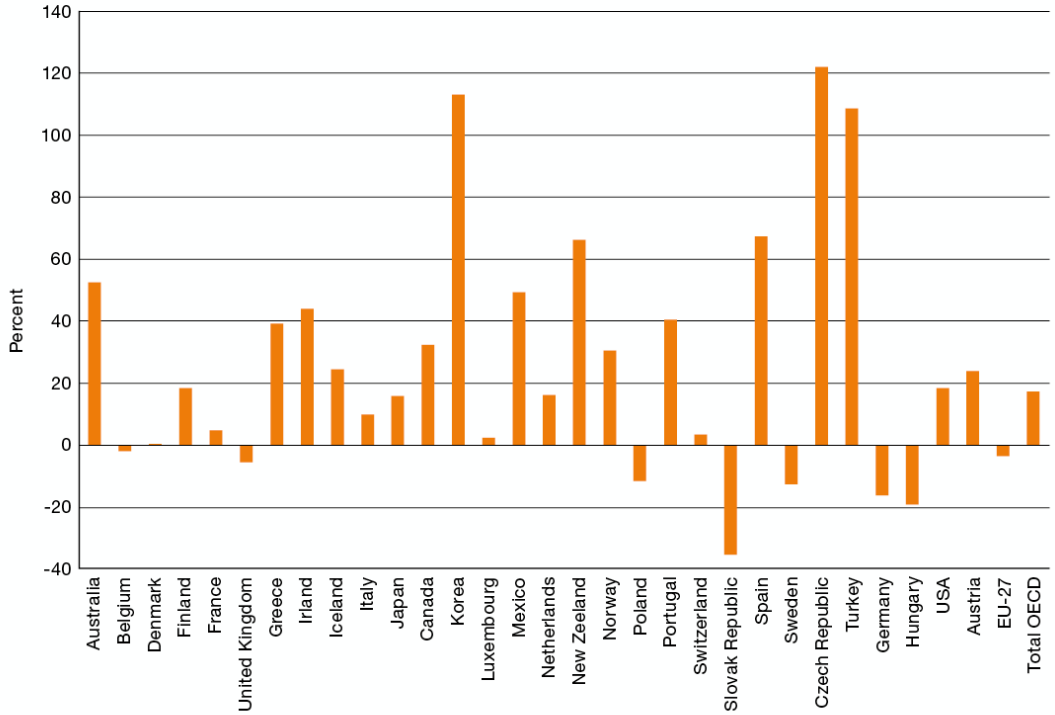
Energy in Sweden 2010

OH-pictures

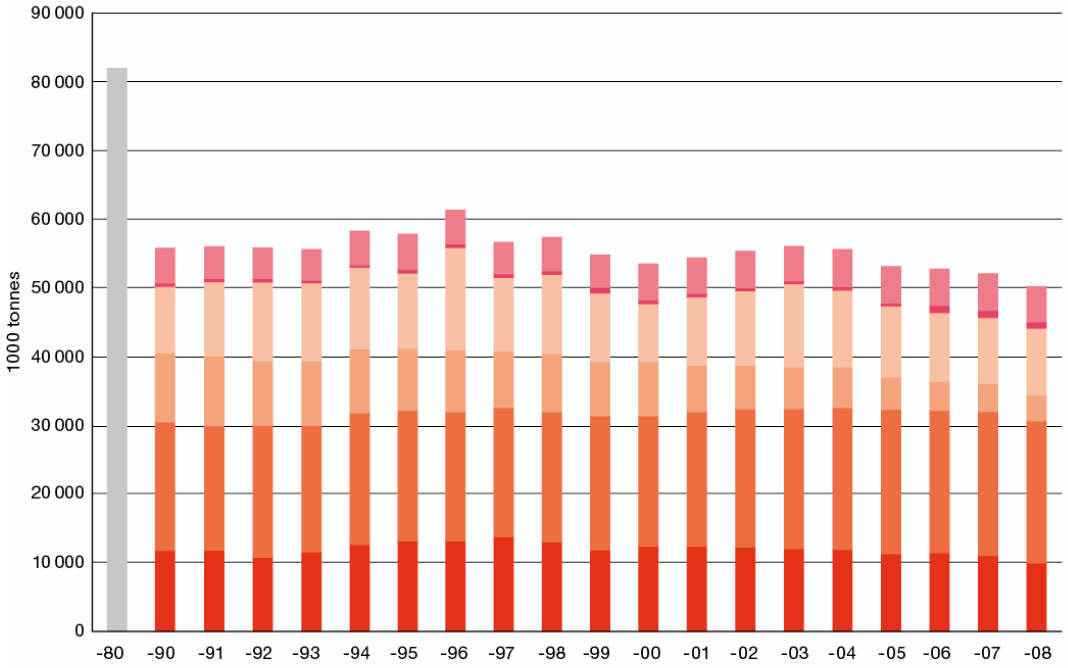
Swedish Energy Agency

Figure 1 Changes in carbon dioxide emissions in EU and OECD states, 1990–2007



Source: OECD in figures, 2009 edition.

Figure 2 Carbon dioxide emissions in Sweden in 1980, 1990–2008



Totalt 1980
Industry [1]
Transport
Residential, services etc.
Electricity and district heating.[2]
Fugitive emissions from fuels
Industrial processes etc.[3]

Note.
1. Including electricity production from industry.
