expected to also meet its 2020 target with existing measures.*
- ***Policy development:*** *Renewable energy support through a feed-in tariff is currently under revision and there is still potential for improvement in energy efficiency and in the transport sector.*

1 Background on climate and energy policies

The XIX Constitutional Government of Portugal took office in June 2011. The main objectives of the government's programme regarding climate and energy policy include the development of a low carbon economy and more specifically the improvement of energy efficiency, effective liberalization of energy markets, and the reduction of the dependence on fossil fuels through an increase on the use of biofuels and improvements in the quality of public transport. The government's programme also mentions the compliance with GHG emission reduction targets as one of the objectives (Governo de Portugal 2011, p.49-51; 58).

In late 2012, the Portuguese Government released a National Low Carbon Roadmap to support strategic planning and development of national emissions reduction plans (e.g., the National Programme for Climate Change (PNAC) 2020 and low carbon sectoral plans). The aim of the Roadmap was to analyse the technical and economic feasibility of GHG emissions reduction pathways by 2050 (APA 2012). The RNBC (2012, p.33) used two socio-economic scenarios and concluded that it is possible to define trajectories for Portugal to achieve a GHG reduction of 50% to 60% by 2050 compared to 1990 levels. The study especially stressed the potential in the field of renewable energy and shows that the adoption of a low-carbon pathway leads to the creation of green jobs. In particular, jobs in the renewable sector could double by 2050 compared to a scenario without reduction targets (RNBC 2012, p.47, 56). In 2008, the number of green jobs was estimated to be around 0.4% of total employment by the National Institute for Statistics in Portugal (INE) ([1]).

Portugal ranked 6th in the Climate Change Performance Index 2013 ([2]) (CCPI 2012); however, the Portuguese media ([3]) stressed that this surprising change in the ranking

[1] The INE collects data and publishes statistics on employment in environmental areas based on OECD/Eurostat classification.

[2] Portugal ranked 14th in the CPPI in 2011 and the first three places this year were not awarded to any country (as in the previous year). The overall assessment for Portugal was "good", as well as for the

was not only due to existing measures to increase energy efficiency and deployment of renewables, but it was largely influenced by a reduction of consumption of electricity, heat, and transport fuels due to the ongoing economic crisis and a general reduction of consumption in Portugal. In fact, delays on the elaboration of instruments to reduce GHG emissions, such as the National Programme for Climate Change (PNAC) ([4]) for the period 2013–2020, the low-carbon sectoral plans, as well as the progress reports of the adaptation strategy might indicate that discussions about climate policies have weakened and the topic lost priority in the political agenda due to the need for restructuring. During the economic recession, Portugal has been facing a period of fiscal consolidation to address its serious budget deficit. The remaining question is whether or not Portugal will be able to successfully integrate environment and climate into the ongoing structural reforms to position itself for long-term growth and productivity (OECD 2011).

The current National Energy Strategy (ENE 2020) was set by RCM 29/2010, focussing on the following areas: supporting growth and competitiveness, promoting renewables and energy efficiency, ensuring security of supply, and economic and environmental sustainability. Taking into account the measures included in the MoU signed by Portugal, the program of the new government reemphasized the main priorities of the energy strategy to be pursued in the next years (ODYSSEE-MURE 2010, 2012, p. 19):

- improvement of energy efficiency (25% reduction in consumption by 2020)
- diversification of primary energy sources and reduction of oil dependence
- creation of an energy mix with affordable prices
- liberalization of energy markets to make them more competitive.

It is worth mentioning that more than 120,000 jobs are expected to result from the National Energy Strategy (OECD, 2012, p. 117-121).

Producers of renewable electricity have benefited from a feed-in tariff in the past years. However, costs of the support to electricity generation were sometimes not fully transmitted to consumers and a considerable tariff debt of €1.8 billion was created in 2011 ([5]) (OECD 2012, p. 30). Currently, the future development of the energy market is focussed on the liberalization of the electricity and gas markets as well as on a more sustainable development of the electricity system to avoid increase of the tariff debt (MoU 6th Update, 2012 p. 19). In this context, the seventh review of the MoU (to take place in 2013) will present an estimation of cost reductions and steps to eliminate the tariff debt by 2020 (MoU 6th Update 2012, p. 20).

category energy efficiency. Nonetheless, in terms of emissions level, development of emissions, climate policies and renewable energies, the assessment was "moderate".

[3] See for example RTP Noticias, DN Portugal, TVi24.

