

Energy Efficiency Trends

Overview

As measured by the ODEX indicator, the overall energy efficiency improved on average by 2,5%/year between 2000 and 2013.

Industry achieved the largest improvement, on average 3,4%/year – partly due to structural effects in the chemical and the iron & steel industries –, with a slowdown since the economic crisis.

While in the household sector the progress was steady, of on average 2,5%/year, the transport sector experienced fluctuations, with periods of rising energy efficiency index, leading to an average improvement of 1,4%/year over the whole period.

Industry

Overall (9 branches), the improvement reached 36% between 2000 and 2013 (3,4%/year on average).

This is partly due to structural effects in the chemical and the iron & steel industries. The former achieved an improvement of 5,9%/year (its industrial production index more than doubled over the period, when its energy consumption remained stable), while the latter switched from oxygen to electric steel, thereby becoming more energy efficient per tonne of steel produced.

For cement, the unit consumption remained rather stable, but it has been influenced by shifts in the relative shares of the dry and wet routes.

Households

For households, the ODEX indicator reflects the evolution of the average energy consumption per dwelling, after correction for the number of degree-days and the increased penetration of central heating.

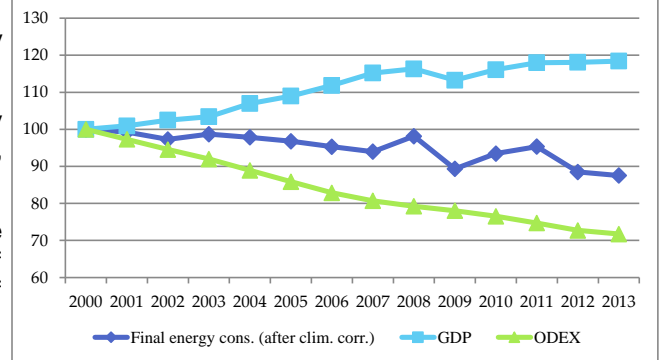
Over the period 2000-2013, there has been a steady improvement in energy efficiency, of on average 2,5%/year. This progress is essentially that achieved for space heating. For the average consumption (after climate correction) for space heating alone, this improvement was 2,7%/year.

Transport

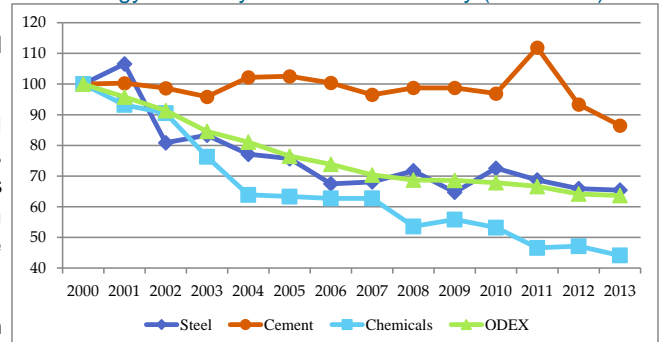
For transport, the ODEX indicator is only a rough indicator, for reasons of limited data availability. It takes into account road, rail and air transport, for both passengers and goods transport. For road transport, it represents the evolution of the average annual energy consumption per vehicle or per passenger. The various types of road vehicles are taken into account on the basis of car equivalents.

Over the period 2000-2013 the indicator has been fluctuating. The periods of rise are due to the fact that the energy consumption for road transport has increased faster than the stock of vehicles. On average, the corresponding 'efficiency' improvement reached 1,4%/year between 2000 and 2013.

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

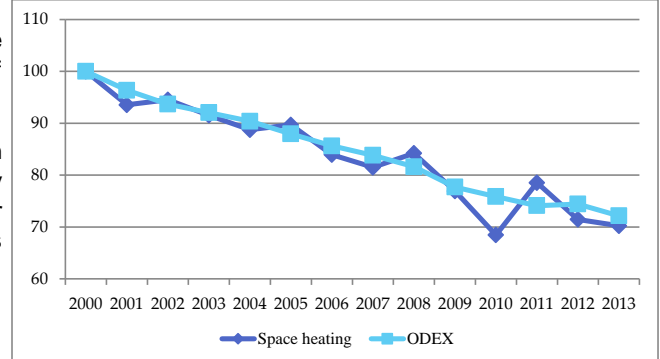


Main energy efficiency indicators in industry (100=2000)



