Energy Efficiency Profile : Greece

October 2008

Energy Efficiency Trends

Overview

The energy efficiency index (ODEX) for all sectors in Greece decreased regularly by 19%, during the period 1990-2006. The decreasing follows up the trend of EU-27 global energy efficiency index. This improvement is due to mainly transport sector contribution, whereas the energy efficiency index of the other two sectors (households and industry) decreased less than 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 22% compared to 1990. This improvement in the energy efficiency index was the result of major decreases in non-metallic (58%) and chemical (47%) industry. The improvement of energy efficiency in non-metallic minerals industry by 58% was important, taking into account that non metallic minerals absorb almost 35% of the energy consumed in the industrial sector. The efficiency index of the other energy intensive branches, such as non ferrous metals, decreased by 33%.

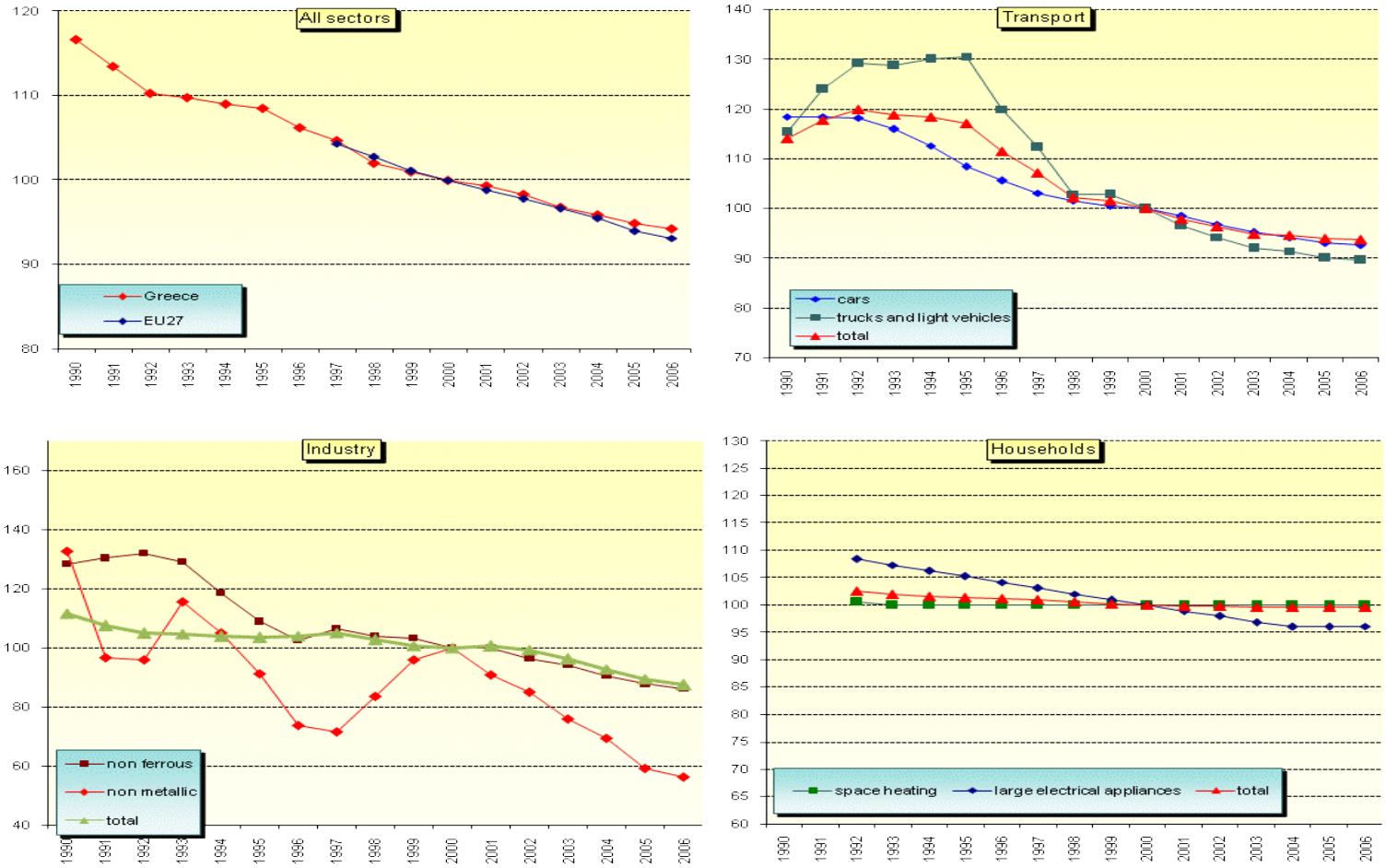
Households

Between 1990 and 2006, the energy efficiency index in the household sector decreased substantially by 2%, which means an improving of energy efficiency. The energy efficiency for large electrical appliances improved by 11% and is the dominant factor, which determines the overall energy efficiency in households. The little decreasing of energy efficiency index (ODEX) 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 the urban areas.

Transport

In 2006, the overall energy efficiency of the transport sector has improved by 16% compared to 1990. The efficiency improvement in road transport was mainly caused by the penetration of new, more energy efficient cars and heavy vehicles which led to the improvement of energy efficiency by 22%.

Energy efficiency index



Source: ODYSSEE data base

For more information: http://www.odyssee-indicators.org/database/definition_odex.pdf

Energy Efficiency Policy Measures

Institutions and programmes

The Ministry of Development introduces energy policies for industry and service sectors. The Ministry for Environment is responsible for policies for energy use in buildings and the Ministry for Transport in transport. The Regulatory Authority for Energy (RAE) is an independent administrative authority, the RAE acts as a dispute settlement authority with respect to complaints against transmission or distribution system operator in both electricity and natural gas sectors. The Centre for Renewables Energy Source (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. Very recently was established the Council of National Energy Strategy in the Ministry of Development that will function as independent consultant body, for the long-term national energy policy planning.

The **law 2773/99,** amended by recent issuing of **law 3468/2006** for arranging all legal and operational matters pertaining to power generation from RES as well as to combined heat and power co generation, allows for electricity production by the private sector from RES or CHP. Furthermore, it ensures the sales of electricity produced from independent producers or auto producers (surplus) to the Hellenic Transmission System Operator (HTSO) at fixed prices per technology.

