

Assessment of climate change policies as part of the European Semester

Country Report Portugal

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A report submitted by ICF Consulting Limited
in association with

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to DG Climate Action

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1 Short Summary

Portugal continues to focus on developing a low carbon economy, increasing energy efficiency, decarbonising mobility, as well as reducing the electricity tariff debit (see Chapter 4).

The Portuguese non-ETS target under the Effort Sharing Decision (ESD) is 1% (compared to 2005) and based on the latest data for 2013, the country met its annual interim target under the ESD for the year 2013 and even exceeded it by 9.6%. According to the latest national projections submitted to the Commission and taking into account existing measures, the 2020 target is expected to be exceeded by 31.7%.

The key policy developments in 2014 include the changes in the remuneration regime for electricity produced from renewable sources, the development of the Green Growth Commitment and the approval of the Green Tax Reform (see Chapter 4).

2 Climate and energy policy priorities

Portugal has conducted structural reforms in several sectors due to macroeconomic imbalances in the past years, which impacted climate and energy-related policies. There are climate and energy strategies in place and the National Energy Strategy for 2020 (ENE 2020) has already been implemented. Nonetheless, the review of the National Programme for Climate Change 2020 (PNAC 2020) that should have been completed by 2013 is still under development. The current National Energy Strategy focus on supporting growth and competitiveness, promoting renewables and energy efficiency, ensuring security of supply, and economic and environmental sustainability.

Besides the National Energy Strategy, the National Action Plan for Energy Efficiency (PNAEE) 2016 and the National Action Plan for Renewable Energy (PNAER) 2020 are also part of strategic energy planning. With regards to green jobs, the Portuguese government expects to create around 70,000 new direct and indirect jobs with the implementation of the measures foreseen in the PNAER 2020 (RCM 20, 2013).

Renewable energy sources play an important role in the energy sector. In fact, according to the Portuguese TSO, approximately 62% of electricity consumption in Portugal mainland was supplied by renewable energy sources between January and October 2014, a small increase compared to the 58% achieved in 2013, but still the highest value since there is available data. The increase in the first ten months of 2014 was a result of more hydro and wind energy generation - with the former accounting for 32% and the latter accounting for 24% of domestic electricity consumption (REN, 2014).

In September 2014, the government presented its Green Growth Commitment with a set of targets to be reached by 2020 and by 2030. The new strategy focuses on growth, efficiency and sustainability and is open for public consultation until January 2015. The main sectors covered in the Green Growth Strategy are energy, transport, industry, water, waste, agriculture and forests. Key targets related to CO₂ emissions, electric mobility, green jobs and deployment of renewable energy sources can be summarised as follows (GGS, 2014):

- To reduce CO₂ emissions between 68 and 72 million tonnes of CO₂ by 2020 and between 54 and 60 million tonnes of CO₂ by 2030 based on 2005 levels;
- To introduce 1.250 electric and plug-in hybrid vehicles in the State fleet by 2020.
- To have 95.000 people employed in green jobs by 2020 and 140.000 by 2030;
- To have 40% of final energy consumption covered from renewable sources by 2030.

Additionally, in 2014, a review of the remuneration scheme for electricity produced from renewable energy sources took place and a new regime for self-consumption and small production units came into force on 1 January 2015 (DL 153, 2014).

3 GHG trends and projections

Portugal reduced its total GHG emissions by 24% between 2005 and 2013. The share of GHG emissions not covered by the European Emission Trading Scheme (EU ETS) is around 63%, which is above the EU28 average (see Table 1).¹

Table 1 Key data on GHG emissions

		National data				EU28
		2005	2011	2012	2013	2013
Total GHG emissions	Mt CO ₂ eq	87.7	69.3	68.8	67.0	4 539
Non-ETS emissions	Share in total emissions	58%	64%	63%	63%	58%

Source: EEA 2014a; EEA 2014c

By 2020, Portugal needs to reduce its emissions not covered by the EU ETS by 1% compared to 2005, according to the Effort Sharing Decision (ESD). The latest data for 2013 show that Portugal met its annual allocation interim target under the ESD for the year 2013 and even exceeded it by 9.6 percentage points (see figures in Table 2). National projections indicate that the country will be able to stay on this course and exceed its 2020 target by a wide margin of about 31.7 percentage points with existing measures (WEM) (EEA 2014a).

