



Energy Efficiency Profile : Finland

October 2008

Energy Efficiency Trends

Overview

The overall energy efficiency index for Finland can be calculated only from 2000 to 2006, due to data availability in the household and industry sectors. The data problems in the industry sector should be resolved in early 2010, making it possible to calculate ODEX from 1995 onwards.

Industry

In industry the dominating role of paper industry is shown in the fact that the energy efficiency index for the total industry follows closely that of the paper industry, a major industry in Finland. The improvement in industry as a whole has been 5% from 2000 to 2006. The energy efficiency index can not be calculated before 2000 due to lack of data. Also the current data for industry has some discrepancies from 2000 to 2002.

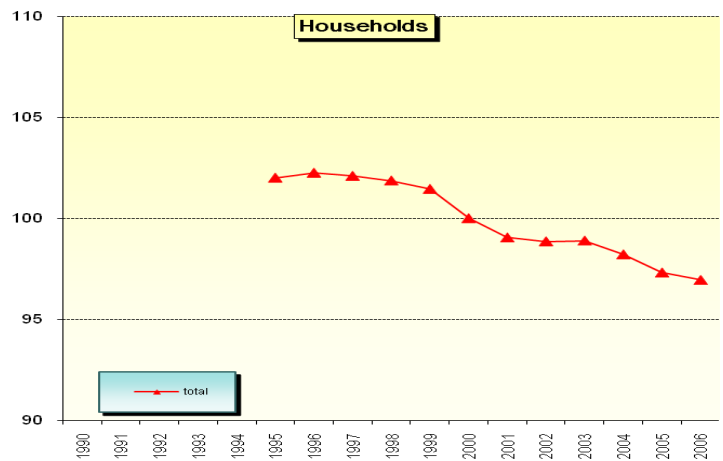
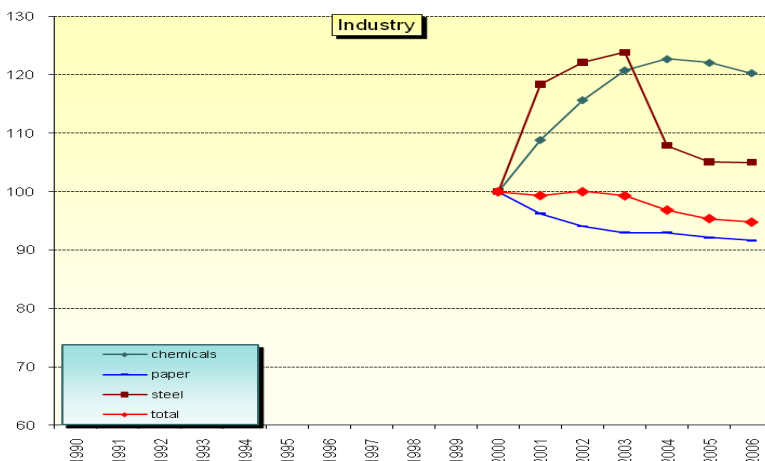
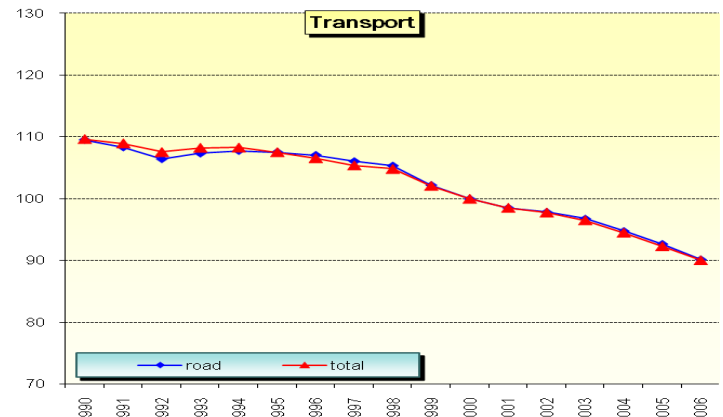
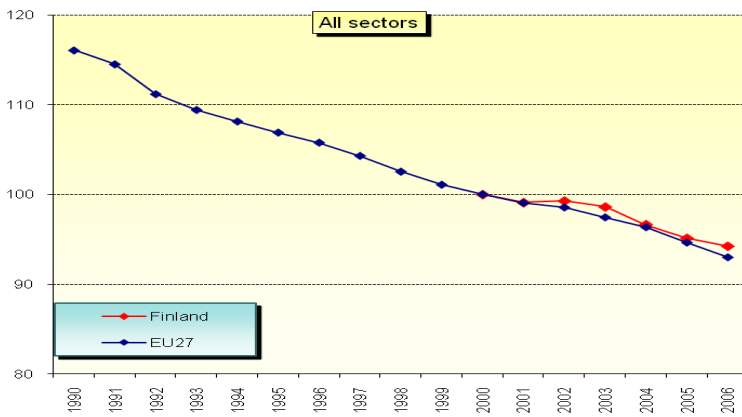
Households

The energy efficiency of the household sector is closely connected to the energy efficiency of space heating, due to the cold and long winters. Data for household sector ODEX calculation is only available since 1995. The energy efficiency index of households has decreased by 5% from 1995 to 2006.

