



# Energy Efficiency Profile: Bulgaria

May 2011

## Energy Efficiency Trends

### Overview

Over the period 1996-2008 the energy efficiency index (ODEX) for all sectors decreases by 35 % in Bulgaria compared to 13 % for the EU as a whole. This improvement is due, largely, to the industrial sector. In the same way, the decrease in the energy intensity of the Bulgarian economy as a whole is due to a great extent to the decrease of the energy intensity of industry.

### Industry

In the industrial sector, the energy efficiency index has decreased by 67 % over the period 1996-2008, which indicates that significant energy savings have been made in the sector. The reduction of the energy efficiency index in the production of chemicals is 67 %, in the production of steel 32 % and in the production of non-metallic minerals 112 % in the same period. The growing price of fuels and energy carriers is the driver; it has been reinforced by incentives for energy savings in this sector. The relatively fast growth of production in the period (including in 2008) allowed for increasing the load factor of existing production capacity, which becomes a favorable factor for improvement of energy efficiency.

### Households

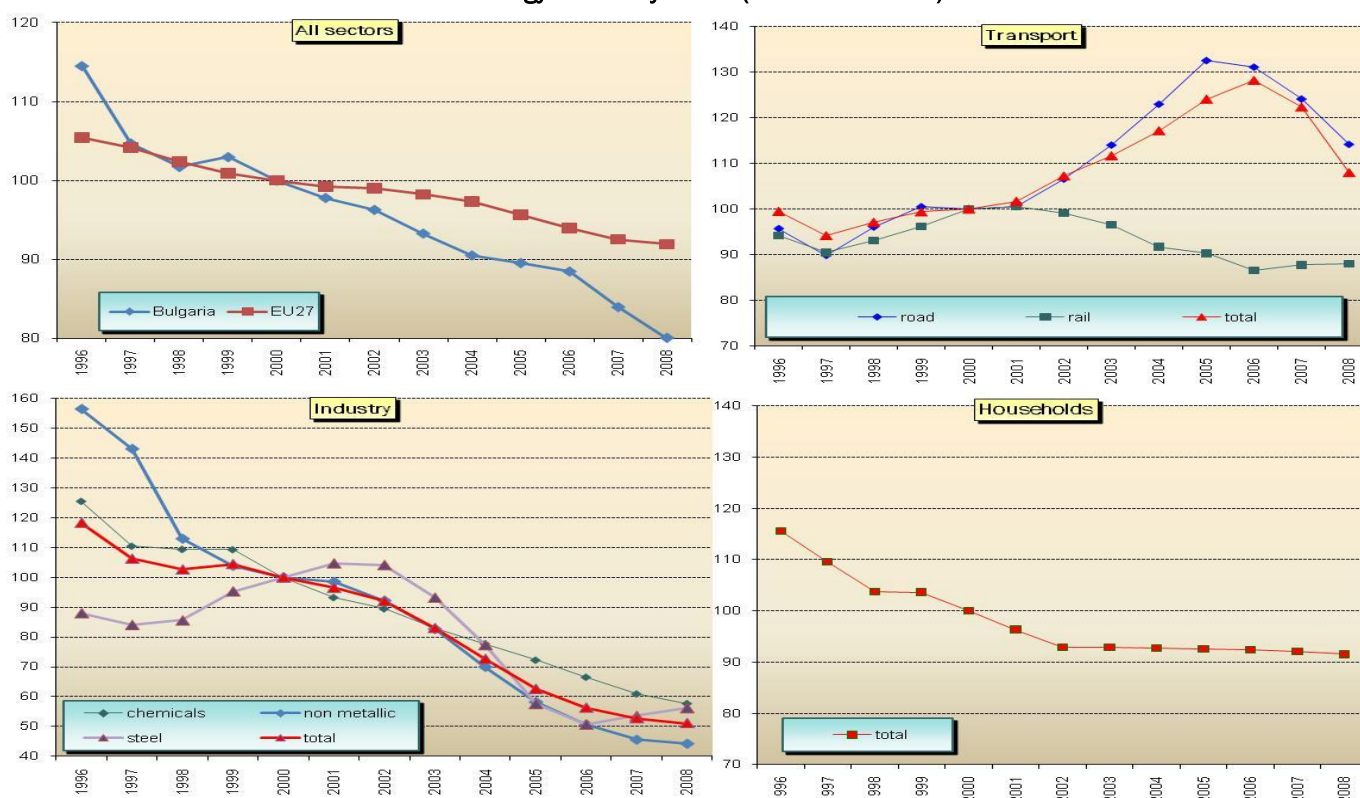
Between 1996 and 2008, energy efficiency of the household sector improved by 24 % and this happened in a situation of considerable growth of private household's consumption. For space heating, the improvement is 22 %. Bulgarian households increased their energy efficiency and the effect of this improvement is used almost entirely for improving their heating comfort, wider use of electric appliances, air conditioning etc.

