



Energy Efficiency Profile: Greece

Energy Efficiency Trends

May 2011

Overview

The energy efficiency index (ODEX) for all sectors in Greece decreased regularly by 30%, during the period 1990-2009. The decreasing follows up the trend of the EU average until 2005 when the global index tends to increase (and show a slowdown in energy efficiency savings mainly in industry and transport).

Industry

The efficiency in the industrial sector (measured at the level of 10 branches - in terms of energy used per production index or per ton - and aggregated to the whole sector) improved by 11% compared to 1990. A decreasing of the energy efficiency index can be observed since 2005 due to a deterioration of the energy efficiency in particular for 2 branches, chemicals and food industries which represent around 25% of the industrial energy consumption.

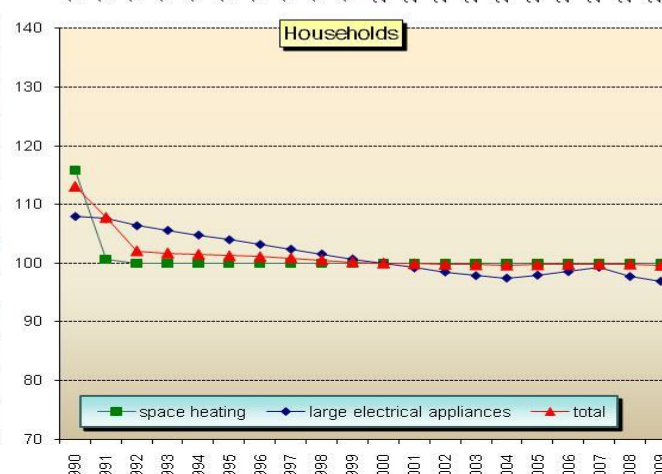
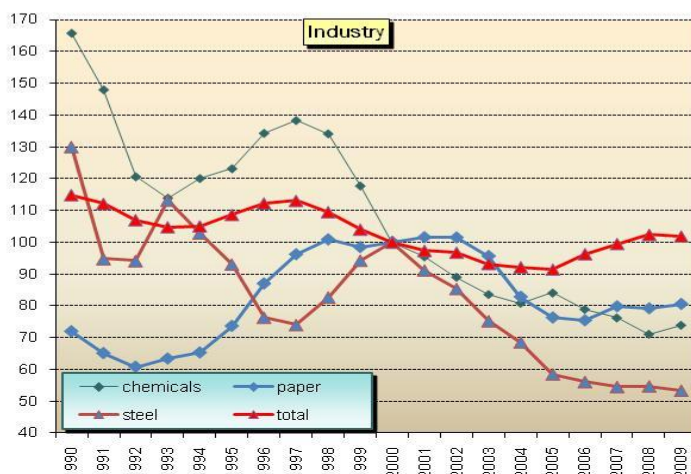
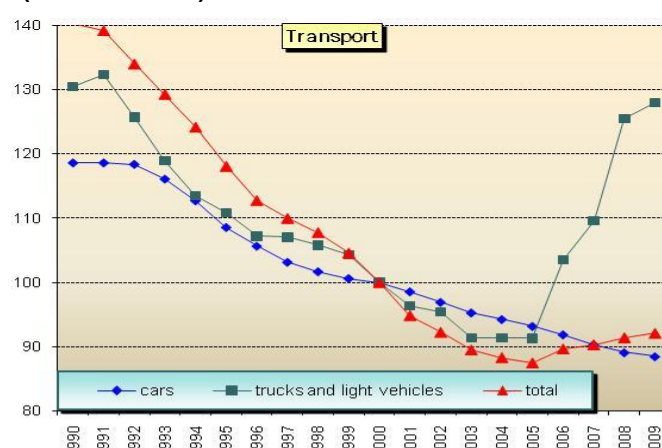
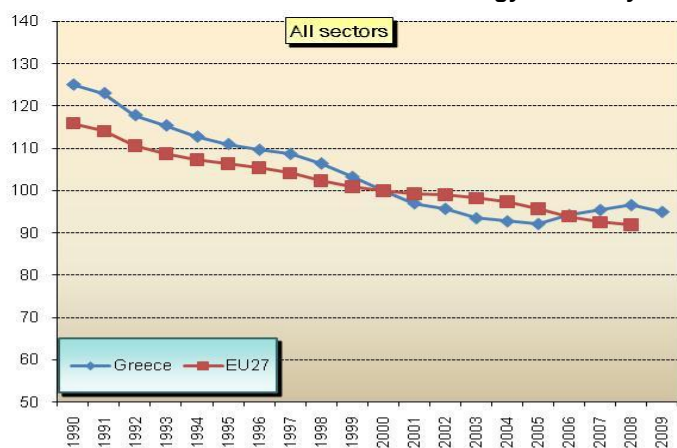
Households

Between 1990 and 2009, the energy efficiency index in the household sector decreased substantially by 2%. The energy efficiency for large electrical appliances improved by 11% and is the dominant factor, which determines the overall energy efficiency in households. The energy efficiency trend for households is attributed mainly to the continuous replacement of the old building stock with newer and bigger dwellings based on the stringent requirements of new building regulation on better insulation and more efficient household electrical appliances. Loans acquisition with low interest-rates helped the growth of renovation of older buildings and their replacement with new dwellings, especially in urban areas.

