



# Energy Efficiency Profile : Czech Republic

October 2008

## Energy Efficiency Trends

### Overview

In the period 2000 - 2006 the energy efficiency index for the whole economy (ODEX) more or less stagnated. It grew by 1 % in 2004 and than again dropped by the same value. It is an unfavourable development in comparison with the EU-27 where the energy efficiency index decreased by 7 %. Whereas the energy efficiency in households and industry improves, contrary is the case in the transport sector. Since the share of the transport sector in the total energy consumption increases, the deterioration of energy efficiency of transport negates the improvement from other sectors.

### 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) progressed by 10 % compared to the year 2000. It is by 1.4 % better value than the EU-27 average (a decrease of 8.6 %). The production indices of individual sectors exhibit big year-to-year fluctuations. It witnesses about still continuing changes in the industrial sub-sectors.

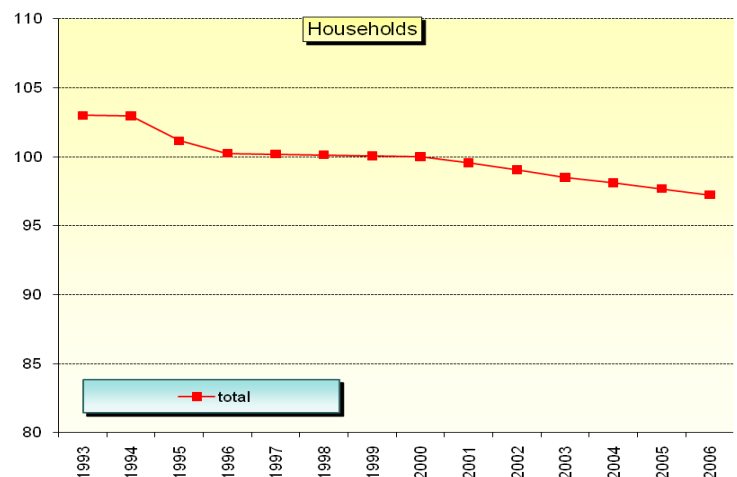
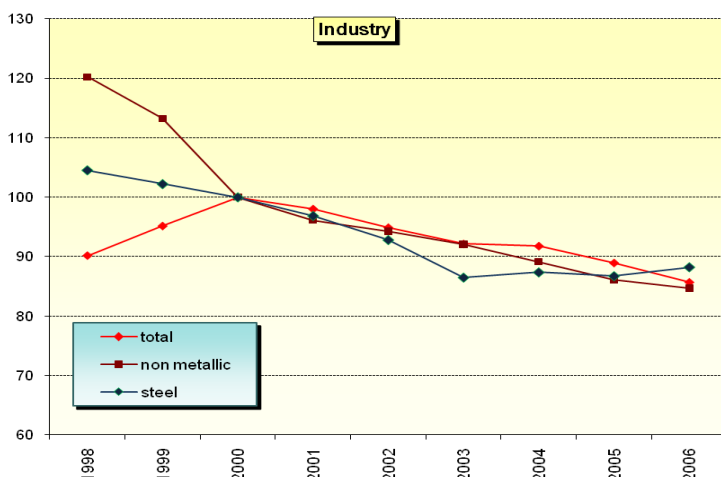
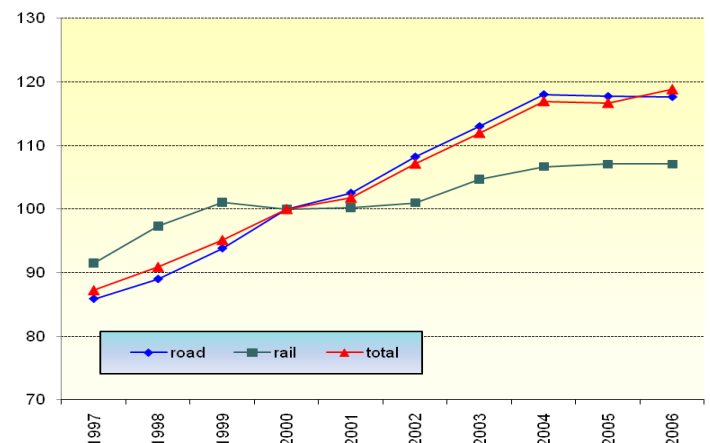
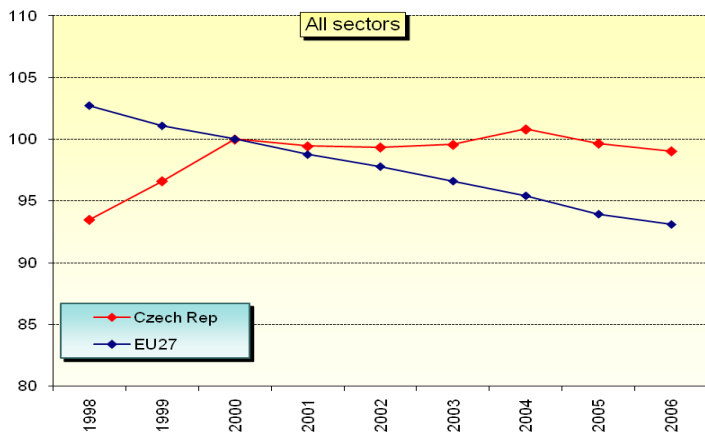
### Households

Between 2000 and 2006, the energy efficiency index in the household sector as a whole decreased by 2.5 % with a constant tempo. This results from two contradictory trends - improving technical parameters of buildings and equipment on one side and increasing living standard on the other side. The decrease in the mentioned period is significantly lower than EU -27 average of 6.2 %.