2. Including cokeovens, refineries and waste incineration.
3. Including solvent and other products use.

Details are revised compared to earlier editions.

Source, 1980: Statistics Sweden, Statistical Notices, NA 18.
Source, 1990-2008: Sweden's report to the UN Climate Convention, National Inventory Report 2010.

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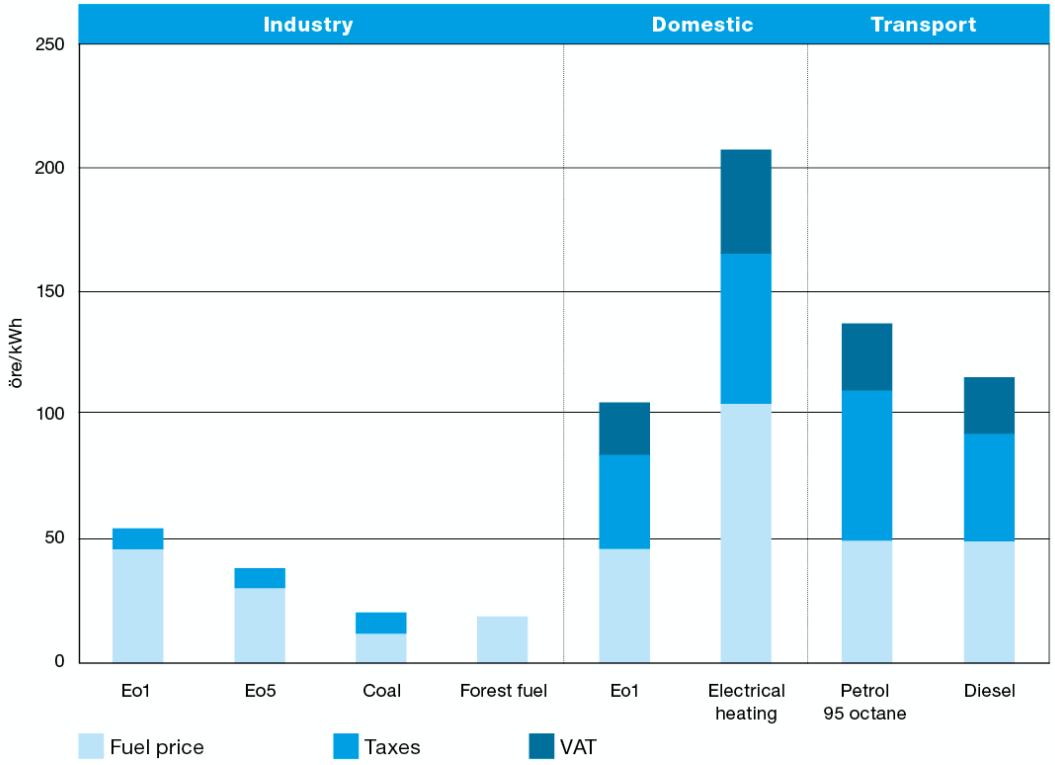
Figure 3 Total energy price for various customer categories, 2009



Source: SPI, Statistics Sweden and Swedish Tax Board.
Note: Prices for industry do not include any volume discounts.

