



# Energy Efficiency Profile: Spain

## Energy Efficiency Trends

June 2011

### Overview

The evolution of the global energy efficiency index (ODEX) in Spain shows a favourable trend in the last years, in particular over the period 2004-2007, following the general trend of the EU index. This improvement seems to obey to the implementation of the energy efficiency measures corresponding to the *Spanish Energy Efficiency Strategy*, after the year 2004, which also is translated to a general improvement in most of the energy efficiency indicators, at general and sectoral level. However, recently, after 2008, there's a change of trend in the global ODEX, which can be explained by the current crisis, which mainly affects the industrial activity. In fact, in Spain there's a strong correlation between the global ODEX and the index of industry, which makes the global ODEX very sensitive to the evolution of the industry ODEX, and consequently to the factors which alter its progress.

### Industry

The year 2004 represents a break in the general trend followed by this index in Spain. After this year, there's an improvement which makes the Spanish index evolve in parallel to the EU index. Both indices, at Spanish and EU level, show a similar progress along the period 2004-2007, with an average yearly improvement of 2% and 2.7% respectively. Most of the branches experience this improvement. The cause could be derived from the combined effect of energy efficiency policies implemented after 2004 and small structural changes. This situation has reversed in 2008, as a consequence of the economic crisis, which has had a strong impact in the industrial activity, especially in branches linked to construction (e.g. non-metallic minerals) and car manufacturing (e.g. steel).

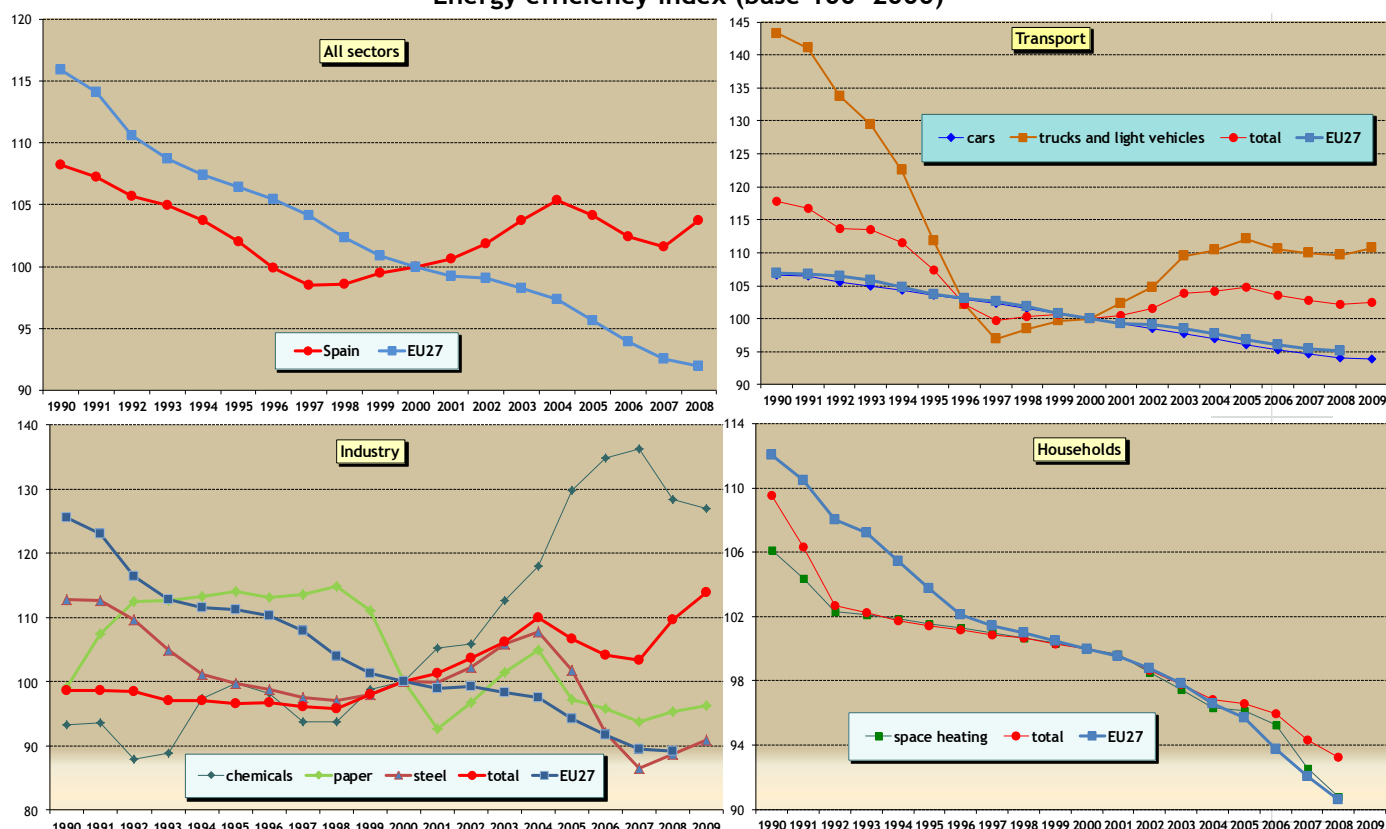
### Households

Energy consumption of a Spanish average household is 40% lower than the EU average. This difference is in particular explained by a milder climate, which reduces the space heating demand. The equipment ownership, which used to be lower than the EU average, has now reached a similar level, which is put in evidence from the increase of the electricity unit consumption, leading to its convergence with the EU average. In particular, the progressive equipment ownership, which has taken place along the 90s, account for the increase observed in the unit consumption. After 2001, there is a change in the household sector, specially reinforced after 2004, following the same pattern as most of sectors. This situation has its translation in terms of the ODEX index, showing a continuous improvement, with an evolution below the European index until 2004. Since then, the improvement is kept, although the progress in efficiency is slightly higher at EU level. Among the possible causes of this fact, it can be mentioned a lower penetration of the most efficient appliances.