Table 2 Non-ETS emission targets, trend and projections

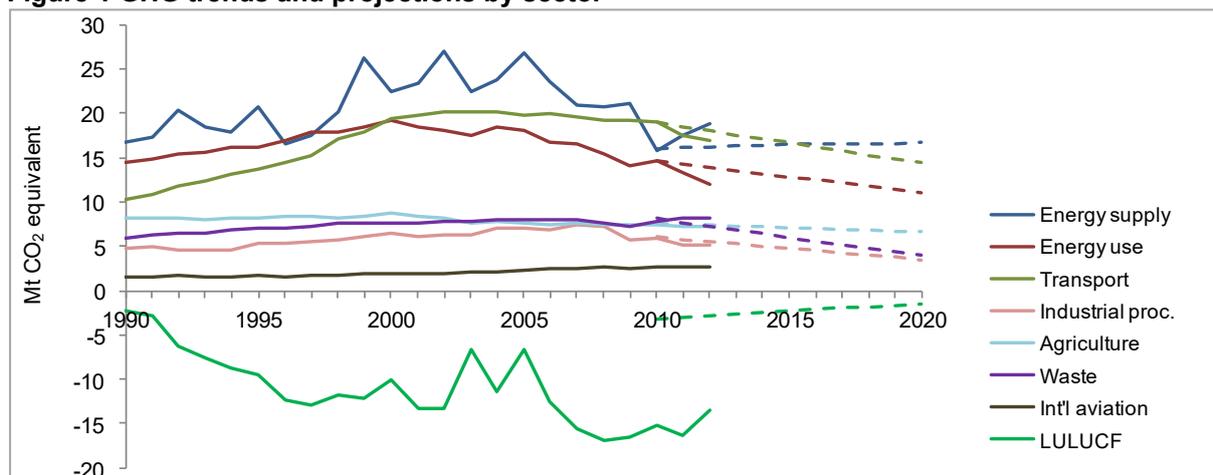
		Compared to base year
2013	ESD interim target	- 2.8%
	ESD emissions	- 12.4%
2020	ESD target	+ 1.0%
	ESD projections WEM	- 30.7%
	ESD projections WAM	n. a.

Source: EEA 2014a. Green indicates target met or exceeded, orange indicates a value below.

GHG emissions are mainly created by the energy industries, followed by the transport sector and direct fuel consumption (e.g. households for heat generation) (see figure below for historic and estimated emissions by sector). Projections from 2010 indicate that by 2020 emissions from energy use and the transport sector will be reduced, while emissions from the energy industry will slightly increase.

¹ The European Environment Agency has developed a complex methodology to measure progress on the Non-ETS/ESD targets of all EU Member States. This report uses the figures derived on this basis. A detailed explanation and the underlying absolute amounts are contained in Annexes 1-3 of the EEA report No 6/2014 "Trends and projections in Europe 2014. Tracking progress towards Europe's climate and energy targets for 2020" available at <http://www.eea.europa.eu/publications/trends-and-projections-in-europe-2014/>

Figure 1 GHG trends and projections by sector



Source: EEA 2014a. Actual data until 2012 and projections from 2010 onwards.

4 Policy development

This section covers significant developments made in key policy areas between January and December 2014. It does so through two different perspectives: 1) progress on the policies communicated under the National Reform Programme and 2) developments in the identified national priority sectors and policy areas.

4.1 Key policies as outlined by the National Reform Programme

Member States prepare National Reform Programmes (NRPs) each April outlining the country's progress and the key policies and measures to achieve targets under the EU 2020 Strategy. These key policies and measures are summarised in the following table and their current status is provided.

Table 3 Key policies and measures as outlined by the NRP 2014

Green Growth Commitment	
Status in the NRP	Under development.
Status as per Dec 2014	The strategy was presented in September 2014 by the Minister for Environment, Spatial Planning and Energy and text is open for public consultation between September 2014 and January 2015.
Description of policy	The Green Growth Commitment sets targets to be reached by 2020 and by 2030 in different sectors, focusing on growth, efficiency and sustainability. The main sectors covered are energy, transport, industry, water, waste, agriculture and forests.
New Remuneration Regime for Electricity Production from Renewable Energy	
Status in the NRP	Under development.
Status as per Dec 2014	In force. The new regulatory framework addressing Small Production Units (UPP) and self-consumption (Decree-law 153/2014) was published in October 2014 and came into force in January 2015.
Description of policy	See Chapter 4.