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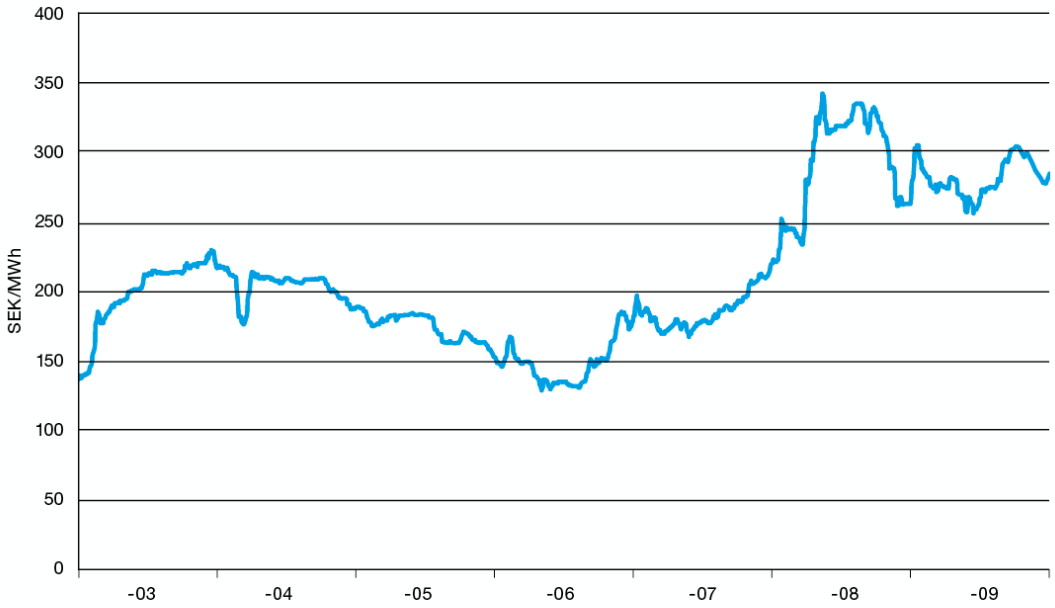
Figure 4 Average spot traded price for electricity certificates, 2003–2009



Source: Svensk Kraftmäkling.

