



Energy Efficiency Profile : Portugal

May 2011

Energy Efficiency Trends

Overview

Over the period 1990 - 2009, energy efficiency decreased around 4% in Portugal, as shown by the increase of the energy efficiency index (ODEX). The main reason comes from the relevant weight from industrial sector characterized by lower energy efficiency. The main improvements were registered in the household sector and in some branches from transport sector.

Industry

For the same period, the overall energy efficiency of industry has decreased almost 7% as measured in terms of energy used per production index. Although in the last four years it seems to indicate a trend towards improving energy efficiency in chemical and non-metallic, the energy efficiency of the sector has decreased. This means "other industry sectors" are those have more contributed to decrease in energy efficiency.

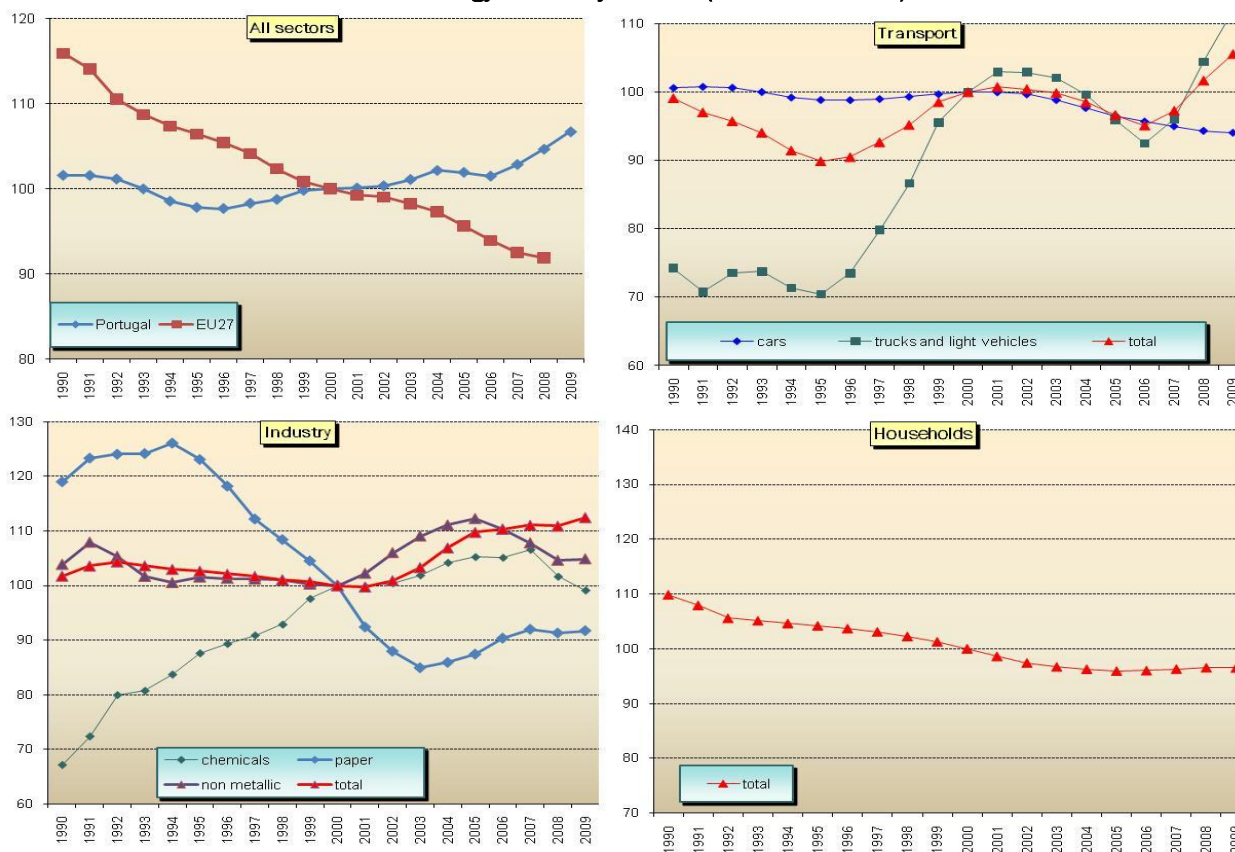
Households

The energy efficiency improvement (1%) between 1990 and 2009 is mainly due to the introduction of natural gas, the use of LPG for water and space heating, and also to an improvement in national building construction in new dwellings, namely thermal insulation, use of double glazing and natural lightening. The improvement in the energy efficiency have stabilized between 2006 and 2009 and slowing down the progress of 3% evidenced between 1990 and 2006. The benefit of the acquisition of more efficient appliances has been counteracted by the growth in the energy consumption for higher comfort of space temperature.

