



Energy Efficiency Profile: Denmark

May 2011

Energy Efficiency Trends

Overview

In Denmark, the energy efficiency of final consumers improved by around 18% from 1990 to 2008. The index, referred to as ODEX, experienced a decrease from 113 in 1990 to 93 in 2008. All sectors have contributed to this significant improvement in the energy efficiency. In the period 2000-2008, energy efficiency has improved by 7.3%. Again, all sectors have contributed to the improvement.

Industry

Energy efficiency of the industrial sector improved by around 23% between 1990 and 2008, and 13% since 2000. The increase in efficiency in the chemical industry contributed significantly to the results observed since 2000 with an improvement of 35%. In the steel industry, the energy efficiency increased by 22%, while the energy efficiency in food industry increased by 14.5%.

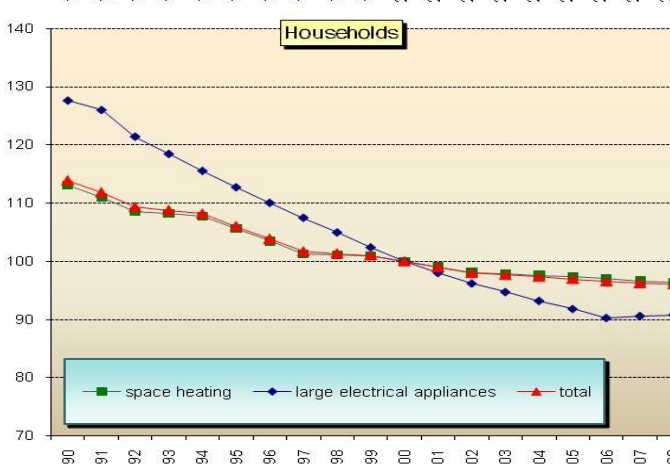
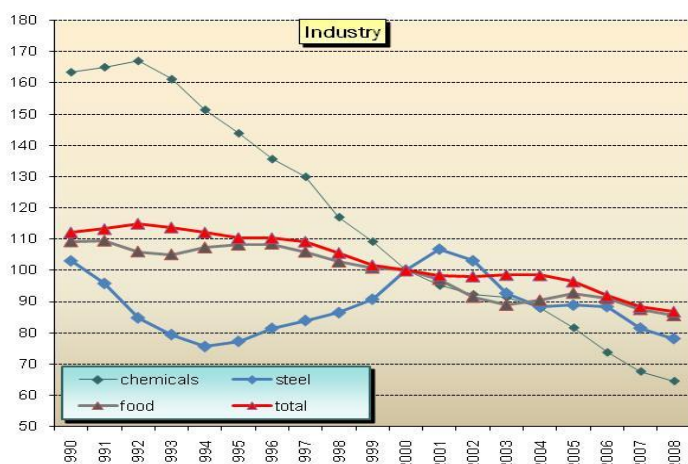
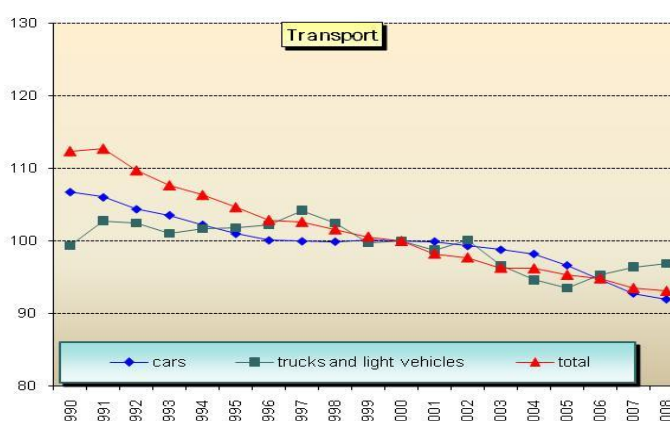
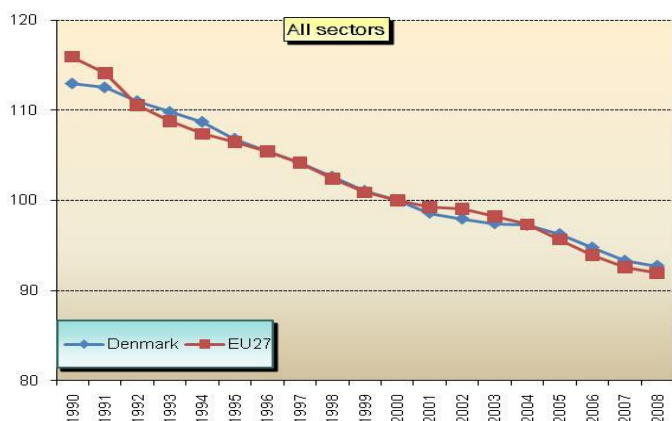
Households

Between 1990 and 2008, the total energy efficiency of households improved by almost 16%. For space heating, the improvement in efficiency was around 15%. Substitution of old oil burners with new natural gas burners and district heating has contributed significantly to the improvement. In the same period, large electrical appliances exhibited a significant improvement in energy efficiency close to 30%. This development, and a decrease in the use of electricity for heating, has contributed in stabilizing the total electricity consumption in the Danish household sector. Since 2000, the energy efficiency for households has improved by 4% (3.5% for space heating and 9% for large electric appliances).

