



Energy Efficiency Profile: Netherlands

May 2011

Energy Efficiency Trends

Overview

Energy efficiency of final consumers has improved by almost 25% between 1990 and 2009, which translates into an average effect of almost 1.5%/year. Between 1990 and 2000 the improvement rate was 1.2% per year. After 2000 the efficiency improvement reached an average rate of 1.8%/year. The largest improvements since 1990 have been realised in the household sector (1.9%/year) and manufacturing industry (1.8%/year), while transport lags behind with about 0.5%/year.

Industry

The energy efficiency progress in the manufacturing industry was 29% between 1990 and 2009 (1.8%/year), including negative developments since 2007 due to the economic crisis. From 1993, the starting year of Long Term Agreements on energy savings, the improvement was 2.8% per year. In the chemical sector, which is responsible for half the energy consumption of industry, energy efficiency improved by 47% since 1990 (3.3%/year). However, the results for the efficiency gains in the chemicals sector have been amplified by hidden structural effects, as efficiency is calculated using energy intensity (i.e. energy consumption per Euro of added value), and the added value has increased faster than the physical production quantities. The energy efficiency of the steel industry remained stable between 1993 and 2001, but has improved between 2001 and 2007. Negative savings occurred after 2007, due to the economic crisis. The overall improvement for the steel industry since 1990 was 14% (0.8%/year). The energy efficiency in the paper industry decreased until 1997, but the overall increase of efficiency since 1990 was 10% (0.6%/year).

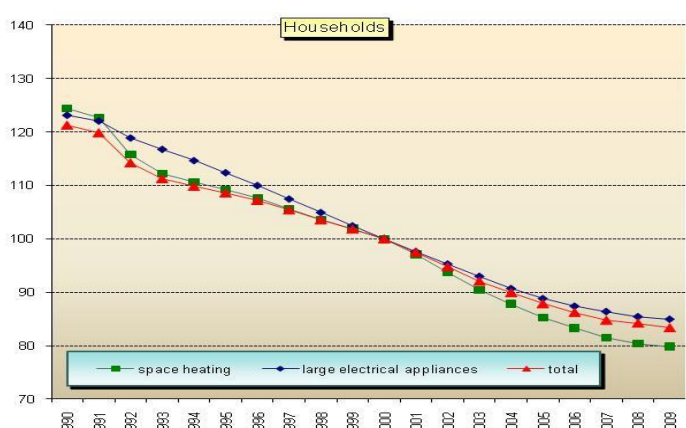
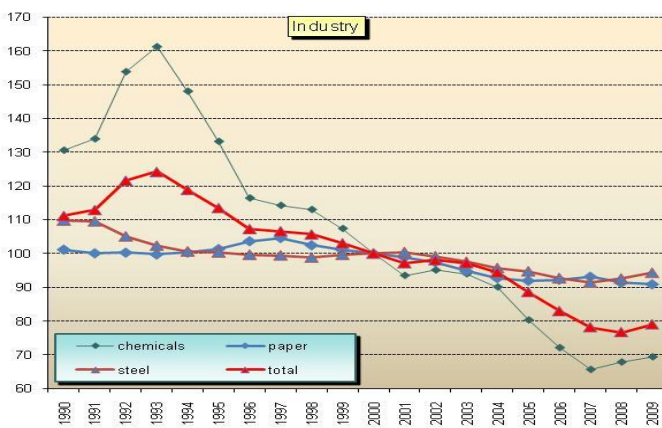
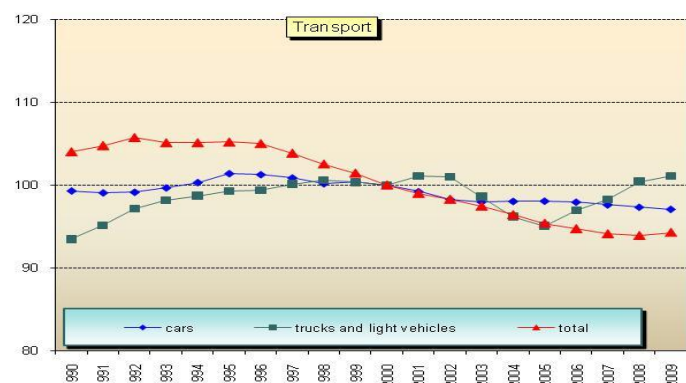
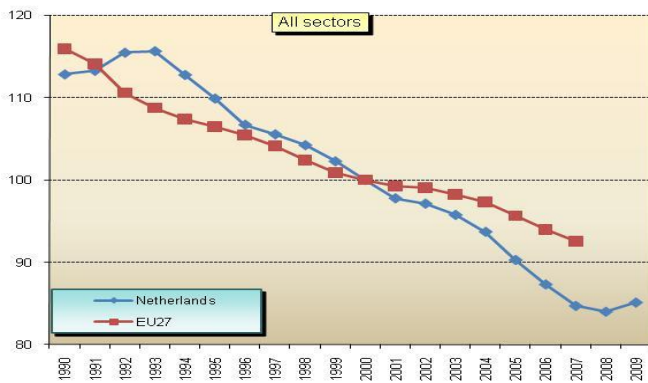
Households

Households improved their energy efficiency by 31% between 1990 and 2009. Progress came mainly from space heating, with an improvement of almost 36% and a share in household energy consumption of about 75%. The improvement for electrical appliances was 31% with a share in final energy consumption of 8%. The reason that the overall improvement of energy efficiency is not closer to the 36% of space heating is the limited improvement for the others uses: water heating (6%) and cooking (13%) with a share of energy consumption of 16% and 3% respectively.