Green Tax Reform	
Status in the NRP	Under development.
Status as per Dec 2014	In force. Law 82-D/2014 was published in December 2014 and came into force in January 2015.
Description of policy	See Chapter 4.

Incentives to Energy Efficiency	
Status in the NRP	Tenders in the ECO.AP program expected to be launched in 2014.
Status as per Dec 2014	No such tenders were identified in 2014.
Description of policy	The programme is aimed at promoting energy efficiency in the public administration (departments and agencies). The government intends to reduce its energy bill by 30% by 2020, while simultaneously reducing its CO ₂ emissions. The programme's pilot-phase is expected to cover 300 buildings by 2015.

Sustainable Cities 2020 Strategy	
Status in the NRP	Under development.
Status as per Dec 2014	Under development.
Description of policy	The strategy focuses on energy efficiency and reduction of GHG emissions in cities.

National Program for Climate Change (PNAC) 2020	
Status in the NRP	Under development.
Status as per Dec 2014	Under development. The PNAC 2020 is still being developed.
Description of policy	The National Programme for Climate Change (PNAC) was introduced in 2006 and 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 define new policies for non-ETS sectors.

4.2 National policy priorities

The below sub-sections provide updates on key existing and new policies in priority sectors and policy areas of relevance to the energy and climate targets under the Europe 2020 strategy². The sections on each sector or policy area contain information on the most important policy instruments in operation or development.

4.2.1 Environmental Taxation

In Portugal, the implicit tax rate on energy is significantly below the EU average with EUR 134 per ton of oil equivalent in 2012 (compared to the EUR 173 average) (Eurostat, tsdcc360). However, the share of environmental tax revenues in overall tax revenue was at 6.7% in 2012, and therefore above the EU average of 6.1% (Eurostat, ten00064). When comparing environmental tax revenues with GDP, Portugal lies below the EU average with 2.2% in 2012 (the average being 2.4%) (Eurostat, ten00065).

² The Consortium jointly with DG Clima identified these based on identified challenges in Country Profiles (EEA, 2014), share of sectors in total GHG emissions, and Country Specific Recommendations (2014). DG Clima has identified additional relevant issues to be reviewed for some or all Member States, including country specific energy challenges.

In December 2014, the Portuguese government approved the Green Tax Reform aiming at inducing more sustainable consumption patterns in the society, reducing dependency on energy imports, promoting energy efficiency and creating jobs. The reform changed the tax system by introducing a carbon tax for non-ETS sectors, changing the Vehicles Tax Code (ISV) with higher charges to vehicles with a high CO₂ emission factor and setting a tax incentive for the discharge of end-of-life vehicles (see Transport), as well as introducing a contribution on plastic bags (i.e. €ct 8 + VAT per bag). The objective is to reduce the use of plastic bags to a maximum of 50 bags/per capita in 2015 and 35 bags/per capita in 2016. The current amount is 466 bags/per capita (GoP, 2014).

4.2.2 Energy Efficiency

Within the EU-28, Portugal has the tenth least-energy-intensive economy and is close to EU average. Energy intensity declined by 18% from 2005 to 2012 (Eurostat, tsdec360), while the final energy consumption dropped by 15% in that time frame with the reductions coming from all sectors (Eurostat, tsdpc320). Portugal is currently on track to meet its indicative EU energy efficiency target (EEA 2014a).

The National Energy Strategy for 2020 addressed the promotion of energy efficiency and the National Action Plan for Energy Efficiency (PNAEE) established an ambitious overall reduction target of 25% of primary energy consumption by 2020 compared to projections. The plan also set a specific target for the State, namely a 30% reduction of primary energy consumption (also compared to projections) (EED, 2015), and highlighted the role played by the ECO.AP program on promoting energy efficiency in the public administration (NRP, 2014).