The improvement of the ODEX in this sector is a result of different opposed trends in the recent years. The trend for improvement of energy efficiency in buildings, in appliances, in lighting, use of heat pumps and the trend for improved thermal comfort, use of air conditioning and more appliances and increased use of wood for heating in inefficient stoves.

### Transport

Over the period 1996-2008, the energy efficiency index in the transport sector increased by 8 %, which indicates a deterioration of energy efficiency. The energy efficiency index of road transport, increased by 18 % over the whole period, but after 2006 some improvement can be observed. The most significant driver of the deterioration of energy efficiency in the sector has been the shift from rail to road transport, the city congestions and the high average age of the Bulgarian vehicles stock (cars, light duty vehicles, buses, trucks).

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 **Energy Efficiency Agency (EEA)** is an executive Agency (governmental institution) under the Ministry of Economy and Energy, according to the Energy Efficiency Act from March 2004 (recast of EEA 2008). The basic EEA activities cover the implementation of the Energy Efficiency Act, monitoring and reporting the achieved energy savings and the framework in relation to the ESD targets.

## Cross-cutting

- Mandatory individual targets for saving of final energy for trade companies with more than 75 GWh annual final energy sales.

## Industry

All consumers with an annual consumption above 3,000 MWh (excl. ETS) must carry out energy efficiency studies and implement the identified energy saving actions. In addition, they must set up individual energy saving targets.

The **Bulgarian Energy Efficiency and Renewable Energy Credit Line (BEERECL)** has been developed by the European Bank for Reconstruction and Development (EBRD) in 2004 in close co-operation with the Bulgarian Government and the European Union. The facility extends loans to private sector companies for energy efficiency and renewable energy projects in industry.

Financial support from EU funds is provided for energy efficiency projects in SME's in the frame of Operative Program "Competitiveness" (after 2012)

## Households, Services

Among the main measures are:

- Mandatory energy audits and certification of all state or municipal buildings with gross floor area above 1,000 m<sup>2</sup>;
- Mandatory individual energy saving targets for all buildings above 1000 m<sup>2</sup>. (new Energy Efficiency Act 2008);
- Mandatory energy labeling of electrical appliances;
- Minimum efficiency requirements for hot water boilers with a capacity 4 – 400 kW for liquid or gas fuel;
- Obligatory inspection of water heating boilers with more than 20 kW and air conditioning systems with more than 12 kW;
- Energy Performance Standard for buildings;
- Residential Energy Efficiency Credit Line (first stage to the end of 2009 and second stage since 2012);
- National Strategy for Building Insulation, 2005-2020 for state, municipal and multi-family residential buildings.
- Individual billing in multi-family residential buildings connected to district heating.
- Financial support from EU funds of energy efficiency projects in municipal buildings in the frame of Operative Program "Regional Development" (after 2012)

## Transport

The main measures are:

- Taxes on motor vehicle fuels. The taxes (incl. VAT) are about 50 % of the consumer prices of gasoline and diesel oil.
- Mandatory annual technical inspections of all vehicles. (from 01.09.1999 with several changes).

## Selected Energy Efficiency Measures

Sector	Title of measures	Since	Energy savings	CO <sub>2</sub> savings
All	Individual targets for final energy savings for energy trade companies with more than 75 GWh annual sales	2010	399 ktoe (16,7 PJ) annually to 2016 and 57,7(2,4 PJ) achieved to 2010	1436 kt
Industry	Mandatory energy efficiency studies of consumers with annual consumption above 3000 MWh (excl. ETS installations)	2004	112 ktoe (4,69 PJ) annually* to 2016	420 kt
Industry	Bulgarian Energy Efficiency and Renewable Energy Credit Line – soft loans for EE measures in industry	2004	88 ktoe (3,69 PJ) annually (achieved to 2010)	317 kt
Residential, Services	National Strategy for buildings insulation (2005-2020)	2005	88,8 ktoe (3,72 PJ) annually (planned for 2016)	320 kt
Residential	Residential Energy Efficiency Credit Line - soft loans for EE measures (1stage to 2009 and 2 stage from 2012)	2005	15,7 ktoe (0,66 PJ) annually (achieved to 2009)	56 kt
Residential	Individual billing in multi-family residential buildings connected to district heating.	2004	63 ktoe (2,64 PJ) annually (achieved to 2010)	227 kt
Services	Mandatory energy audits and certification of buildings with gross floor area above 1,000 m <sup>2</sup> , state or municipal property.	2005	214 ktoe (9 PJ) to 2016 *	770 kt
Transport	Mandatory annual technical inspections of vehicles	1999	76,4 ktoe (3,2 PJ) annually	244 kt

Source MURE

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

\* after implementing the measures proposed in the audits

\*\* after implementing the measures and projects included in the Program

