Energy Efficiency Profile : Netherlands

October 2008

Energy Efficiency Trends

Overview

The combined energy efficiency of final consumers has improved by 17% between 1990 and 2006. Between 1990 and 1995, the improvement rate was only 0.6% per year. The rate of improvement accelerated to an average of 1.6% between 1995 and 2000 and was higher than the EU-27 average during these years. Since 2000 the developments are very close to the EU-27 average of 1.1% yearly. The largest improvements since 1990 have been realised in the households and manufacturing industry sectors, while transport lags behind considerably.

Industry

The energy efficiency progress in the manufacturing industry was nearly 21% between 1990 and 2006. From 1993 on, the starting year of Long Term Agreements on energy savings, the improvement was more than 1.5% per year. The chemical sector, which is responsible for half the energy consumption of the industry in the Netherlands, improved energy efficiency by 25% since 1990. The energy efficiency of the steel industry remained stable between 1993 and 2001, but has started to improve after 2001. The energy efficiency in the paper industry decreased until 1997, but the overall increase of efficiency since 1990 was 9%.

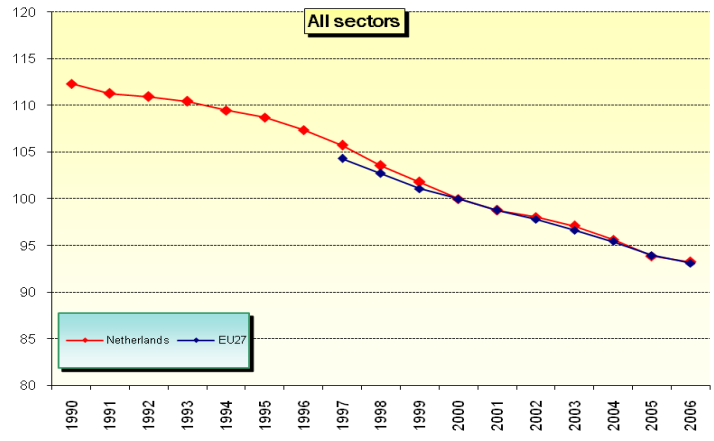
Households

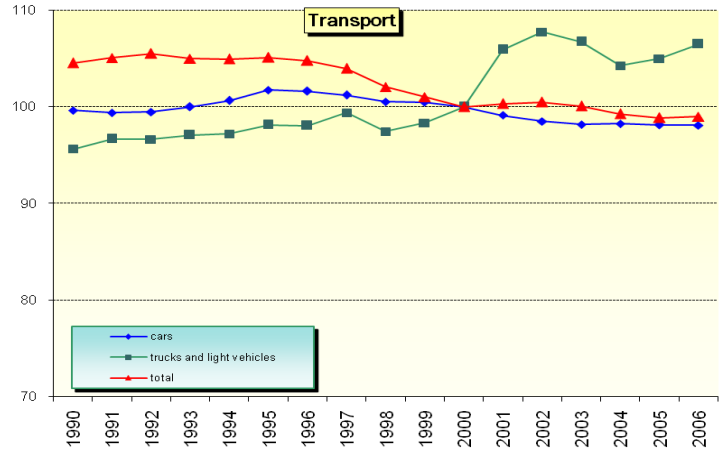
Households improved their energy efficiency by more than 25% over the period 1990-2006. Progress came mainly from heating, with an improvement of 32%. The unit consumption for specific uses of electricity (large electrical appliances) varied considerably due to the counteracting effects of improved efficiency and increased penetration; this resulted in a net improvement of about 4%.