The Portuguese Energy Efficiency Fund provides financial support. In 2014, it launched new calls to fund energy efficiency in industry (Encouraging the Promotion of Energy Efficiency 2014) and in the transport sector (Promotion of Sustainable Urban Mobility 2014) (EEF, 2014). These calls covered measures foreseen in the National Action Plan for Energy Efficiency (PNAEE) and their main features can be summarised as follows:

Call 1: Encouraging the Promotion of Energy Efficiency 2014:

- Category 1: operations in the industry aiming at the installation of insulation systems with a total budget of € 250,000. Operators of industrial facilities (except the ones under the EU ETS) were eligible and 50% of total eligible costs up to € 2,000-2,500 were covered.
- Category 2: conduction of energy audits. Operators of facilities were eligible and 50% of total eligible costs up to € 750 were covered.
- Category 3: implementation of consumption management equipments. Operators of facilities were eligible and 25% of total eligible costs up to € 10,000 were covered.

Call 2: Promotion of Sustainable Urban Mobility 2014:

- Plans for Mobility and Transport (PMT) with a total budget of € 260,000. Municipalities and municipal authorities were eligible and 25% of total eligible costs up to € 40,000 were covered;
- Plans for Mobility of Companies (PMEP) with a total budget of € 40,000. Companies were eligible and 30% of total eligible costs up to €10,000 were covered.

Energy-intensive industries are subject to the Energy Intensive Consumption Management System (SGCIE) and have to reduce energy consumption. Installations have to perform energy audits and formulate a plan to rationalise energy consumption (PREn), which has to be approved by the Directorate General for Energy and Geology (DGEG). These plans should include minimum targets for energy intensity and consumption (DL 71, 2008).

In the building sector, the Regulation for the Characteristics of the Thermal Behaviour of Buildings (RCCTE) and the Regulation on Heating, Cooling and Air Conditioning (RSECE) regulate efficiency requirements for new residential and small office building and set minimum energy performance requirements, respectively (EEA, 2014a).

4.2.3 Renewable Energy

The share of renewables in gross final energy consumption was 24.6% in 2012 which is above the indicative 2012 target of 22.6% set out by the Renewable Energy Directive (RED). The average

annual growth rate was 1.0% between 2005 and 2012. Thus, an annual growth rate of 5.1% is needed between 2013 and 2020 to reach the 2020 target of 31% (EEA 2014a). The share of renewable electricity generation in final electricity consumption increased significantly from 27.7% to 47.6% from 2005 to 2012, while the share of renewable heating only increased marginally from 31.8% to 33.0% (Eurostat, SHARES 2014).

Renewable energy was mainly supported through a feed-in tariff, which continues to be in place only for existing installations. From 2015 onwards, new installations can receive support through specific power granting tenders. In addition, a new regulatory framework on electricity produced for self-consumption and from small units was published in October 2014 and came into effect in January 2015. According to the new regime, electricity produced by small units (i.e. units with the capacity of up to 250 kW), shall be fed into the grid. The remuneration rate varies depending on the source of energy used and is based on a bidding model in which producers offer discounts to the reference tariff set by the government (DL 153, 2014). In self-consumption units, the primary goal is to meet the consumption needs of the building. Nonetheless, the excess of electricity produced from renewable sources can be fed into the grid if the unit capacity is up to 1 MW. In this case, as the idea is that individuals cover their own consumption needs, excess of production sold to the grid receives 10% less than the market price (DL 153, 2014). For the heating sector, previously an indirectly support via the micro generation regime was in place, However, due to the changes introduced by DL 153/2014, there is currently no direct nor indirect support mechanism for renewable heating (KoT, 2015).

With the implementation of the measures foreseen in the reviewed National Action Plan for Renewable Energy (PNAER), the government expects to create around 70,000 new direct and indirect jobs by 2020 (RCM 20, 2013).

4.2.4 Energy Networks

Portugal intends to reinforce its interconnection capacity with Spain through the construction of two lines with 400 kV each which are expected to be finalised in 2016. The increase of the interconnection capacity between Portugal and Spain, as well as between Spain and France is key for the export of renewable electricity out of the Iberian market. The Portuguese Ministry of the Environment highlighted that the country should not focus only on achieving GHG emission reduction targets, but should set an ambitious and innovative agenda, including the export of renewable energy to other Member States (a9, 2014). In 2014, transmission system operators from Portugal, Spain and France intensified discussions aiming at the development of the interconnection capacity between the Iberian Peninsula and central Europe. The TSOs signed a Common Strategy Paper in January 2015, which they consider crucial to achieve the 10% interconnection target set by the European Council in October 2014 (EC, 2015; CM, 2015).

