

Energy Efficiency Trends

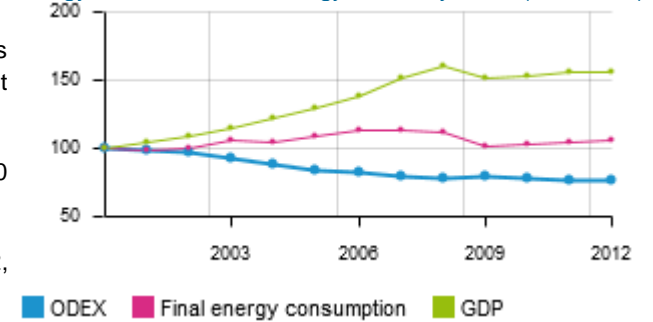
Overview

From 2000 to 2008 there is GDP growth. The effect of the crisis was observed after 2008. In 2012 GDP is 52% higher compared to 2000, but did not reach pre-crisis level of 2008.

Final energy consumption in 2012 was only 5.6% higher than in 2000 despite significant economic growth over the same period.

Energy efficiency improvement is 24% over the period from 2000 to 2012, based on the reduction of the index ODEX.

Energy cons., GDP and energy efficiency index (100=2000)

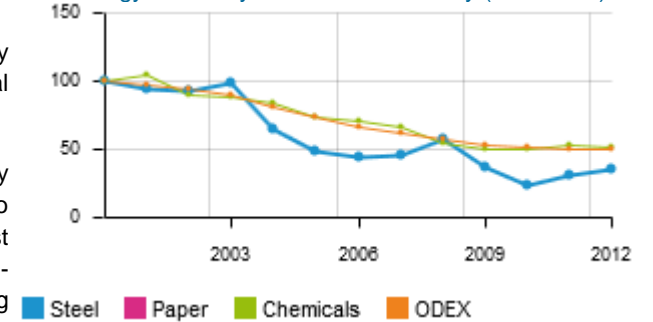


Industry

Industry stepped as largest consumer of energy in 2009 replaced by transport sector. The largest consumer in the sector is the chemical industry with a share of 30% of the industry final energy consumption.

In 2012, the energy efficiency index of the sector (ODEX) and energy consumption per unit of production in the chemical industry decreased to 50% from the level of 2000. The industry is the sector with the most significant improvement of the energy efficiency over the period 2000-2012. The improvement of the energy efficiency is mainly due to the rising prices of energy and the implemented financial measures in the sector.

Main energy efficiency indicators in industry (100=2000)



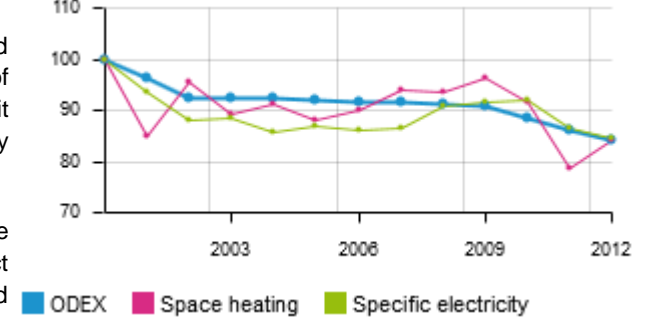
Chemicals : toe per unit of production index
Paper, steel: toe per tonne

Households

From 2000 to 2012, the energy efficiency index (ODEX) in the household sector decreased by 15% in conditions of significant growth (over 60%) of household expenditure. Energy consumption for space heating of unit residential area and electricity consumption per dwelling also decreased by about 15%.

As the final energy consumption of the sector remains constant it can be concluded that households improved their energy efficiency, but the effect is used to improve the thermal comfort, greater use of household appliances, air conditioning, etc.

Main energy efficiency indicators in households (100=2000)



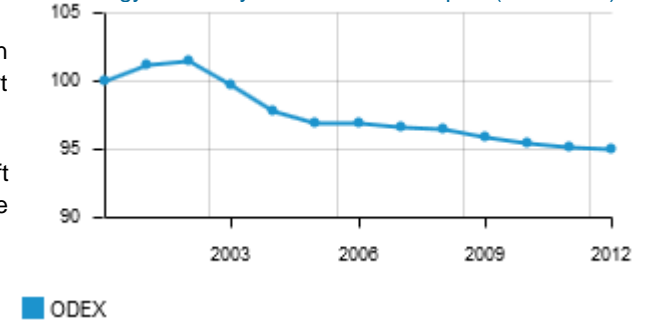
Space heating : koe per m2
Large electrical appliances: kWh per dwelling

Transport

Since 2009 transport has the largest share in final energy consumption, in 2012 this share is over 30%. The Energy Efficiency Index of Transport (ODEX) decreased by only 4% from 2000 to 2012.

The main unfavorable trends in energy efficiency in the sector are: the shift from rail to road transport, traffic congestions in cities and the high average age of the fleet (cars, buses, trucks).

Main energy efficiency indicators in transport (100=2000)



Cars: litres per 100 km
Road traffic of goods (trucks): koe per tonne-km

Energy Efficiency Policy

Institutional and energy efficiency targets:

In the "Energy Strategy of the Republic of Bulgaria to 2020" is assumed that "energy efficiency is the highest priority in the energy policy of the country." On this basis are set ambitious goals.

savings of 716 ktoe per year in final energy consumption and 1590 ktoe per year in primary energy consumption below the reference scenario of trends for energy consumption in Bulgaria and other EU countries from 2013.

The National Action Plan for Energy Efficiency adopted indicative national targets to 2020 for additional energy

Main energy efficiency policy measures and their impacts

Sector	Main objectives and measures	Impacts
Cross-sectoral	Individual targets for energy savings, energy traders.	Target for 2008-2013 - 2322 GWh/year Target for 2014-2020 - 5650 GWh/year. Reported savings 2008-2013 - 1743 GWh/year..
Industry	Mandatory energy audits of industrial systems with an annual consumption over 3,000 MWh (excl. ETS) and implementation of the prescribed measures.	Potential savings - 490 GWh/year identified in the audits performed in 2008-2013.
Households	Individual regulation and metering of heat in multifamily buildings connected to district heating.	Energy savings - 555 GWh/year in 2014.
Transport	Mandatory annual technical inspection of vehicles and control of engines.	Energy savings - 667 GWh/year in 2014.
Services	Mandatory energy audits and certification of public buildings with an area of over 250 m2 and implementation of the prescribed measures.	Potential savings - 1202 GWh/year identified in the audits performed in 2008-2013