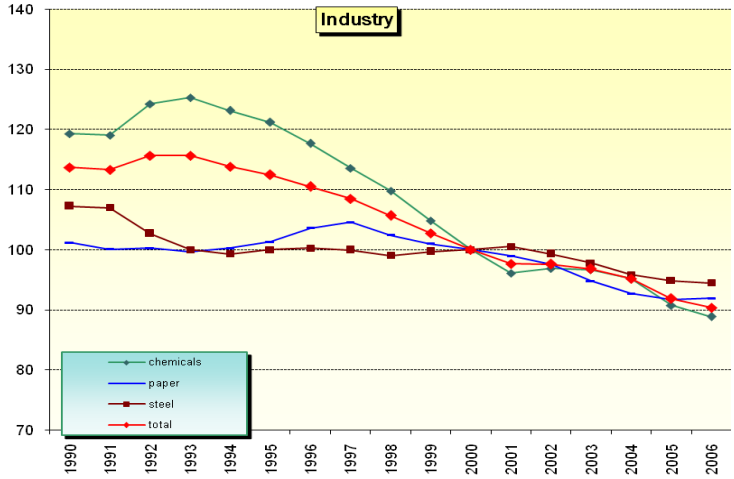
Transport

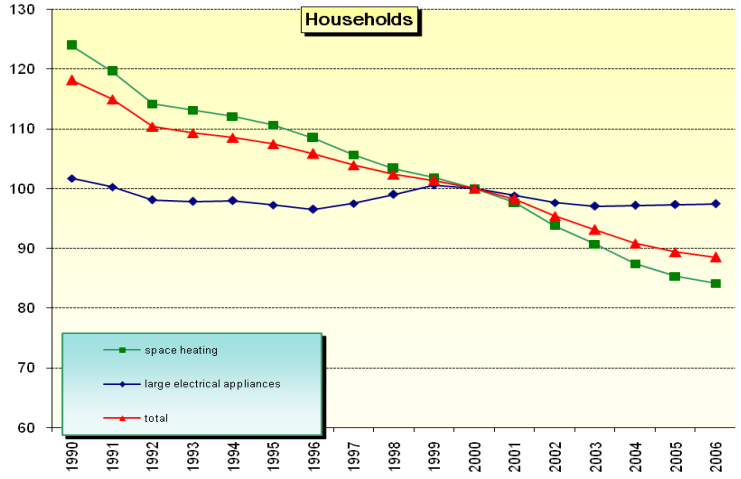
The energy efficiency performance numbers for transport show no large improvements apart from the years between 1996 and 2000. The efficiency of cars improved to a level of 1.6% lower than in 1990 by the year 2006. The efficiency of trucks and light vehicles decreased by more than 12% between 1990 and 2002. This is the result of the increased share of goods transport by light trucks, which are less efficient. There has been a slight improvement in later years, but in 2006 consumption was still 11% higher than in 1990. As a result of a larger share for air transport (from 17% to 24% of the total energy consumption in the transport section) and a 27% better energy efficiency in air transport, the energy intensity of the transport sector decreased by 5% since 1990 despite the unsatisfactory trends for cars and trucks and light vehicles.

Energy efficiency index, base 100=2000









Source: ODYSSEE data base

For more information: http://www.odyssee-indicators.org/database/definition_odex.pdf

Energy Efficiency Policy Measures

Institutions and programmes

In the Clean and Efficient (Dutch: Schoon en Zuinig) programme, introduced in 2007, the Dutch government set ambitious targets for Greenhouse gas emission reduction (-30%), share of renewables in the energy mix (20%) and improvement in energy efficiency (increasing to 2,0% per year) in 2020 (full text of this programme : http://www2.vrom.nl/docs/internationaal/New%20Energy%20for%20Climate%20Policy.pdf) .
The programme can be seen as an intensification of the existing policy approach, which characterizes itself by a multi-level 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 are in effect 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 entered into with energy intensive industries. In 1998 less energy intensive industries were addressed. 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 are replaced by a covenant on benchmarking for the energy intensive industries 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 an energy efficiency gain of new dwellings with over 50% 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 with 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 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 of 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.
- Motor vehicle tax (Dutch: MRB) and private motor vehicle and motorcycle tax (Dutch: BPM) are taxation schemes to raise tax on car possession. The tariffs are differentiated based on CO2 emissions to stimulate the selling 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)
General				
General	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 data base