



# Energy Efficiency Profile : Croatia

October 2008

## Energy Efficiency Trends

### Overview

In the period 1995 - 2006 the energy efficiency bottom-up index for the whole economy (ODEX) decreased by 10,5% close to the level of EU27. The industrial sector (machinery) and transport sector (trucks and light vehicles) contributed the most to this development.

### Industry

The energy efficiency in the industrial sector improved by 8,8% in 2006 compared with 1995. The machinery and fabricated metals contributed the most to decrease of energy efficiency index in industry (26,3%). The energy efficiency index in other sectors (chemicals, paper and cement) increased by 8,4%, 13,0% and 8,6% respectively.

### Households

Energy efficiency in the households sector (calculated on four different end-uses) improved by 1,3% in 2006 compared to 1995, mainly because of energy efficiency

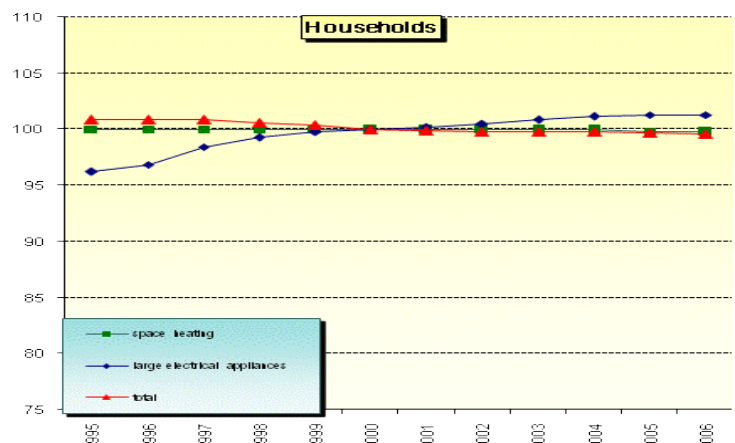
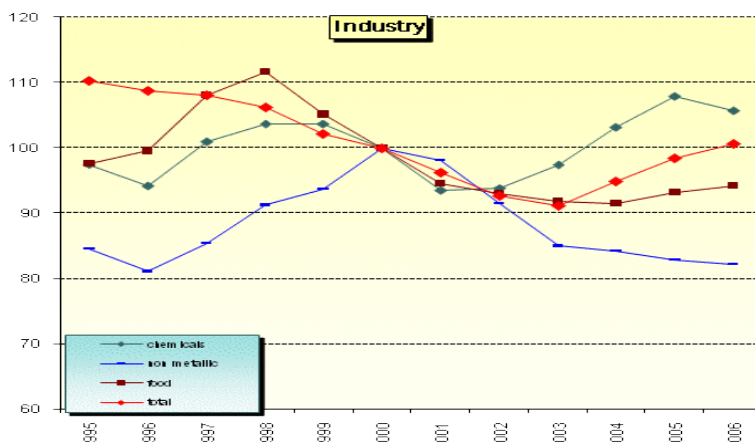
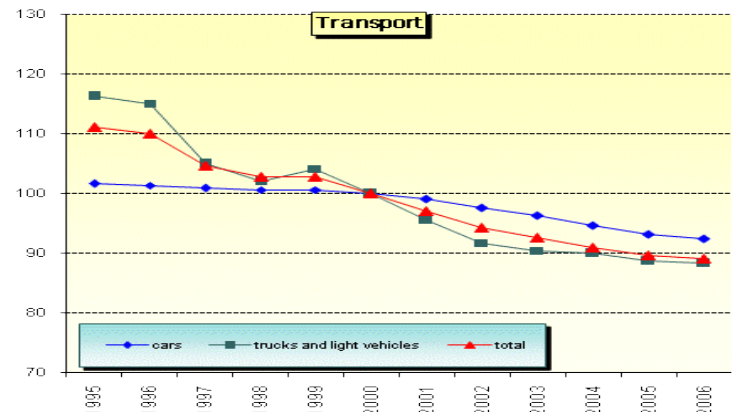
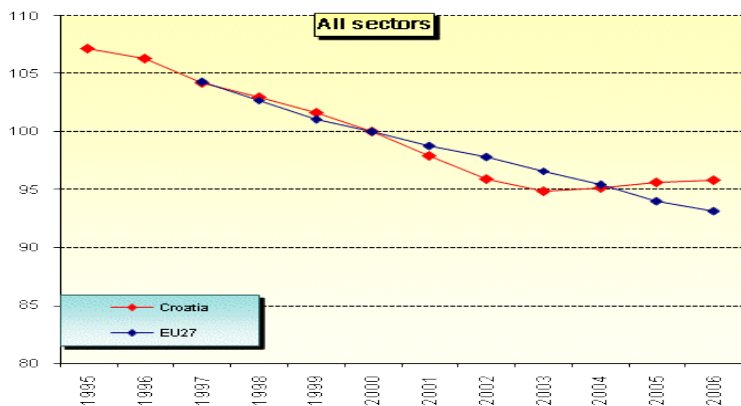
improvement of 8,2% for cooking. The index for space heating shows very small improvement of 0,5% (because of increase in heating comfort and share of central heating), while the index for large appliances increased by 5,3%.