Figure 5 Prices of emission allowances, 2005–2010

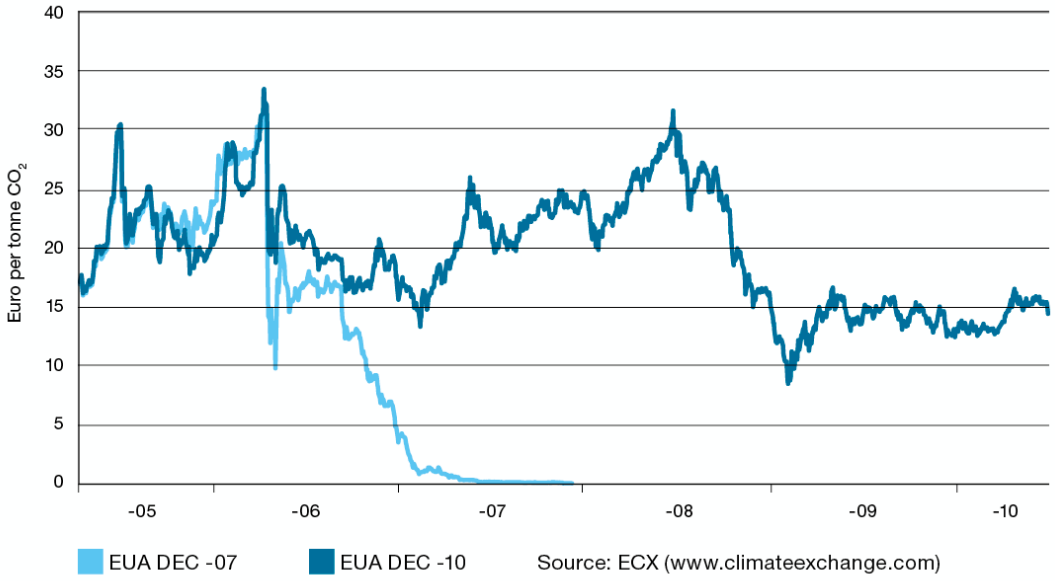
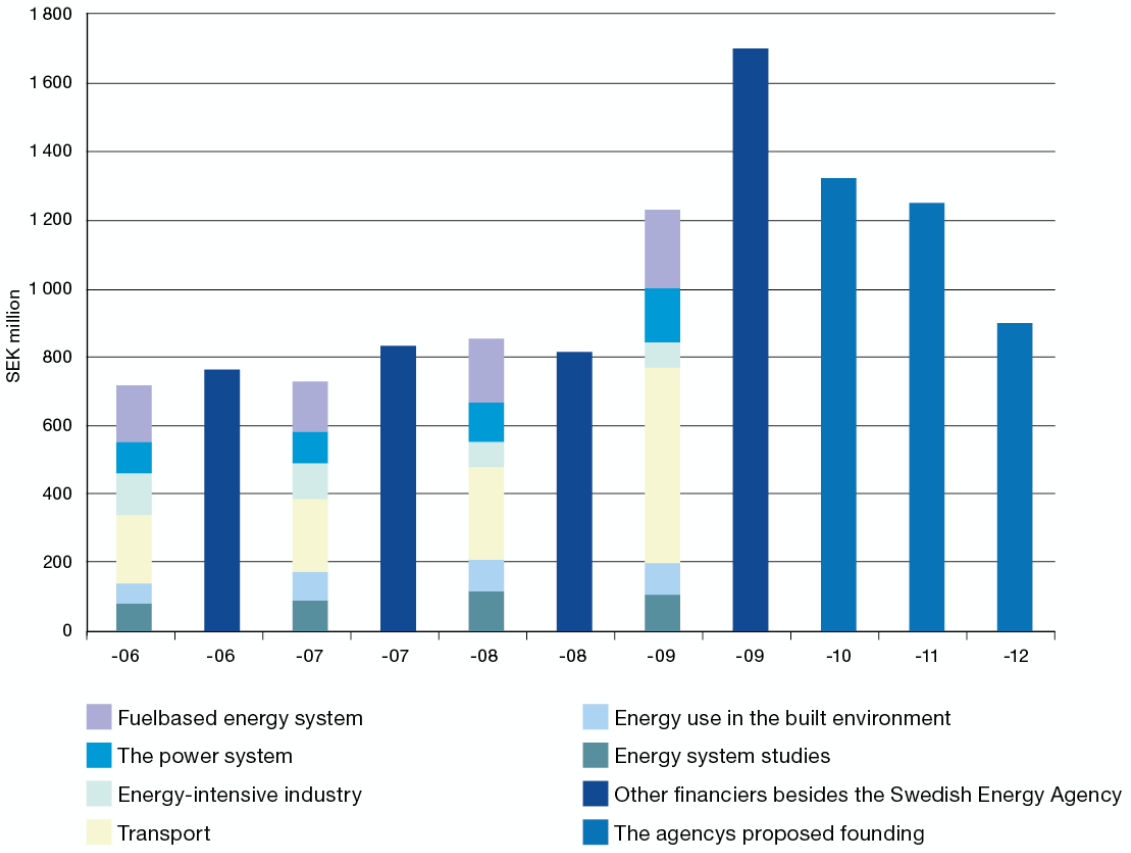
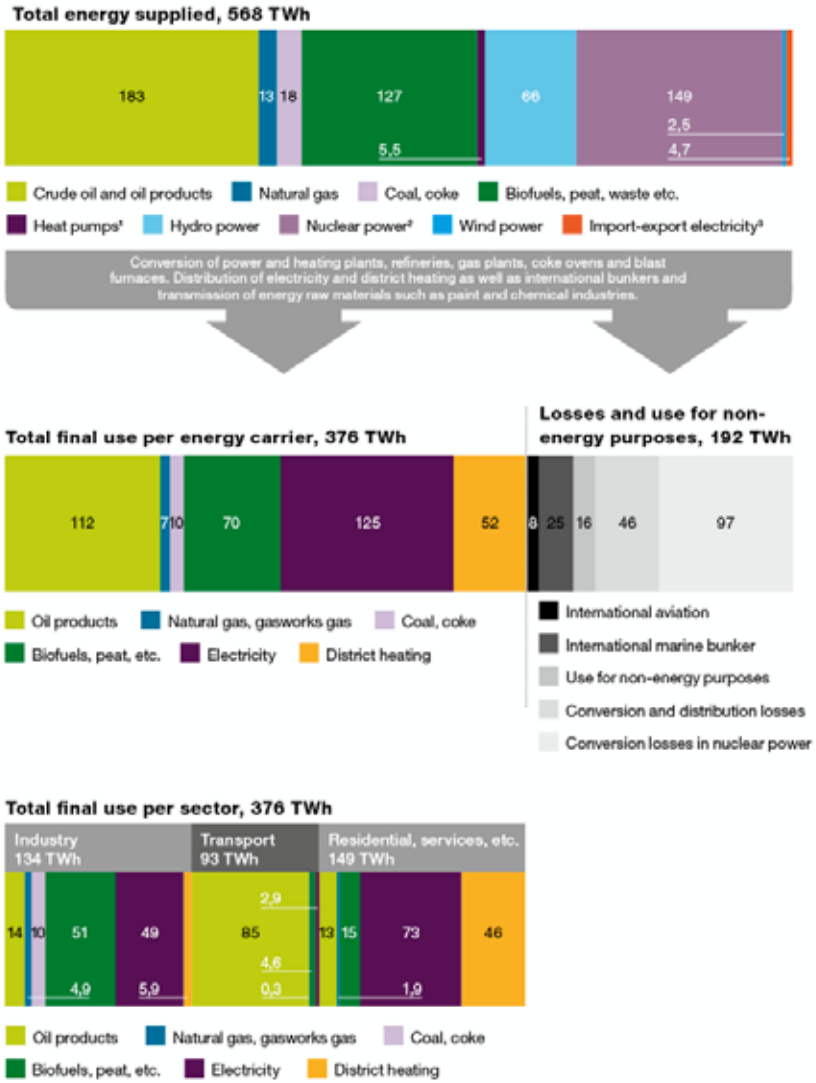