[4] A National Programme for Climate Change was introduced in 2006 (reviewed in 2007) with a set of policies and measures aiming at complying with Kyoto targets for the period 2008–2012. The PNAC for the period 2013–2020 is still being elaborated and shall consolidate measures and instruments mentioned in the PNAC 2006 and define new policies for non-ETS sectors,

[5] According to the report, this debt could reach €5 billion if no reforms are implemented (OECD, 2012, p. 30).

2 GHG targets, status quo and the latest developments

Background information

In 2011, Portugal emitted 70 Mt CO_2eq (UNFCCC inventory 2011), which is 17% higher than in 1990. However, there is a downward trend since 2005 partly owing to the economic recession. Transport is the greatest contributor of emissions with 25% of the total, and emissions from this sector also showed the highest increase by more than 70% between 1990 and 2011. This reflects the growing number of private cars and freight transport. Emissions from energy supply were until recently the primary source of emissions due to Portugal's high dependency on oil for power generation. Emissions from energy use account for 19% of total emissions but have been declining since 2005 partly due to the economic recession and energy efficiency measures. Emissions from industrial processes grew by10% between 1990 and 2011 as a result of increased production of ammonia, cement, and lime. However, since 2009 emissions from this sector have been declining. Due to decreasing agricultural activity, reduced livestock and fertilizer use, and replacement of crops with permanent pasture, emissions from agriculture have decreased slightly since 1990 (UNFCCC inventory 2011, EEA 2012c, UNFCCC 2012).

Progress on GHG targets

There are two sets of targets to evaluate: 1) the Kyoto Protocol targets for the period 2008-12 (which has just ended) and 2) the 2020 targets for emissions not covered by the EU ETS.

Under the Kyoto-Protocol the emission reduction target for Portugal for the period 2008-2012 has been set to plus 27 % based on 1990 for CO_2, CH_4 and N_2O and on 1995 for F-gases. An evaluation of the latest complete set of greenhouse gas data (for the year 2011) shows that Portugal's emissions have increased by 16.4% from the Kyoto base year to 2011 (EEA 2013a). Therefore, Portugal is on track to meeting its Kyoto target through domestic emissions reductions directly.

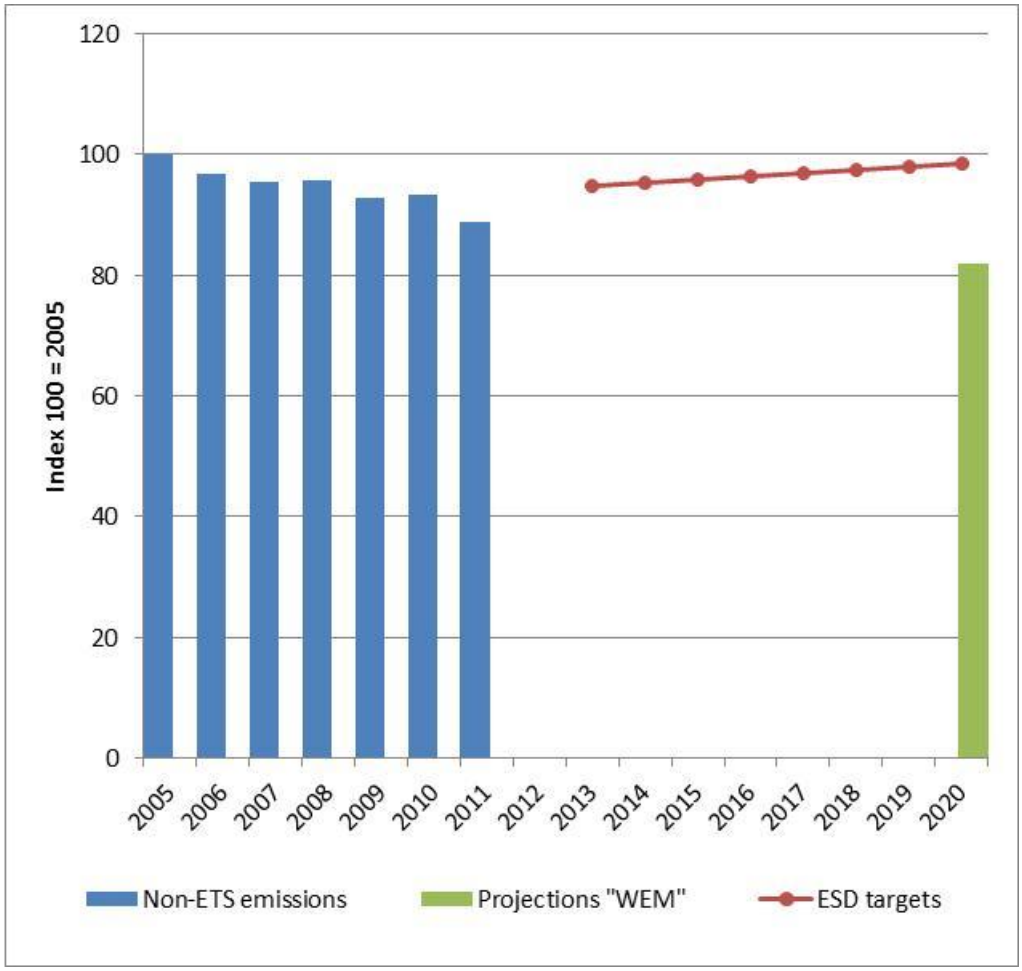
By 2020, Portugal can increase its emissions not covered under the EU ETS by 1% compared to 2005 according to the Effort Sharing Decision (ESD) ([6]). The latest data suggests that Portugal is on track at present. Emissions in 2011 were 6% below the Annual Emissions Allocation (COM 2013) set for the year 2013 following the ESD. National projections show that Portugal is expected to overachieve its target significantly by 2020 in the scenario with existing measures (no additional calculations for projections with additional measures) ([7]) (EEA 2013b).