### Transport

In 2006, energy efficiency of the transport sector worsened by 16.5 % compared to the year 2000. It is opposite trend in comparison with EU-27 average. This adverse development is given by an extreme growth of road transport - there are more vehicles with lower capacity utilisation and we can observe switch from railway to road transport. Import of relatively old used cars from the Western Europe can play the negative role as well. In last two years we can observe a break of the trend toward to stagnation of energy efficiency index of transport.

Energy efficiency index , base 100=2000



# Energy Efficiency Policy Measures

## Institutions and programmes

The responsibility for initiation, support and realisation of activities leading to energy savings and reduction of the negative environmental impacts of the energy consumption and transformation was divided between the **Ministry of Industry and Trade (MIT)** and the agency **Czechinvest** after abolition of the **Czech Energy Agency in December 2007**. At present, the Czechinvest is responsible for preparation, realisation and consistent evaluation of **Operational Programme Industry and Enterprise (OPIE) 2004 – 2006 “subprogram Energy savings and RES”** and **Operational Programme Enterprise and Innovation (OPEI) 2007 – 2013 „subprogram Eco-energy“**. The **State Environmental Fund (SEF)** is an organization of Ministry of Environment. The SEF operates the **Operational Programme Infrastructure (OPI) 2004 – 2006** and **Operational Programme Environment 2007– 2013**. Ministry of Industry and Trade along with Ministry of Environment is responsible for the preparation, realisation and consistent evaluation of the **Government Programme for the Support of Energy Savings and RES**. This programme for 2008 involves 15 individual ministries of the Czech government.

## Industry

There are key energy efficiency programmes in the industrial sector operated by Czechinvest. These are **Operational Programmes** financed from ERDF for namely small and medium enterprises (SME). Targets of these subprograms are reduction in energy intensity by energy savings and introduction of RES into the SME sector. The **Government Programme part A**, operated by MIT, includes a sub programme, where it is possible to gain investment subsidies, which are focused on energy efficiency improvement in energy production and distribution facilities, combined production of electricity and heat, greater

use of renewable and secondary energy sources and reduction of energy demand in industrial enterprises and SME.

## Households, Services

**Amendment Act No. 177/2006 Coll. to the Energy Management Act (Act No. 406/2000 Coll.)** was approved on 29 March 2006. The main reason for issuing the amendment was the implementation of the Directive 2002/91/EC on the “Energy Performance of Buildings” into the Czech Legal Framework. There are key energy efficiency programmes in the Households and Services operated by SEF. There are mainly Operational Programmes financed from ERDF. Other energy efficiency programmes run by MIT include measures for improving energy efficiency in buildings. These measures comprise replacement of windows, heat regulation and thermal insulation improvement.

## Transport

**Government Decision No. 66** about minimal share of biofuels or other fuels from RES in gasoline and oil on the market in the Czech Republic was approved on 2 February 2005. Minimal share of biofuels on the total consumption of fuel in transport should reach 2 % by the end of 2005 and 5.75 % by the end of 2010.

## Energy prices and taxes

Electricity generation from RES units is supported by feed-in tariffs or green bonus mechanism for a period of 15 years according to **Act No. 180/2005** (The Act on Promotion of Electricity Generation from RES according to 2001/77/EC). Another contribution exists for electricity generation from CHP according to Price Decision No. 7/2007 of Energy Regulatory Authority.

## Selected Energy Efficiency Measures

Sectors	Title of measures	Since	Energy savings (GJ / year)	CO <sub>2</sub> reduction (ton/y)
Industry	OP Industry & Enterprise – part Energy savings	2004 – 2006	172 514 (1)	18 840
Industry	OP Industry & Enterprise – part RES	2004 – 2006	158 534 (2)	163 815
Industry	OP Enterprise & Innovation – part Eco-energy	2007 – 2013		
Households and Services	OP Infrastructure – Improving Infrastructure of Air Protection	2004 – 2006		
Households and Services	OP Environment – Improving Air Quality & Sustainable Use of Energy Sources	2007 – 2013		
General cross cutting	Government Programme for Support of Energy Savings and RES Use – part B	2002 – 2006	77 835 (3)	188 336
General cross cutting	Government Programme for Support of Energy Savings and RES Use – part A	2002 – 2006	1 294 347 (4)	129 620
General cross cutting	Preferential feed-in tariffs & green bonus for electricity from RES	2005	2 719 000 (5)	3 450 330
General cross cutting	Prototype Carbon Fund in the Czech Republic	2002 – 2012		Estimated 50 000 (6)
Household	Building Standards for New Dwellings (Directive 2002/91/EC implementation)	2006		

(1) 35 subsidised projects in the framework of programme Energy Savings until 31<sup>st</sup> December 2006 – total energy savings (GJ per year) for approved projects

(2) 69 subsidised projects in the framework of programme RES until 31<sup>st</sup> December 2006 – total electricity generation (MWh per year) for approved projects and expected heat generation is 68 963 GJ per year.

(3) Total electricity generation per year (MWh per year) – supported projects in the framework of annual Government programme part B in the period 2002 – 2005 and expected heat generation is 1 100 000 GJ per year.

(4) Total energy savings per year in GJ for supported projects in the framework of annual Government programme part A in period 2002 – 2005 (National Programme for the Support of Energy Savings and the Utilisation of Renewable and Secondary Sources of Energy 2002 – 2005)

(5) Estimation of additional electricity generation from RES in MWh per year in 2010

(6) Estimation of total CO<sub>2</sub> reduction for Czech PCF portfolio from 2008