Figure 6 Research, development and demonstration funding, 2006–2012



Source: Swedish Energy Agency's Annual Report, 2009 (ER 2010:01), Budget Bill 2009/10:1 Expenditure Area 21, Energy.
Note: For 2006–2009, the figure refers to approved funding. For 2010, the figure shows proposed funding, while for 2011–2012 it is expected funding. The figures are therefore not strictly comparable between years.

Figure 7 Energy supply and use in Sweden, 2009, TWh



Source: Statistics Sweden and the Swedish Energy Agency.
1. These are large heat pumps in the energy sector. 2. Nuclear power is shown as gross power, i.e. as the nuclear fuel energy input, in accordance with the UN/ECE guidelines. 3. Net import of electricity is treated as supply.

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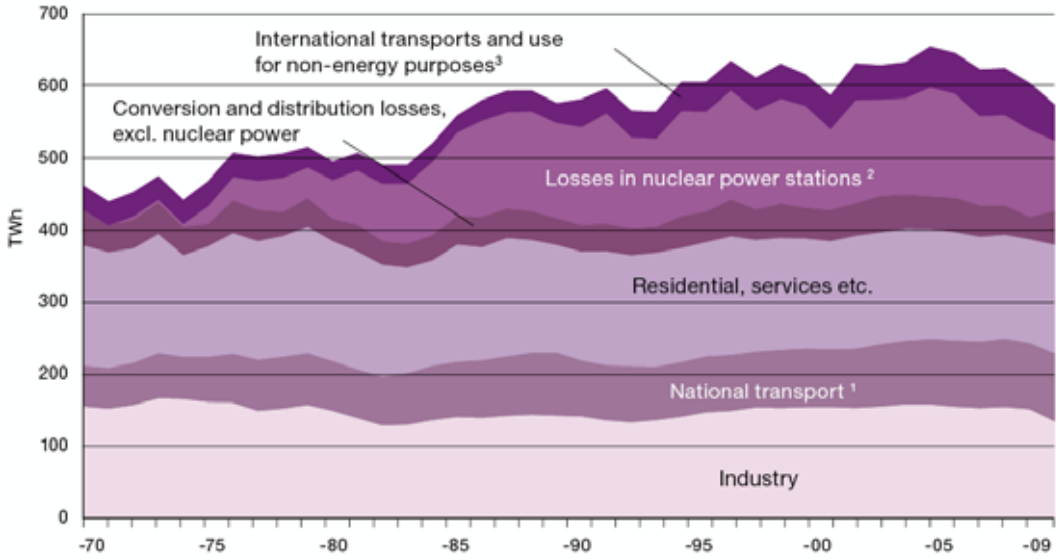
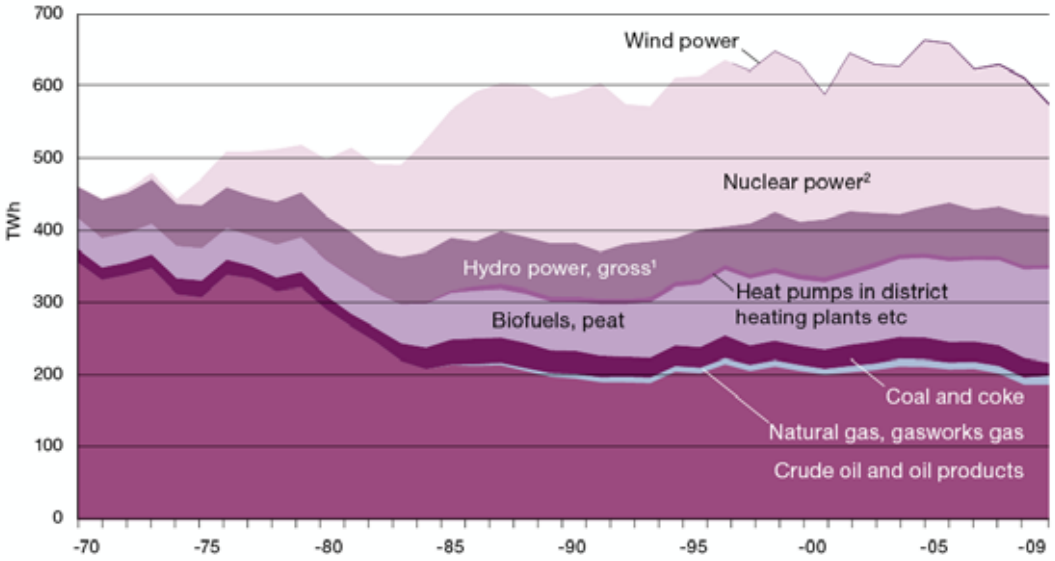
Figure 8 Sweden's total energy use, 1970–2009