Figure 1 shows Portugal's non-ETS emissions until 2011, targets under the ESD for the period 2013-2020 and the projections with existing measures for 2020.

[6] Decision No 406/2009/EC of the European Parliament and of the Council of 23 April 2009 on the effort of Member States to reduce their greenhouse gas emissions to meet the Community's greenhouse gas emission reduction commitments up to 2020.

[7] Calculations are based on domestic emissions only without accounting for possible use of flexibility options. The 2020 targets and 2005 non-ETS emissions are all consistent with 2013–2020 ETS scope, i.e., they take into account the extension of the ETS scope in 2013 and the unilateral inclusion of installation in 2008–2012.

Figure 1: Non-ETS emission trends and projections compared to the ESD targets



Source: EEA. Projections are based on 15/04/2013 draft GHG inventory submissions under the UNFCCC and MS projections submitted

Table 1: GHG emission developments, ESD-targets and projections (in Mt CO_2eq)

					ESD target*		2020 Projections**	
	1990	2005	2010	2011	2013	2020	WEM	WAM
Total	61.0	88.0	71.4	70.0				
Non-ETS emissions		50.2	46.8	44.6	47.7	49.0	40.7	40.7
(% from 2005)				-11%	-5%	1%	-16%	-16%
Energy supply	16.3	25.5	14.6	16.5				
(% share of total)	27%	29%	20%	24%				
Energy use (w/o transport)	14.5	17.9	14.5	13.3				
(% share of total)	24%	20%	20%	19%				
Transport	10.3	19.9	18.9	17.6				
(% share of total)	17%	23%	27%	25%				
Industrial processes	4.8	7.1	6.1	5.3				
(% share of total)	8%	8%	8%	8%				
Agriculture	8.2	7.7	7.5	7.5				
(% share of total)	13%	9%	11%	11%				

Source: UNFCCC inventories; EEA (2013b); COM (2013), Calculations provided by the EEA and own calculations.

** The ESD target for 2013 and for 2020 refer to different scopes of the ETS: The 2013 target is compared with 2011 data and is therefore*

consistent with the scope of the ETS from 2008-2012; the 2020 target is compared to 2020 projections and is therefore consistent with the scope of the ETS from 2013-2020. Non-ETS emissions in 2005 for the scope of the ETS from 2013-2020 amounted to 48.5 Mt CO_2eq.
*** 2013 projections with existing measures (WEM) or with additional measures (WAM).*
Legend for colour coding: green = target is being (over)achieved); orange = not on track to meet the target
Total greenhouse gas emissions (GHG) and shares of GHG do not include

National projections of GHG emissions up to 2020, summarised by the EEA, need to be prepared by the Member States in accordance with the EU Monitoring Mechanism ([8]) every two years, and the latest submission was in 2013. Projections need to be prepared reflecting a scenario that estimates emissions reductions in line with policies and measures that have already been implemented (with existing measures, WEM), and an additional scenario that reflects developments with measures and policies that are in the planning phase (with additional measures, WAM) may also be submitted.

In the following two tables, these measures - as outlined by the Member States as basis for their projections as of April 2011 ([9]) - have been summarised with a focus on national measures and those EU instruments expected to reduce emissions the most ([10]). An update on the status of the policies and measures is included in order to assess the validity of the scenarios.