Transport

Between 1990 and 2009 the overall efficiency of the transport sector shows a decrease of about 7%. Although cars show a significant efficiency improvement since 1990, trucks and light vehicles show an abrupt decrease in efficiency in later years which could in part be due to the economic crisis.

Energy efficiency index* (base 100=2000)



*All indicators measured as a three-year moving average
Source ODYSSEE For more information : <http://www.odyssee-indicators.org/>

Energy Efficiency Policy measures

Institutions and programmes

A new update version of the National Climate Change Program of 31st of July 2004, was approved by Ministries Council on the 1st of June 2006, and is currently under public discussion, before being published in Decree Law. The aim of the current version is to reinforce the monitoring of the GHG emissions, in several economic sectors and to make sure the compliance of Portugal commitments under Kyoto Protocol. In this version, further ambitious measures and policies are put forward, especially directed to sectors not covered by the European Wide Emissions Trading.

In 2008 it was approved on the Ministries Council of 20th of May the National Action Plan for Energy Efficiency (PNAEE). This document includes a wide range of programs and measures covering all sectors, and is considered essential for Portugal to achieve and surpass the targets set under Directive No. 2006/32/EC of the European Parliament and the Council of 5 April on energy end-use energy efficiency and energy services.

Industry

Since the 1990s, the dominating instrument to improve energy efficiency in industry is the Regulation on Management of Energy Consumption (RGCE). This instrument establishes goals for energy intensive companies to progressively reduce their specific energy consumption. RGCE requires companies to audit their energy consumption, every 5 years and meet their targets on energy savings. The main sectors covered are pulp and paper, textiles, chemicals, wood and cork and food and beverage. Since August 2003 until the end of 2004, near 100 audits reports, corresponding to energy savings of 18 ktoe per year (6% of the energy consumption of industrial plants), were submitted to DGGE- General Directorate for Geology and Energy [DGGE (2005), *National Reporting Guidelines for CDS-14/15 Thematic Areas- ENERGY*].

Later on in 2008, this regulation was recast by Decree-Law nº 71 April 15th releasing the new Energy Intensive Consumption Management System (SGCIE). This system aims to promoting energy efficiency and energy consumption monitoring in energy intensive installations, including now the installations with energy consumption upper 500 toe/year. The former regulation was just applied to installations with energy consumption upper 1000 toe/year.

Households and Services

On April 2006, after an expectation of almost two years, 3 new Decree Laws were published, setting out the framework for the national Energy Efficiency Certification System. The revision of the two building codes, on the characteristics of thermal performance and on HVAC systems, was finally published, under Decree Law 80/2006 and 79/2006, respectively. The Energy Certification Process of buildings was put in force by Decree nº 78/2006 April 4th. The new legislation establishes higher thermal requirements than the existing standards and adds strict indoor air quality requirements as well as maintenance and periodic inspections during the lifetime of HVAC systems.

The new measures for these sectors included in the National Action Plan for Energy Efficiency (PNAEE), such as the incentive for the replacement of older appliances for new and more efficient ones, are currently in place and will result, in the short term, in an increase in the energy efficiency.

Transport

Under the Ministries Council Resolution nº161/2005, of 12th October, the current tax on the purchase of cars was amended. From the 1st of July 2006 on, the tax calculation formula includes an environment component part, besides the cylinder capacity (CC) component. The integration of the environment part in the tax calculation formula will be made progressively, reducing the cylinder capacity component, favouring the less pollutant vehicles. This environmental component part will be differentiated according to the type of fuel used, taking in to consideration the environmental damages for the public health caused by the respective fuels consumption.

In 2009 it was approved on the Ministries Council of 20 of February the Electric Mobility Program (MOBIE.E) which aims to spread the use of electric cars in Portugal. The program includes incentives to the acquisition of electric vehicles and promotes the development of an integrated battery re-charge network.

Energy prices and taxes

Since June 2002 the Government increased the general VAT from 17% to 19% and in July 2005 from 19% to 21%. This VAT rate applies to LPG, gasoline and automotive diesel. Electricity and natural gas are subjected to the reduced VAT of 5% and heating oil and diesel for agriculture purposes are subjected to the intermediate VAT of 12%.

Selected Energy Efficiency Measures

Sectors	Title of measures	Since
Households/tertiary	Revised building code on thermal performance characteristics	2006
Households/tertiary	Revised building code on HVAC Systems	2006
Households/ tertiary	Energy labelling of buildings	2006
Industry	Regulation on management of energy consumption (RGCE)	1982
Industry	Energy Intensive Consumption Management System (SGCIE)	2008
All	Climate change national strategy (PNAC)	2004
All	National Action Plan for Energy Efficiency (PNAEE)	2008
All	Feed-in tariff for renewables	1988
All	Prime Programme - MAPE	2000
Transport	Excise tax relief for biofuels	2006
Transport	Fiscal incentives for old cars scrapping	2000
Transport	Electric Mobility Program (MOBIE.E)	2009