Transport

In 2009, the overall energy efficiency of the transport sector has improved by 34% compared to 1990. However, since 2006 the index tends to increase (which means no more energy efficiency savings), mainly for trucks and light vehicles. Indeed since 2006, the traffic of trucks and light vehicles (national and international haulage) has decreased strongly and the lack of incentives for the replacement of old vehicles, led to the decreasing efficiency of the fleet of trucks and light vehicles. On the other hand, the energy efficiency index of cars is steadily decreasing mainly because of new, more energy efficient cars which led to an energy efficiency improvement of 25%.

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

The Regulatory Authority for Energy (RAE) is an independent administrative authority. The Centre for Renewable Energy Source and Saving (CRES) was founded in 1989 as the national agency for the promotion and implementation of energy savings, rational use of energy and renewable energy sources. In the last years, a number of Laws, Ministry Decisions, Presidential Decrees and Legislative Acts are adopted for introducing energy efficiency and rational use of energy in all sectors in Greece. The main legislations in force are the following: "Measures to reduce energy consumption in buildings and other provisions" (L.3636/2008); "Measures to improve energy efficiency and energy savings in the public sector" (MD D6/V/14826/17.6.2008); "Establishment of harmonized reference values of efficiency for the separate production of electricity and thermal energy" and "Specify details of the method of calculation of electricity from cogeneration and efficiency cogeneration" (MD D5-IL/G/F1/oik.15606 & 15641/15.7.2009); "Adoption of Energy Performance of Buildings Regulation" (MD D6/V/oik.5825/9.4.2010); "Acceleration the Development of Renewable Energy and climate change and other provisions relating to the Ministry of Environment, Energy and Climate Change" (L. 3851/2010); "Measures to improve energy efficiency in end-use, energy services and other provisions" (L. 3855/2010); "Energy Inspectors of buildings, boilers and heating and air conditioning" (P.D.100/2010); "Financing Environmental Interventions, Green Fund, Ratification forest maps and other provisions" (L.3889/2010); "Incentives for replacing of old technology vehicles" (MD DEFK 5006718EX2001/11.2.2011); "Framework methodology for measuring and verifying energy savings to achieve the national indicative energy savings target in the final consumption-eligible list of indicative measures to improve energy efficiency" (MD D6/7094/23.5.2011).

The NSRF (National Strategic Reference Framework) 2007–2013 constitutes the reference document for the programming of European Union Funds at national level for the 2007–2013 period. The country's strategic planning for the period 2007-2013 is to be implemented through Sectoral Operational Programmes, Regional Operational Programmes and European Territorial Cooperation Programmes. The Second National Energy Efficiency Action Plan is about to be submitted to the EU Commission.

Industry

Since 2000 in industry, the dominating instrument to improve the energy efficiency is the **Operational Programme for Competitiveness 2000-2006 (OPC)**. This program enforces investments in the field of rational use of energy, CHP and drives the promotion of renewables. Additionally, the **"Private Incentives for Economic Development and Regional Convergence"** (law 3299/05) provides up to 40% subsidies to industrial and tertiary sector's enterprises for energy efficiency or RES investments (40% for electricity production from RES or CHP). In parallel the emissions trading scheme implemented to 151 energy-intensive industrial installations is the main mechanism to improve the energy efficiency since 2005.

Households, Services

Greece adopted the Directive 2002/91/EU (Law 3661/2008) for the reduction of energy consumption in buildings. The main articles of the law concern building codes and minimum requirements for Energy Efficiency in new and existing buildings (buildings energy performance certificate in all existing buildings; energy auditing (inspection of boilers and air condition systems)).

Two major programs give economic incentives for improving energy efficiency in the residential sector: the program "Changing Air-Condition" for replacement of old split air-condition units run on summer 2009 and led to the replacement of 140.000 units all over Greece; the program "Energy Savings in households" for the insulation refurbishment for walls, roofs, windows and the replacement of heating and water heating equipment

Transport

Since 1999, Law 2682 promotes the purchase of low polluting vehicles with fiscal incentives such as tax reductions for electric, alternative and hybrid vehicles. Additionally these vehicles are exempted from traffic restrictions e.g. access in the Athens city centre. Since January 2002, The Joint Ministerial Decision 90364 concerning the introduction of fuel consumption and CO2 emissions label for new cars, implements the EU Directive 1999/94/EC. With the Legislative Act 16.9.2009/2 "Measures for air pollution confrontation" incentives were given for replacement of old polluted private vehicles. This Act was replaced with the M.D 5006718EΞ2001/11.2.2011 "Incentives for replacing old, high polluted vehicles". The taxation of vehicles is connected with CO2 emissions. Moreover the basic principles of Eco-Driving are inserted in the theoretical training of new drivers. Furthermore, the L.3855/2010 (transposition of the Energy Service Directive) provides energy efficient vehicles in the public sector.

Selected Energy Efficiency Measures

Sectors	Title of Measure	Since
Households	"Energy Savings in households" Program	2010
Households	"Changing Air-Condition" Program	2009
Tertiary	Energy savings in Local Self-Governments. -"ECONomize" program	2010
Tertiary	Energy Performance of Buildings	2010
Transport	Improvements in Road Transport Infrastructure	1998
Transport	Technical Inspection of Vehicles	2008
Transport	Replacement and promotion of Low Polluting Vehicles	2009
Transport	Taxation of new cars according CO2 emission	2010
All	Promotion of Combined heat and power (CHP) and district heating systems	2006
All	Program for financial support of technological investments in energy efficiency	2000

Source : MURE www.mure2.com