Table 2: Existing and additional measures as stated in the 2011 GHG projections

Existing Measures (only important national measures; w/o EU legislation)		Status of policy in January 2013
Energy	Investment subsidies and specific tariffs for renewable electricity generation	Feed-in tariffs are in place. However, the remuneration regime is under review and might be changed to a market regime.
	Solar Hot Water for Portugal Programme (AQSpP): Providing tax incentives	Implemented in 2006. No updated information for 2012 available; however, for the period 2007–2020, an installation rate of 100,000 m^2/year was expected (see Cumprir Quioto 2012).
	Investment subsidies and specific tariffs for co-generation	Implemented by Decree-Law 23/2010. Review of remuneration regime: Ordinance 140/2012, amended by Ordinance 325-A/2012.
Energy Efficiency	Regulation on acclimatisation and thermal behaviour of buildings	Implemented. DL 80/2006 set the Regulation for the Characteristics of the Thermal Behaviour of Buildings (RCCTE). DL 79/2006 set the Regulation on Heating, Cooling and Air Conditioning (RSECE).

[8] Decision No 280/2004/EC of the European Parliament and of the Council of 11 February 2004 concerning a mechanism for monitoring Community greenhouse gas emissions and for implementing the Kyoto Protocol.

[9] The respective policies and measures were not available at the time of the preparation of this country report. Thus, policies and measures as outlined in April 2011 are given here.

[10] The implementation of the EU-ETS has not been included. Other EU Directives have only been considered if they have been outlined in the projections as one of the main instruments to reduce GHG emissions.

	Reduction of the rate of loss in the energy transport and distribution network to 8.6% by 2010 through regulations	No new regulations are currently prepared. Loss rates for the distribution and transport networks are available from 2009 (ERSE, 2013).
	Reduction of electricity consumption through regulations	Implemented. Consumption Efficiency Promotion Plan (PPEC).
	Energy Efficiency Fund, approved by Decree-Law nº 50/2010	Implemented. The Energy Efficiency Fund (FEE) launched a new support scheme for the installation of solar thermal systems (STS) and energy-efficient windows (EEW) in existing residential buildings in late 2012.
	Increase of fuel tax (ISP) on industrial fuels	Implemented
	Tax harmonization between diesel fuel for heating (residential and service sector) and for transport by 2014	Implemented. Gradual harmonization foreseen. However, with the changes from Law 64-B/2011 (Art. 132, State Budget 2011), the maximum rate of the ISP tax for diesel for heating and for transport already coincide.
	Voluntary agreements in the industrial sector for energy efficiency (Regulation on the Management of Energy Consumption)	Implemented
Transport	Voluntary agreement with the car manufacturing associations (ACEA, JAMA, KAMA) to reduce carbon intensity of light passenger vehicles	Implemented
	Investments in expansion and new building of metro networks	Implemented. Network extension in Lisbon in 2012.
	Provision of monetary incentives for the substitution of end-of-life vehicles to promote the renovation of the car stock	The end-of-life vehicle disposal incentive programme ended in 2010 and the incentive for demolition of old cars for acquiring an electric car was cancelled in 2011.
	Reduction of motorway speeds	Implemented
	Increase of biofuel share through concession of subsidies to investment and proper tariffs for biofuels	Implemented. See tax exemption for small producers of biofuels in the transport section.
Other non-ETS sectors	Manure management (conversion of medium & large manure management systems to anaerobic biodigesters with energy recovery) through promotion of investment in waste-to-energy recovery	Measure introduced by RCM 104/2006. No further development identified.
	Programme for the Sustainable Development of Portuguese Forest	Implemented: Promotes the sustained increase in forested area through financial support and incentives for new tree plantations
	Decree-Law 152/2002, of 23 May 2002 (transposed Directive 1999/31/EC), to reduce biodegradable municipal waste transported to landfills	Decree-Law 152/2002 was repealed by Decree-Law 183/2009 of 10 August 2009, which regulates the deposition of waste in landfills and transposes Directive 1999/31/EC into national legislation (Art. 59 of DL 183/2009).

Source: Reporting of MS in accordance with Decision No 280/2004/EC about their GHG emission projections up to 2020, April 2011.