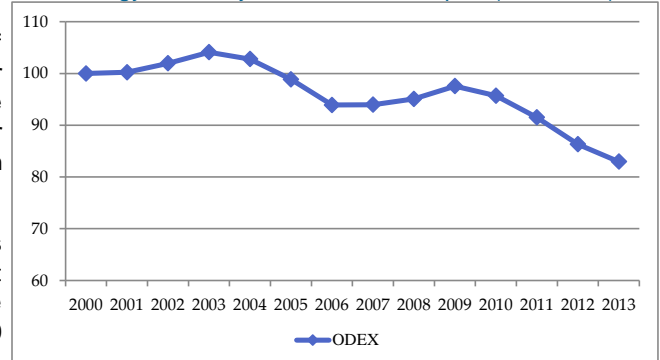
Chemicals : toe per unit of production index. Steel, cement: toe per tonne

Main energy efficiency indicators in households (100=2000)



Space heating : koe per dwelling, after climate correction.

Main energy efficiency indicators in transport (100=2000)



Energy Efficiency Policy

Institutional and energy efficiency targets:

Belgium is a federal state, in which energy efficiency is a competence of the three Regions (Flanders, Wallonia and Brussels-Capital), with supporting measures from the federal government.

In the framework of Art. 3 of the EED (directive 2012/27/EU), Belgium has set an indicative energy efficiency target of 18% reduction in primary energy consumption by 2020 relative to the 'Primes 2007'

baseline. This produces a saving of 9,6 Mtoe. The corresponding final energy saving is 7,1 Mtoe (82,6 TWh).

For 2016, the target set in the context of the ESD (directive 2006/32/EC) is the sum of the commitments made by the three regions, which amounts to a final energy saving of 27,5 GWh.

Main energy efficiency policy measures and their impacts

The regions have mainly, each for its own territory, implemented the EPB directive; promoted further energy efficiency by households through grants, audit schemes, awareness raising, etc.; fostered energy savings in industry through voluntary agreements (Flanders, Wallonia); implemented mobility measures; and promoted renewable energies and cogeneration by setting up green and CHP certificates systems.

An important new measure taken up by the regions is the transposition of Art. 7 of the EED. For this, all three have decided not to impose quantitative energy efficiency

obligations, but rather to achieve equivalent results mainly by awarding grants for energy saving investments and signing voluntary agreements with industry, but also through regulation.

The main measures taken by the Federal government are tax reductions (for energy efficiency investments by households and for low CO2 emission cars), the transposition of the EU directives on labels and on Ecodesign and the promotion of public transport by railway. However, most of the tax reductions have been stopped in 2012 (households' investments) or 2013 (clean cars).

Sector	Main objectives and measures	Final energy savings (GWh)		
		2012	2016	2020
Cross-sectoral	Public service obligation on electricity distribution network operators in Flanders	7.983	11.405	14.630
	Promotion of renewable energy and cogeneration through a Green Certificates system (3 regions)	1.237	3.201	4.188
Industry	Voluntary agreements with industry 2003-2020:			
	<ul style="list-style-type: none"> Flanders: Wallonia: 	6.253	10.866	15.479
Buildings	Implementation of the Energy Performance of Buildings (EPB) directive, including previous K-level regulations (3 regions)	2.433	4.175	5.256
	Subsidies for energy saving investments in Wallonia and Brussels Transposition and implementation of the Labelling and Ecodesign directives	2.609	5.983	7.543
Transport	Diverse set of measures in the transport sector in the three regions	2.813	7.915	9.650
Agriculture	Flanders - Subsidies for energy saving measures in horticulture (greenhouses)	831	1 045	1.045

Source : *Belgian Energy Efficiency Action Plan according to the Directives 2006/32/EC and 2012/27/EU article 24.2 Annex XIV part 2*, April 2014, <https://ec.europa.eu/energy/en/topics/energy-efficiency/energy-efficiency-directive/national-energy-efficiency-action-plans>