### Transport

In Spain the transport sector shows values of the ODEX index, remarkably higher than the European average. The reason, on the one hand, lies with Spain's geographical position that renders it an area for goods traffic from the North of Africa to the Centre of Europe, and on the other hand, with the age of the national car fleet. Nevertheless, the index shows an improvement after 2004, following a similar trend as the EU average.

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

**IDAE** is the national agency responsible for promoting energy efficiency and the increased use of renewable sources of energy in Spain. Royal Decree 1554/2004 of 25<sup>th</sup> June 2004, developing the basic organic structure of the newly created Ministry of Industry, Tourism and Trade (MICYT) and ascribes IDAE to this ministerial Department, through the General Secretary. The Council of Ministers of July 2007 approved the "**Action Plan, 2008-2012 of the Energy Efficiency Strategy (E4)**", consolidating the effort of the Action Plan 2005-2007. This Plan pays special attention to diffuse sectors. As a whole, it joins together a set of measures that will enable a saving of 87.9 Mtoe all along the period 2008-2012. The new Action Plan is the first NEEAP requested by *Directive 2006/32/CE*. The "**Saving and Energy Efficiency Stimulation Plan, 2008-2011**", was approved in Cabinet of Meeting in August 2008, in a context of strong oil price rise, with the double objective of reinforce the fulfilment of the energy efficiency targets established in the frame of the Action Plan 2008-2012, and achievement of additional energy savings equivalent to 10% of the oil imports.

### Industry

This sector relies on several measures within Action Plan 2008-2012, currently under way, to improve its energy efficiency. Among these, it can be highlighted the subscription of **voluntary agreements** between the representative entrepreneurial associations of each sector and the Central Administration, through the MICYT and IDAE itself. These agreements engage associations to reach the potential of energy saving detected in each sector. With the same aim, there is a "**Public Support Programme**" focused on energy efficiency with distributed funds according to a management model shared between the State's General Administration (SGA) and the Autonomous Communities. The approval of "**Royal Decree 616/2007 on the promotion of CHP**", through which Directive 2004/8/EC is transposed to Spanish legislation, shall contribute to a better energy efficiency in the industry sector.

### Households, Services

Along the last years, there has been a series of improvements in the specific legislation as regards the efficiency of the building sector, among which stands out the approval of the **Technical Building Code (TBC)**, the revision of the Regulation on Building Heating Installations (RITE), and the approval of a **Building Energy Certification procedure for new buildings (respective Royal Decrees RD 314/2006, RD 1027/2007, and RD 47/2007)**. At present, a procedure of **energy certification for existing buildings** is under development. Additionally, some recent initiatives focused on both the improvement of energy efficiency and the penetration of renewable energies in the building sector through ESCOS are expected to have a positive effect in the short term: the IDAE's Financing Lines for Thermal Renewable Energies in Buildings —**BIOMCASA-SOLCASA-GEOTCASA**—; **Plan 330 ESE (Activation Plan in the State's General Administration Buildings through ESCOS)**; **Plan 2000 ESE (Plan to Boost Energy Services Contracts)**. Other measures are focused on the purchase of high efficient equipment: **Green Public Procurement Plan**; the incorporation of the **Eco design requirements** to be applied to energy-using products (EuPs), approved by **RD 1369/2007**. The approval of **RD 1890/2008** regulates energy efficiency in **street lighting installations**.

### Transport

**Law 12/2007**, of 2<sup>nd</sup> July, modifying Law 34/1998 **on the Hydrocarbons Sector**, with a view to adapting it to the content of Directive 2003/55/EC **on common rules for the internal gas market**, which regarding **biofuels**, introduces the *obligation to use them in transport*. All this is develop through the Order ITC/2877/2008, which regulates an enhancement mechanism for the use of biofuels and other renewable fuels for transport purposes; and RD 1738/2010, which sets mandatory biofuel objectives for the years 2011, 2012 and 2013. The electricity mobility is given a foster in Spain through the approval of **MOVELE Demonstration Project** and the **Integral Strategy to Impulse the EV/PHEV** in Spain 2010–2014. The promotion of clean vehicles is promoted thanks to a registration tax linked to CO2 emissions, implemented through Law 34/2007 on Air Quality.

## Selected Energy Efficiency Measures

Sector	Measure	Since
Industry	Public Support Programme	2008
Building	Renewal of the thermal casing in the existing buildings	2008
Building	Promotion of the construction of new buildings and renewal of the existing ones with a high energy certification	2008
Building	Plan to Boost Energy Services Contracts (Plan 2000 ESE)	2010
Building	IDAE's Financing Lines for Thermal Renewable Energies in Buildings: BIOMCASA-SOLCASA-GEOTCAS	2009
Public Services	Energy Saving and Efficiency Plans in Public Administrations	2008
Public Services	Energy Efficiency Regulation in Street Lighting Installations	2009
Tertiary	Green Public Procurement Plan	2008
Transport	Registration Tax Link to CO2 Emissions (Law 34/2007 on Air Quality )	2008
Transport	MOVELE Demonstration Project (Electric Mobility)	2009
Transport	Mandatory Use of Biofuels	2008
Transport	Integral Strategy to Impulse the EV/PHEV in Spain 2010–2014	2010

Source MURE

For more information : <http://www.isisrome.com/mure/>