Additional Measures: Still to be implemented (only important national measures; w/o EU legislation)		Status of policy in January 2013
Transport	Energy efficiency improvements of the car stock through revision of the present taxation regime on private vehicles so that CO_2 emissions are factored into the calculation of the tax (representing at least 60% of the total value of the tax from 2008)	Implemented. The vehicle registration tax (ISV) is calculated based on CO_2 emissions and cylinder capacity. Petrol cars that emit more than 195g and diesel cars that emit more than 160g are subject to the highest rates (ACEA 2012).
	Promotion of modal transfer in Lisbon through regulation and investment	An intermodal tariff system for the use of public transport (bus, train, and metro) was implemented in the city of Lisbon in 2012. The "Navegante Pass" integrates the public transport companies (i.e., Carris, Metro, and CP) and allows full mobility in Lisbon (Normative Order 1/2012 of the Ministry of Finance, Economics and Employment).
Other non-ETS sectors	The purpose of EC Regulation no. 842/2006 on the 17th of May, regarding certain fluorinated GHG, is to contain, prevent, and thereby reduce emissions of the fluorinated greenhouse gases covered by the Kyoto Protocol. The national legislation is being elaborated.	Implemented. Decree-Law 56/2011 of 21 April 2011 transposed the EC regulation into national legislation.

Source: Reporting of MS in accordance with Decision No 280/2004/EC about their GHG emission projections up to 2020, April 2011.

3 Evaluation of National Reform Programme 2012 (NRP)

In April of each year, Member States are required to prepare their National Reform Programmes (NRPs), which outline the country's progress regarding the targets of the EU 2020 Strategy. The NRPs describe the country's national targets under the Strategy and contain a description of how the country intends to meet these targets. For climate change and energy, three headline targets exist: 1) the reduction of GHG emissions, 2) the increase of renewable energy generation, and 3) an increase in energy efficiency ([11]).

In the following table, the main policies and measures as outlined in the NRP of April 2012 ([12]) have been summarised, and their current status (implemented, amended, abolished, or expired) is given, with specifics on latest developments.

[11] There are specific targets for all MS by 2020 for non-ETS GHG emission reductions (see section 2) as well as for the renewable energy share in the energy mix by 2020 (see section 4, renewable energies). Specific energy efficiency targets will be defined (or revised) by the MS until the end of April 2013 in line with the methodology laid out in Article 3 (3) of the Energy Efficiency Directive (Directive 2012/27/EU).

[12] All NRPs are available at: http://ec.europa.eu/europe2020/documents/related-document-type/index_en.htm

Table 3: Main policies and measures as outlined in the NRP, April 2012

Review of the National Action Plan for Renewable Energy (PNAER) and the National Action Plan for Energy Efficiency (PNAEE)	
Status as stated in the NRP	To be initiated
Status as per Jan 2013	Review not finalized. Last updated information: a communication of the DGEG of 11 October 2012 with guidelines for the review of the PNAEE and the PNAER.
Description of policy or measure	The National Action Plan for Energy Efficiency encompasses programmes and measures considered essential to achieve the targets under the Directive 2006/32/EC (RCM 80/2008). The National Action Plan for Renewable Energy focusses on the promotion of renewable energy by 2020 under the target set by Directive 2009/28/EC.

Analysis of energy options to 2030 and development of a new energy plan (with a long-term view)	
Status as stated in the NRP	Long-term energy planning is mentioned as a topic that requires lengthy discussions and medium and long-term studies, which should be initiated.
Status as per Jan 2013	A new energy plan is still in its initial phase. No reliable information on drafts or open consultation was available at this point of time. A project (Roadmap for New Energy Technologies: PORTUGAL 2010-2050) aiming to analyse the national potential of R&D in new energy technologies was launched in 2010 with funding from the Fund for Innovation Support - FAI. In addition, the MoU 6th Update (2012. p. 20) stresses that decisions on future investments in renewables will be based on an analysis of its costs and consequences for energy prices and that a report will be released in Q3-2013.
Description of policy or measure	Analysis of energy options, taking into consideration risks and benefits of different technologies.

Consolidation of programmes that support energy efficiency (e.g., ECO.AP)	
Status as stated in the NRP	In 2012, competitive tenders to select Energy Service Companies (ESCOs) are expected to take place. The tenders would include the first 30 state buildings.
Status as per Jan 2013	The competitive tenders did not happen in 2012, but are expected to take place in 2013. The documents (e.g., model contracts) are prepared, but the call has not opened yet.
Description of policy or measure	The Programme ECO.AP is aimed at promoting energy efficiency in the public administration (departments and agencies). With this programme, the state intends to reduce 30% of its energy bill by 2020 and thus also reduce CO_2 emissions. The programme intends to promote energy efficiency through creating a barometer of Energy Efficiency for State buildings and contracts with Energy Service Companies (ESCOs). The initial target set by RCM 2/2011 was 20%.