### Transport

The energy efficiency index of the transport sector improved by 19,8% in 2006 compared to 1995. The highest efficiency improvement was for the trucks and light vehicles (24,0%), while for the cars was 9,1%. The reason way sector of light duty vehicles in category under 3.5 tonnes of carriage achieved such a big improvement in terms of energy efficiency lies in high yearly rate of new vehicles procurement which for the observed period between 1995 - 2006 has amounted to 8,4%.

The specific consumption of cars in litres/100km is regularly decreasing since 1995 (-0.8%/year), with improvements for new cars, since the average rate of procurement of new cars increased for 18.0% yearly.

Energy efficiency index (base 100=2000)



# Energy Efficiency Policy Measures

## Institutions and programmes

Croatia has signed Energy Charter Treaty in 1994, ratified it in 1997 and in 1998 the Government has confirmed the Protocol on Energy Efficiency and Related Environmental Aspects - PEEREA. PEEREA requires formulation of energy efficiency strategies and policy aims, establishment of appropriate regulatory frameworks, development of specific programmes for the promotion of efficient energy use and development of programmes for reduction of adverse environmental effects from energy sector. Croatia ratified UNFCCC in 1996, while Kyoto Protocol was ratified in 27 April 2007. Croatia is now obliged to reduce its emissions 5% in relation to the base year over the commitment period 2008-2012 and energy efficiency measures are expected to play crucial role in fulfilment of these obligations.

## Industry

The main incentive for energy efficiency projects in industry is coming through programs of the Fund for the environmental protection and energy efficiency, where funding is offered for energy audits and projects with proven improvement measures. Voluntary approaches in industry are being more effective lately, and there is a demand for reliable energy audits, which are offered by various organizations. Financial support is also coming from institutions like reconstruction and development bank, for SMEs and energy efficiency projects. Specific programs are to be set through recently prepared regulative acts.

## Households, Services

Currently there are several actions on implementation of European Directives in Croatian legislation, including Directive on energy performance of buildings 2002/91/EC. Presently, the target deadline for the implementation of the Directive in national legislation is 31 December 2008. Republic of Croatia, jurisdictional Ministry of Environmental Protection, Physical

Planning and Construction at the present is in the process of forming a Committee for implementation of Directive 2002/91/EC on Energy performance of Buildings in national legislation, with obligatory energy certification of buildings. Key issues of implementation are necessary law and regulation changes, preparing quality action plan for the implementation of the directive, forming building registry and education of energy experts trained for energy audits of buildings.

## Transport

Substitution of certain shares of mineral fuels with biofuels is the most important measure for CO<sub>2</sub> reduction which has been adopted in 2007 by Decree for Implementation of Bio Fuels into the Transport Sector of the Republic of Croatia, since Croatia is trying partly to fulfil declared goals from the European Directive 2003/30/EC on the promotion of the use of biofuels or other renewable fuels for transport. Declared target for the mineral fuels substitution with biofuels for year 2007 was settled up by the Government of the Republic of Croatia to 0.9%, while for the year 2008 was increased on 1.21%. Other strong campaign that has started in early 2007 is focused on promotion of use of compressed natural gas as other possible alternative fuel which has a potential to be used in share than more 5% until year 2020 what could led to 551 kt CO<sub>2</sub> between 2010 - 2020.

## Energy prices and taxes

The gas market liberalisation in the Republic of Croatia resulted in certain changes concerning the structure of the natural gas price for end consumers. Basic gas price elements include natural gas supply price and natural gas transmission price, as well as distribution margin defined by the Croatian Energy Regulatory Agency (CERA). By the end of 2006 CERA published documents that define methodologies and criteria for tariff values determination, so for the first time tariff systems are unbundled.

## Selected Energy Efficiency Measures

Sectors	Title of Measure	Since
Transport	Regulation for Eco Test Fee Payment Exemption for Vehicles Powered on LPG and CNG	2004
Transport	Decree for Implementation of Bio Fuels into the Transport Sector of the Republic of Croatia (yearly basis upgrading)	2007
Transport	Promotion of the CNG vehicles utilization in the Republic of Croatia	2007
Transport	Procurement of a bio diesel buses for the Zagreb's public transport company ZET	2007
Transport	Regulation on Energy Efficiency and CO <sub>2</sub> Emissions of the New Cars Data Availability	2007
Transport	Make Cars Green – Eco Campaign	2008

Source: MURE data base  
[www.mure2.com](http://www.mure2.com)