Transport

There is no significant improvement in the energy efficiency performance of transport. Most of the progress occurred between 1996 and 2007. The efficiency of cars improved by only 2% between 1990 and 2009. The efficiency of trucks and light vehicles decreased by 8% between 1990 and 2009 (0.4%/year). This is the result of the increased share of goods transport by light trucks, which are less efficient. Despite the unsatisfactory trends for cars and trucks and light vehicles the energy efficiency of the transport sector increased by 9% since 1990 as a result of a larger share for air transport (from 17% to 24%) and its 28% better energy efficiency.

Energy efficiency index (base 100=2000)*



* Indicators measured as a three-year moving average

Energy Efficiency Policy measures

Institutions and programmes

In the Clean and Efficient programme (Dutch: Schoon en Zuinig), introduced in 2007, the Dutch government set ambitious targets for 2020 for Greenhouse gas emission reduction (-30%), the share of renewables in the energy mix (20%) and the improvement in energy efficiency (increasing to 2,0% per year).

The programme can be seen as an intensification of the existing multi-level policy approach. General cross-cutting measures such as energy taxation, fiscal measures such as the energy investment deduction and the European emission trading scheme form a general base for stimulating energy efficiency. Voluntary sectoral or sub-sectoral agreements were made with industries, services, major transport organisations and key players within the household sector. These agreements aim at a continuous improvement in efficiency. Energy efficiency standards have been introduced for most sectors to set a lower limit for efficiency. Innovators and frontrunners are (financially) supported.

Industry

Since 1992, long-term agreements (LTAs) on energy efficiency have been introduced in energy intensive industries. In 1998 less energy intensive industries were addressed as well. Industries are required to introduce all appropriate process efficiency measures with a payback period of five years and to implement energy management systems.

Since 2000, LTAs for the energy intensive industries have been replaced by a covenant on benchmarking in which they agree to be among the most efficient companies in the world.

Households, Services

Since 1995 the building Decree contains minimum standards for new buildings. They are based on a standardised method for the calculation of an Energy Performance Coefficient (EPC) which is related to the size of the building. The standards were strengthened multiple times, which led for example to a 50% energy efficiency gain for new dwellings since 1995. As part of the More with Less programme (Dutch: Meer met Minder), the government signed voluntary agreements with key players within the Dutch housing, energy and construction sector, to reduce energy consumption in existing buildings by 100 PJ in 2020. Reducing barriers for owners of buildings must stimulate them to invest in energy saving measures, which should lead to over 200.000 buildings being refurbished annually. The programme uses the recently introduced energy performance certificates for buildings (a result of the EPBD directive), to identify energy saving potential and monitor progress. The Energy Labelling for appliances has been introduced in 1996, and was originally combined with a national grant scheme. This led to a very high market share for some A-label appliances.

Transport

To stimulate more efficient cars and efficient driving, the government introduced a mix of financial policy measures. Fuel taxes, among other things, make Dutch fuel prices the highest in Europe. The motor vehicle tax (Dutch: MRB) and private motor vehicle and motorcycle tax (Dutch: BPM) are differentiated according to CO₂ emissions to stimulate the sale of energy efficient cars. A discount on tax is given to the most efficient leased cars. Many of the taxation scheme mentioned, use energy labels for cars as a criterion. The New Driving Force Campaign (eco-driving) started in 2000. Initiatives are developed in the following areas: driving lessons, driving style training, use of energy saving in-car equipment, improvement of tyre pressure and energy labels for cars.

Selected Energy Efficiency Measures

Sectors	Title of Measure	Since	Energy (PJ)	CO ₂ (kt)
All	Energy investment deduction (EIA)	1997	199.8 ^a	11183
Buildings	Energy Performance Standard (EPN)	1995	4.5 ^b	240
Buildings	More with less plan	2008	50-100 ^c	
Households	Energy Labelling Appliances	1996	3.5 ^d	600
Services	Long-term agreements (hospitals, agriculture etc.)	1993	-	-
Industry	Environmental Action Plan	1990	170.0 ^b	3800
Industry	Long-term agreements 2	1998	11.8 ^e	5.140
Transport	Long-term agreement with road transport	1994	2.7 ^b	195
Transport	Energy saving in transport (EBIT)	2000	54.0 ^f	5300
Transport	New driving force campaign	2000	-	1250 ^f

a) Realised until 2006

b) Realised until 2000

c) Ex-ante 2020

d) Realised until 2000 (combined effect with Regular Energy Tax)

e) Realised between 2001 and 2006

f) Ex-ante 2010

Source MURE

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