Promotion of Smart Grids (Redes Inteligentes)	
Status as stated in the NRP	To be initiated
Status as per Jan 2013	InovGrid under development.
Description of policy or measure	An intelligent electricity distribution system with remote management is being developed by EDP Distribution.

Elaboration of instruments to reduce GHG Emissions: 1. National Low Carbon Roadmap (RNBC) 2020–2050	
Status as stated in the NRP	To be elaborated by 31 December 2011 (according to RCM 93/2010)
Status as per Jan 2013	Published. The RNBC was available for public consultation in September 2012. It was finalized and published in 2012.
Description of policy or measure	The Roadmap analysed the technical and economic feasibility of GHG emissions reduction pathways for Portugal by 2050. The RNBC used two socio-economic scenarios and concluded that it is possible to define trajectories with a reduction of 50% to 60% by 2050 based on 1990 levels.

Elaboration of instruments to reduce GHG Emissions: 2. National Programme for Climate Change (PNAC) 2020	
Status as stated in the NRP	To be elaborated by 31 December 2012 (according to RCM 93/2010)
Status as per Jan 2013	Delayed. The Plan for 2013–2020 has not been published (as of 31 January 2013). It is still under discussion.
Description of policy or measure	The PNAC 2020 shall set policies and measures aimed at reducing GHG emissions in non-ETS sectors. The PNAC for the period 2013–2020 shall consolidate measures and instruments mentioned in the PNAC 2006 (reviewed in 2007), define new policies for non-ETS sectors, as well as set sectoral responsibilities and instruments for funding and monitoring.

Elaboration of instruments to reduce GHG Emissions: 3. Low-Carbon Sectoral Plans	
Status as stated in the NRP	To be elaborated by 31 December 2012 (according to RCM 93/2010)
Status as per Jan 2013	Delayed. Carbon Sectoral Plans have not been published (as of 31 January 2013). The Ministry of Health released a pilot study on the elaboration of a Carbon Strategic Plan in late 2010. Nonetheless, Low Carbon Sectoral Plans are still being elaborated.
Description of policy or measure	There is not a model for the sectoral plans, but they must include the GHG emissions from activities in each Portuguese ministry, especially those related to government procurement, buildings, fleets, and use of resources.

4 Policy development

This section covers significant developments made in key policy areas between May 2012 and January 2013. It does not attempt to describe every instrument in the given thematic area. The time-frame was chosen based upon the release of the National

Reform Programmes (in the section above) in April 2012, which contain the status quo for policy on most topics.

Environmental Taxation

Portugal's economy exhibits average energy intensity in comparison with other EU MS, and the implicit rate of taxation on energy, at 143 €/tonne oil equivalent, was also near the EU average in 2009 (138.6 €/tonne oil equivalent) (Eurostat 2103). Revenues from environmental taxation as a proportion of GDP declined between 2003 and 2010 by one-half of a percentage point, but Portugal still ranked 14th in the EU in this regard in 2010. Energy taxation revenue as a proportion of GDP also declined over this same period (Eurostat 2012).

Portugal has demonstrated, however, an effort to shift taxation from labour to environment and energy through three primary policy instruments. A Road Service Contribution (Contribuicao de Servico Rodoviario - CSR) was introduced in 2007 by Law 55/2007 as a requirement for use of the national road network. An increase of the Road Service Contribution was introduced by the State Budget for 2013. The Road Service Contribution is included under the tax on petroleum and energy products (ISP) and went from €65.47 to €66.32 per one thousand litres of petrol and from €87.98 to €89.12 per one thousand litres of diesel. In addition, there is an exemption of the Vehicle Registration Tax (Imposto sobre Veiculos - ISV) for electric cars, which was been cancelled in the creation of the State Budget 2013. Electric vehicles continue to be exempt from the payment of the ISV and hybrid vehicles continue to benefit from a 50% reduction of this tax (DSIECIV, 2012).

There is also an additional fee to the tax on petroleum and energy products (Imposto Sobre Produtos Petrolíferos e Energéticos - ISP). The additional fee to the tax on petroleum and energy products (ISV) remains in force in 2013 ([13]). The additional fee to be paid is €0.005 per litre of gasoline and €0.0025 per litre of diesel up to a maximum of €30 million (Art. 210 of Law 66-B/2012 - State Budget for 2013).

Energy Efficiency

The energy intensity in the Portuguese economy declined between 2005 and 2010 by 13%, well above the EU average of 7.7%. Final energy consumption decreased only slightly (1.9%) compared with the 2001–2005 average. Shrinking industrial energy usage is responsible for much of this decline (Eurostat 2013).