The National Energy Efficiency Action Plan was submitted in European Commission. In the frames of action plan implementation, measures with institutional, administrative and technological character have been modulated for all sectors, based on the energy efficiency and low cost investments.

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 - energy efficiency, CHP and drives the promotion of renewable and other indigenous energy sources. Additionally, the **"Private Incentives for Economic Development and Regional Convergence" law 3299/05** supports the economic and regional development 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, it was started in the beginning of 2005.

Households, Services

Greece adopted the Directive 2002/91/EU by National 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 the follow cases: a) All new buildings, b) For all renovated buildings over 1.000 m2 c) For all existing buildings, when sold or rented out.
* Energy auditing (Inspection of boilers and air condition systems)

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 satisfying the specifications of the EC Directive 94/12 or more recent Directives. 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 Council Directive 1999/94/EC in Greece. The measures that are proposed concern the adoption of regulative and administrative actions. Indicatively, they concern: growth of urban mobility actions, labelling in cars, connection of taxation of vehicles with emissions CO2, measures of briefing, sensitization and education of public on the increase of use of public transport and the promotion of Eco-Driving, infrastructures in the sector of transports, replacement of old vehicles with new energy efficiency ones (natural gas, hybrid, bio-fuel).

Selected Energy Efficiency Measures

Sectors	Title of Measure	Since
Industry	Incentives for obligatory implementation of Energy Management Systems	2008
Industry	Promotion of voluntary agreements in industrial sector	2008
Households	Decision for the reduction of CO2 emission by Energy Efficiency Improvement in Buildings	1998
Households	Energy improvement of building cell	2008
Households	Obligatory installation of central thermal solar systems in new buildings.	2008
Tertiary	Energy Auditing Procedures, Requirements and Guidelines	1999
Tertiary	Obligatory replacement of all lightning systems of low energy output in public sector	2008
Tertiary	Obligatory installation of central thermal solar systems in buildings of tertiary sector	2008
Transport	Energy and CO2 labelling for new cars	2002
Transport	Promotion of Low Polluting Vehicles	1999
Transport	Improvements in Road Transport Infrastructure	1998
Transport	Technical Inspection of Vehicles	2008
Transport	Energy and CO2 labelling for new cars	2008