Transport

The overall energy efficiency of transport sector has improved by 18% from 1990 to 2006. This is mainly due to unit consumption improvement of cars that are responsible for half of the energy use of the transport sector. Energy efficiency of buses, rail transport and air transport also improved significantly during the period 1990-2006.

Energy efficiency index (base 100=2000)



Energy Efficiency Policy Measures

Institutions and programmes

The National Energy and Climate Strategies lay down the road-map for Finland to meet its targets for greenhouse gas reductions. The current strategy (Energy and Climate Policy Outlines for the Near Future - National Strategy for Implementation of the Kyoto Protocol) was adopted in 2005 updating the former strategy from 2001. However, a new long-term climate and energy strategy is under preparation and it is expected to be adopted in late 2008.

The Energy Department of the Ministry of Employment and the Economy (until 31 December the Ministry of Trade and Industry) is the government institute responsible for energy policy. Motiva Oy is a state-owned company that helps the government to implement its energy efficiency measures.

Industry

In industry, the former energy conservation agreement for the 1997-2007 period has been succeeded by new energy efficiency agreements for the 2008-2016 period. The former agreements covered 85% of the sector's energy use. Energy savings made by the end of 2006 totalled 5 240 GWh/y of heat and fuels and 999 GWh/y of electricity. The voluntary agreements also boosts energy auditing which, like energy efficiency investments, are promoted by government subsidies.

Households, Services

In 2007, the Ministry of the Environment issued updated building regulations on heat insulation and energy management in buildings. The previous update of the building regulations took place in 2002 and the next revision of the building regulations is foreseen for 2010.

In 2003, the Act on the Renovation and Energy Subsidies for housing entered into force. It provides subsidies for improving heat insulation of residential buildings, renewing and repairing

ventilation and heating systems and adopting renewable energy.

Energy Efficiency Agreements have been designed also to improve energy efficiency in the household and service sectors. In the municipal sector the past agreements covered 58% of non-housing buildings owned by the municipalities (23% in the private services and government buildings). In the municipal and non-profit housing properties the Agreement runs until 2012 and its coverage is 72% in its housing segment. A new Energy Efficiency Agreement and an Energy Efficiency Programme for the municipal sector have been launched for the 2008-2016 period.

The energy efficiency agreement for oil-heated buildings and distribution of liquid heating and transport fuels, Höylä III, is a continuation of former programmes which ran from 1997 to 2007; it also covers the end-use of transport fuels in addition to oil-heated buildings.

Transport

The Energy conservation Programme for Truck and Van Transport for 2003-2005 has been succeeded by the Energy Efficiency Agreement for Freight Transport and Logistics for the 2008-2016 period. The Energy Efficiency Agreement for Public Transport for 2008-2016 also succeeds former programmes and covers transport by buses and coaches, trams and local trains.

Energy prices and taxes

Energy taxation aims to curb the growth of energy consumption and steer the production and use of energy towards alternatives causing less emissions. The basic tax is collected on oil products only and is graded according to their quality and environmental characteristics. A surtax based on the carbon content of the fuel is collected also from other fossil fuels and electricity, with the exceptions of natural gas (50% reduction) and peat (tax free).

Selected Energy Efficiency Measures

Sectors	Title of measures	Since
Industry Tertiary	The Energy Audit Programme	1994
Industry	The Energy Efficiency Agreement for Industry and its predecessors	1997
Tertiary	The Energy Efficiency Agreement and Programme for Municipalities and their predecessors	2002
Tertiary	The Energy Conservation Agreement for Property and Building Sector	1999
Transport	The Energy Efficiency Agreement for Public Transport and its predecessors	2001
Transport	The Energy Efficiency Agreement for Freight Transport and Logistics and its predecessors	1999
Households	Energy Conservation Agreement for Municipal and Non-Profit Housing Properties	2002
Households	Energy Efficiency Agreement for oil-heated buildings and distribution of liquid heating and transport fuels (The Höylä III Programme and its predecessors)	1997
Horizontal	Energy subsidy for energy audits and energy efficiency improvements	2003
Horizontal	Latest Update of the Thermal Insulation Regulations	2007

Source: MURE data base
www.mure2.com