The primary policy instruments currently in place to reduce energy consumption and increase efficiency in the building sector include funding programmes such as the Efficient Building 2012 (Edifício Eficiente 2012). Portugal's Energy Efficiency Fund (FEE) launched a new support scheme for the installation of solar thermal systems (STS) and energy-efficient windows (EEW) in existing residential buildings. The programme has a €2 million budget (€1 million for STS and €1 million for EEW) and the subsidy covers 50% of the investment costs, including installation, up to €1,500 for STS and up to €1,250 for EEW. Owners of multi-dwelling residential buildings or owners of dwelling units can apply for the subsidy only through certified Energy Service Companies (ESCOs) or companies

[13] These additional fees were already in force in 2012. See Art. 135 of the State Budget for 2012 (Law 64-B/2011)

supplying STS and EEW that meet the programme requirements. The scheme was launched on 30th November 2012 and will accept applications until 3 June 2013. However, this date can be extended by the Executive Committee of the National Energy Efficiency Action Plan (PNAEE) in the case that approved projects do not exhaust the fund (FEE 2012).

The ECO.AP (Energy Efficiency Programme in the Public Administration) is aimed at promoting energy efficiency in the public administration (departments and agencies). The government intends to reduce 30% of its energy bill by 2020 while at the same time reducing its CO_2 emissions. The Programme intends to promote energy efficiency through creating a barometer of energy efficiency for public buildings and promote contracts with ESCOs. ESCOs will identify potentials for energy savings in public buildings and will implement measures to improve energy efficiency thus reducing the energy bill. The initial target set was 20%, which was increased to 30% (RCM 67/2012).

Besides the support of energy efficiency measures in public buildings, energy efficiency measures in private buildings are promoted through the Fundo de Apoio à Inovação (Fund for Innovation Support - FAI). The Ministry of Economy and Jobs will support up to three projects in the building sector. The selection process will be divided into two phases: 1) Three private buildings with high energy efficiency potential will be selected; 2) ESCOs will present proposals to achieve high energy efficiency in the selected buildings; 3) The selected ESCOs will then sign a contract with the Portuguese Energy Agency (ADENE) to receive refundable subsidies for a maximum period of three years. Another contract will be signed between the owner of the building and the ESCOs. The total budget for this program is €1.050.000 with a maximum of €350.000 per project. However, if during the first phase just two buildings are selected, then the maximum support can be increased to €400.000 or even to €500.000 if only one building is selected. The application period goes from January 2013 until 22 March 2013, but this date can be extended by the Executive Committee of the FAI.

Renewable Energy

Renewable energy technologies in Portugal made up 24.6% of total final energy consumption in 2010, placing Portugal in a good position to meet its 2020 goal of 31%. The electricity sector also exhibits a high proportion of renewable generation, but this proportion has been inconsistent in recent years. Almost 36% of final electricity consumption was from renewable sources in 2003, but this dropped to 15.5% in 2005 before climbing to 2010's value of 49.9% (Eurostat, 2013). According to APREN/Quercus (2012), renewables accounted for 46% of total electricity production in 2011, and according to the Directorate General for Energy and Geology (DGEG) at the Ministry of Economy, Innovation and development, from January to November 2012 electricity produced from renewable sources declined compared to the same period in 2011 due to a decrease of hydropower. However, there was an increase in the participation of wind and photovoltaic (DGEG, 2013).

Electricity generation from RES is promoted in Portugal through a feed-in tariff (FiT). Most of the tariffs were defined in 2007 and are applicable to renewable technologies (except large hydropower plants) for a certain timeframe (i.e., 2, 12, 15, 20, 25 or 35 years) or until an upper limit of production is reached, whichever occurs first. Currently, a new

regime for the remuneration of RES-E is under discussion ([14]) and it is likely that the system will be changed from FiTs to a market regime (Eclareon 2013).

In addition, the allocation of power injection into the electric grid was suspended in February 2012 by Decree-Law 25/2012. The suspension took immediate effect and covered "all applications with network connections not yet authorized or reception points not assigned" (Vitorino 2012), except in cases relevant to public interest related to the objectives and priorities of the National Energy Strategy (Art. 2 of Decree-Law 25/2012). Decree-Law 25/2012 was repealed in October 2012 by Decree-Law 215-B/2012, which reviewed the legal regime applicable to the production from renewable sources. Despite the publication of this new Decree-Law and consequently the cancellation of the suspension on allocation of power to renewable sources, there are currently no tenders open for allocation of power injection into the grid.