4.2.5 Transport

GHG emissions as well as energy consumption from transport have increased between 1990 and 2012. However, since 2005 there has been a downward trend. Also, the proportion of transport emissions among Portugal's total emissions has decreased again slightly in 2012 to 24% after reaching a temporary peak in 2010. However, the transport sector remains the biggest source of emissions in comparison with the other sectors (Eurostat, tsdcc210 and tsdpc320). Average emissions for newly registered cars are very low in Portugal with a level of 112.2 CO₂/km. The level is the third lowest in the EU and has decreased by 23% at a rate slightly higher than the EU average of 22% between 2005 and 2012 (Eurostat, tsdtr450). Fuel taxation in Portugal is close to EU average. While the road fuel excise duties on petrol are above average at the twelfth highest among EU MS, the excise duties on diesel are below average at the tenth lowest (EEA 2014b). Distance-based road tolls are charged on certain section of the road network, but rates are comparatively low (CE Delft 2012). In December 2014, the Green Tax Reform introduced changes to the Vehicles Tax Code (ISV) with higher charges to vehicles with a high CO₂ emission factor (Art. 7 Law 82-D 2014) and a tax incentive for the discharge of end-of-life vehicles granted on the acquisition of a new electric vehicle or a hybrid plug-in vehicle amounting to 3.250 EUR and 4.500 EUR, respectively (Art. 25 Law 82-D 2014). With regards to support schemes for biofuels, a tax exemption to small producers is in place, comprising a total exemption of the petrol product tax (ISP) to small producers of biofuels. The latest developments in strategic planning include the public consultation in 2014 of the Strategic Plan for Transport and Infrastructure (PETI3+) for the period 2014-2020. The plan sets three main strategic objectives for the period 2014-2020 that can be summarized as follows:

- a. to contribute to the economic growth by supporting Portuguese companies to create jobs;
- b. to ensure the competitiveness of the transport sector and its financial sustainability;
- c. to promote social and territorial cohesion by ensuring mobility of people and goods around the country (PETI3+,2014).

In addition, a new legal framework for electric mobility came into force in June 2014 aiming at facilitating the integration of charging points in privately-owned areas and to introduce competition in the activities related to the distribution of electricity in charging stations and management of these stations (DL 90, 2014).

5 Policy progress against Country Specific Recommendations (CSRs) issued 2013

The EU Commission provides Country Specific Recommendations (CSRs) for each MS for consideration and endorsement by the European Council. The recommendations are designed to address the major challenges in relation to the targets of the EU 2020 Strategy. In the following table, the CSRs relevant for climate change and energy are listed, and their progress towards their implementation is assessed.

Existing CSRs	Progress
Implement the second and third packages of measures in the energy sector, while eliminating the electricity tariff debt by 2020	In order to finance energy efficiency measures and reduce the electricity tariff debt, the Fund for Systemic Sustainability of the Energy Sector (FSSSE) was established in 2014 (DL 55, 2014). Revenues from the extraordinary levy on energy companies introduced in 2014, which are expected to result in a total revenue of approximately 153 million EUR ³ are expected to be the main income source. The financial management of the fund was assigned to the General Directorate of the Treasury whereas the technical management was assigned to the General Directorate of Energy and Geology (Lusa, 2014) (See Chapter 4).
Improve the cross-border integration of the energy networks and speed up implementation of the electricity interconnection project	A Common Strategy Paper aiming at the development of the interconnection capacity between the Iberian Peninsula and the central Europe was signed in January 2015 by Portugal, Spain and France (EC, 2015). (See Chapter 4).
Implement the comprehensive long-term transport plan	The Strategic Plan for Transport and Infrastructure (PETI3+) for the period 2014-2020 was under public consultation until November 2014. The plan and its Strategic Environmental Assessment Report aim at updating the previous plan by addressing structural reforms to be undertaken and investments needed by 2020 (PETI3+, 2014). The final version has not been published yet (as of 18 Jan 2015). (See Chapter 4).

³ It is worth adding that the energy regulator in Portugal (ERSE) estimated the electricity tariff debit to be 3.7 billion EUR in the end of 2013 (i.e. 2.2% GDP) (Linden, 2014).

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