

Energy Efficiency Trends

Overview

From 2000 to 2008, the country has known an important economic growth (GDP index = 132 in 2008). The impact of this development on the final energy consumption grew until 2005 (index = 127). However, the crisis of 2009 shook the Luxembourgian economy, which recovered promptly to its pre-crisis GDP level as of 2011 thanks to the tertiary sector.

Over the period of 2000-2012, the overall ODEX decreased 4,75 points less than the European average due to a slower improvement in the transport sector, whereas the industry, households and tertiary sectors all outperformed the ODEX improvements compared to the European average.

Industry

Since 2004, the steel industry underwent a period characterized by the overhaul of major steel plants, a change towards higher value-added products then an unfavourable economic context leading to lower efficiencies.

For the chemical industry, troubled market conditions due to the crisis can explain the peaks in specific energy consumption in 2009 and 2011.

The trend from 2000 to 2012 shows however a significant improvement of the ODEX, driven by the voluntary agreements and competitive imperatives.

Households

As of 2006, the energy efficiency (ODEX) of the buildings sector has significantly improved, closing the gap with the European average.

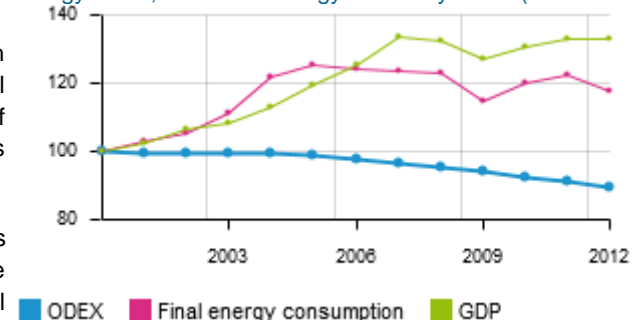
This trend is mainly driven by two elements: the regulations related to the energy performance of buildings of 1996 and 2008 (new building codes and grants for renovations) as well as the increase in the construction of energy-efficient buildings due to the continuous growth of the population.

Transport

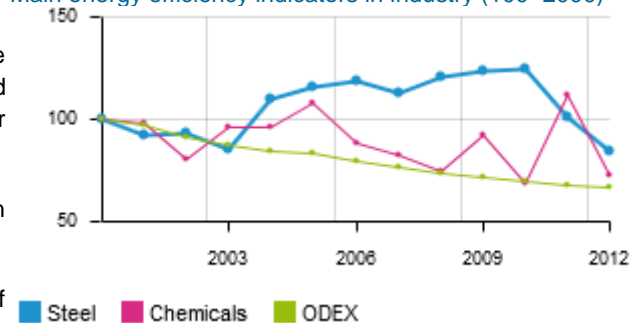
The transportation sector is an important driver of the national energy efficiency indicator, attaining 62% of the national final energy consumption. Its absolute energy consumption and share grew with time; however, it is dominated by external effects, like transit traffic, that are difficult to control.

Most of the final energy consumption of the transport sector is due to road transport. The steady improvement of the fuel efficiency of new cars, together with policies favouring the replacement of old cars with low-CO2 ones and electric cars, and fiscal measures contribute to a promising long-term improvement trend.

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

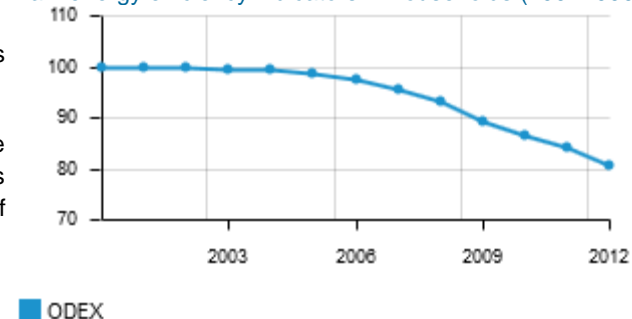


Main energy efficiency indicators in industry (100=2000)



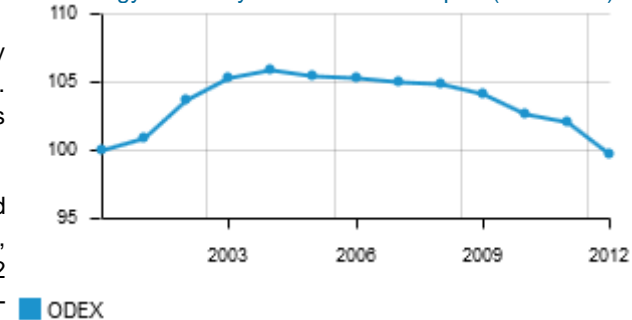
Chemicals : toe per unit of production index
Paper, steel: toe per tonne

Main energy efficiency indicators in households (100=2000)



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

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:

The Government has recognized the importance of the energy efficiency in the buildings sector and has implemented extensive building regulations for the residential and the tertiary sectors. Additionally, grant schemes aim at promoting the renovation of the buildings stock and the development of renewable energy sources.

Concerning the industrial sector, the voluntary agreements are a key measure involving the most significant energy consumers.

The transportation sector shows an improved trend driven by the national measures as well as European regulations limiting the vehicles' CO2 emissions. Furthermore, the planned deployment of electromobility could potentially bring additional benefits.

The Energy Efficiency Obligation Scheme is intended to lead to a significant boost in energy efficiency as of 2015.

Main energy efficiency policy measures and their impacts

Sector	Main objectives and measures	Impacts
Cross-sectoral	Energy Efficiency Obligation Scheme (2015-2020)	2020 : 5,76 PJ/year
Industry	Voluntary agreements (2010-2016)	2020 : 0,55 PJ/year
Buildings	Building regulations of residential buildings and grant schemes (2008-2012)	2020 : 1,02 PJ/year
	Regulation on the energy performance of residential buildings (revision) (2012-)	2020 : 1,19 PJ/year
	Grant schemes for efficient new residential buildings, renovations and renewable (2013-2016)	2020 : 0,51 PJ/year
Transport	Increase of fuel taxes (2007-)	2020 : 0,64 PJ/year
	CO2-related vehicle tax (2007-)	2020 : 0,4 PJ/year
	Grant scheme for low CO2 emission cars and electric cars (2007-2014)	2020 : 0,32 PJ/year
Tertiary	Regulation on the energy performance of non-residential buildings (2011-)	2020 : 0,99 PJ/year
	Regulation on the energy performance of non-residential buildings (revision) (2015-)	2020 : 0,16 PJ/year