Energy Networks

The reduced interconnection capacity between Portugal and Spain is aggravated by the limited interconnection capacity between Spain and France, which prevents the export of electricity out of the Iberian Market and limits the development of renewable electricity projects in Portugal (Eclareon 2013). The National Transmission Grid Development and Investment Plan (PDIRT) ([15]) for the period 2012–2017 was available for public consultation in 2011 and no relevant changes in the plan were identified in the past six months.

Transport

Greenhouse gas emissions from Portugal's transport sector declined between 2005 and 2010, but not at the same rate as in the overall economy. Thus, this sector's percentage of overall emissions grew to 27% (see Table 1). Taxation (excluding fuel taxes) of transport is relatively extensive in Portugal, raising revenues equivalent to 7% of GDP in 2010, which was the 8th highest in the EU (Eurostat 2012). Meanwhile, newly registered vehicles in Portugal became much more efficient between 2005 and 2011, emitting only 122.8 g CO_2/km driven in 2011, making them the most efficient in the EU (EEA 2012e).

GHG emissions from transport are mainly addressed through taxes, such as the road service contribution, the vehicle registration tax, as well as the tax on petroleum and energy products, and the additional fee on this tax for gasoline and diesel (see section shifting taxation).

Along with these measures, the use of biofuels is promoted through the Biofuel Quota. By the end of 2014, oil companies are obliged to blend a minimum of 6.75% (v/v) of domestically produced biodiesel (specified by EN 14214) into road diesel. Companies supplying fuels to the market are also obliged to blend a certain amount of biofuels, which increases gradually from 5% (2011–2012) to 10% (2019–2020). In 2012–2013 this

[14] The MoU 6th Update mentions the revision of FiTs and the option to develop alternative mechanisms (e.g., feed-in premium) for mature technologies. Report on actions will be provided in Q3-2013 (MoU 6th Update, 2012, p. 20).

[15] The transmission system operator prepares the PDIRT for grid development and submits it to the Minister of Economy, Innovation and Development for authorization. The PDIRT is composed of a technical report and a Strategic Environmental Assessment in accordance with DL 232/2007 and shall comply with the national energy strategy ENE 2020 (Art. 7 of DL 312/2001) (Res Legal Europe, 2012).

percentage is 5.5% (Art. 11 of Decree Law 117/2010 amended by Decree-Law 6/2012) (Res Legal Europe, 2012). In addition, there is a tax exemption to small producers of biofuels. In Portugal, small producers of biofuels (also known as Dedicated Small Producers - PPDs ([16])) benefit from a total exemption of the petrol product tax (ISP (Isenção de Imposto sobre Produtos Petrolíferos e Energéticos)). PPDs benefit from this tax exemption up to the global limit fixed at the IEC Code (Código dos Impostos Especiais de Consumo), which is 40.000 t/year (Art. 90 of the IEC Code - DL 73/2010 amended by Law 55-A/2010).

In contrast, support to electric mobility has been cancelled. Decree-law 39/2010 introduced the regulation of a pilot network and incentives for the use of electric vehicles (i.e., a subsidy of €5.000 for the acquisition of the first 5.000 new electric cars, which could be increased to €6.500 if an old car was simultaneously delivered for destruction - Art. 38 of DL 39/2010). However, these subsidies were repealed by the State Budget for 2012 (Art. 139 of Law 64-B/2011). New incentives for electric mobility were not identified in the State Budget for 2013 or in government programmes in the past 6 months.

Waste

The Assembly of the Republic ([17]) passed a Resolution (RAR 8/2013) in January 2013 recommending that the Government adopt economic instruments for waste management as listed in the study "Use of Economic Instruments and Waste Management Performances" ([18]). The resolution explicitly mentions the use of PAYT (Pay-as-you-throw) schemes to stimulate the reduction of waste production and to increase recycling.

5 Policy progress on past CSRs

As part of the European Semester, Country Specific Recommendations (CSRs) for each MS are provided by the EU Commission in June of each year for consideration and endorsement by the European Council). The recommendations are designed to address the major challenges facing each country in relation to the targets outlined in the EU 2020 Strategy. In the following table, those CSRs that are relevant for climate change and energy that were adopted in 2012 are listed, and their progress towards their implementation is assessed.

No CSRs related to climate change and energy were issued for Portugal in 2012.

[16] Dedicated Small Producers (PPD) as defined in Art. 19(1) of Decree Law 117/2010.

[17] The Portuguese Parliament is composed of a single Chamber, which is the Assembly of the Republic. This chamber is responsible, in conjunction with the Government, for drafting national legislation.

[18] For more information on this study see Watkins, 2012.

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