Transport

Energy efficiency of the transport sector improved by 17% from 1990 to 2008 and by 7% since 2000. The improvement for cars and trucks was respectively 8% and 3% between 2000 and 2008.

Energy efficiency index (base 100=2000)*



*All indicators measured as a three-year moving average
 Source: ODYSSEE
 For more information <http://www.odyssee-indicators.org/>

Energy Efficiency Policy measures

Institutions and programmes

The mandate of the **Danish Energy Agency** is to advise the **Ministry for Climate and Energy**, to assist other authorities, to administer Danish Energy legislation and to conduct analyses and assessments of developments in the energy sector. The government has launched an energy efficiency policy emphasizing cost-effective and market-based solutions.

The following documents lay down the general guidelines for Danish energy policy and energy efficiency activities:

- **“Energy Strategy 2050, from coal, oil, and natural gas to green energy”**. (March 2011)
- **“Energy Agreement”** (February, 2008), which stated that the annual savings from 2010 shall be increased to 1.5% of the final energy consumption in 2006.
 - An Action Plan for Renewed Energy Conservation, September 2005

Energy prices and taxes

Energy prices and taxes are among the most important determinants of energy consumption and have been successfully used to promote energy savings in Denmark. From 1990 to 2009, revenues from “green” taxes increased by 161%. from DKK 13.9 billion to DKK 36.4 billion. The taxes were increased in 2009 as a part of a tax reform.

Energy saving obligations for utilities

An agreement from 2006 committed the electricity, natural gas and oil networks and distributing companies to achieve specific energy saving targets, to contribute to an easy access to information on energy efficiency and to carry out energy efficiency campaigns with the purpose of influencing the consumer behaviour. Following the energy agreement of February 2008, the specific energy saving target was increased by more than 100% from 2010. The utilities are today responsible for more than 50% of the annual savings.

Industry

Together with general energy and CO2 taxation measures, the following initiatives have been implemented to enhance energy savings and improve energy efficiency in the industrial sector:

- A voluntary agreement scheme closely integrated with the **Green Tax Package**, which provides rebates on green taxes for companies participating in the scheme.
- Emissions trading with CO2 cap for bigger industries.

Households, Services

The intensified energy conservation efforts are in particular focused on energy consumption in buildings and in electrical applications and products. The main initiatives include more stringent energy requirements included in the **Building Regulations**, an improved energy labelling scheme, enhanced inspection of boilers and ventilation systems and increased efforts in the public sector. The Building Regulation was tightened in 2006 and based on the 2008 agreement the codes were further tightened by 25 % in 2010 and will be again increased by 25 % in 2015 and 2020. The 2010 regulation also include energy efficiency requirements for major renovations of existing buildings and for building components. In 2008, a saving target has been assigned to state institutions, requiring that the energy consumption in 2011 should be 10% lower than in 2006.

In addition to general energy and CO2 taxation, four programmes have been initiated to improve energy savings and efficiency in the household and the tertiary sectors:

- Standards and energy labelling of electrical appliances.
- The **Danish Energy Saving Trust**
- Energy efficiency strategy for buildings, and Centre of knowledge for energy efficiency for buildings 2008.

Transport

The government considers cost efficiency as essential in regulating the environmental impact of transport. A strategy for sustainable transportation and improved infrastructure has been launched in December 2008.

Selected Energy Efficiency Measures

Sectors	Title of measures	Since
Cross-cutting measures	Increased energy companies obligation to reduction of energy consumption	2008
Cross-cutting measures	Campaigns to promote energy saving in buildings	2008
Cross-cutting measures	The Danish Energy Saving Trust	2010
Cross-cutting measure	Green taxes on energy use in household and in industry	Revised in 2009 & 2011
Households, Tertiary	Building codes for new and existing buildings	1995, revised in 2006 & 2010
Households	Scrapping scheme for oil-fired boilers	2010
Households	Performance of Heat Generators for Space Heating/Hot Water	2011
Transport	Green owner's fee for passenger cars	1999
Transport	Eco driving - energy efficient driving technique	2010
Industry	Agreement on energy saving measures	1996
Industry	Emissions trading	2005

Source MURE

For more information : <http://www.isisrome.com/mure/>