Source: Statistics Sweden and the Swedish Energy Agency.

Note: 1. Foreign aviation included in this item until and including 1989. 2. Nuclear power is shown as gross power, i.e. as the nuclear fuel energy input, in accordance with the UN/ECE guidelines. 3. Foreign aviation included in this item from and including 1990.

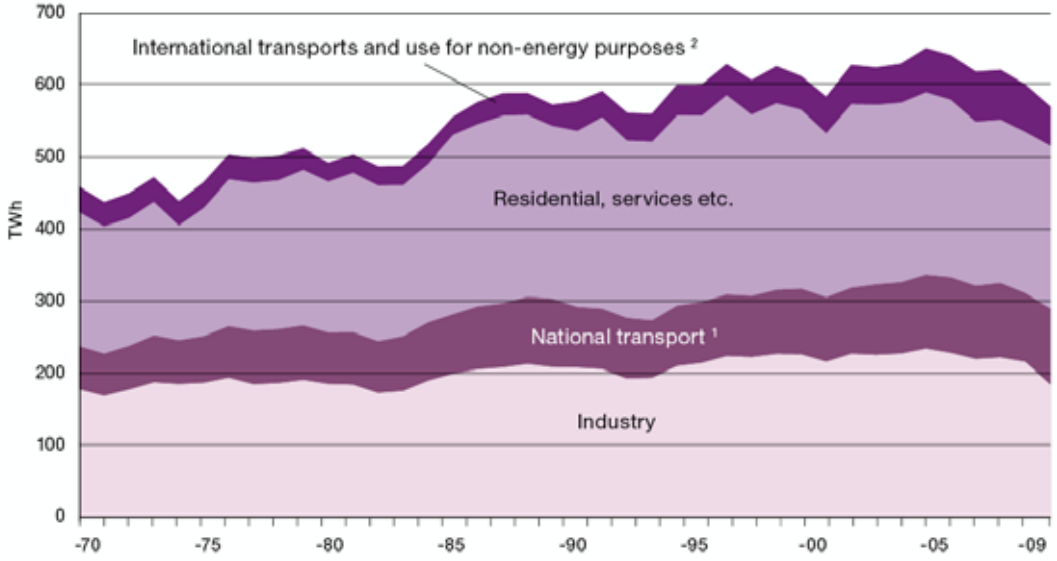
Figure 9 Total energy supply in Sweden, 1970–2009, excluding net electricity exports



Source: Statistics Sweden and the Swedish Energy Agency.

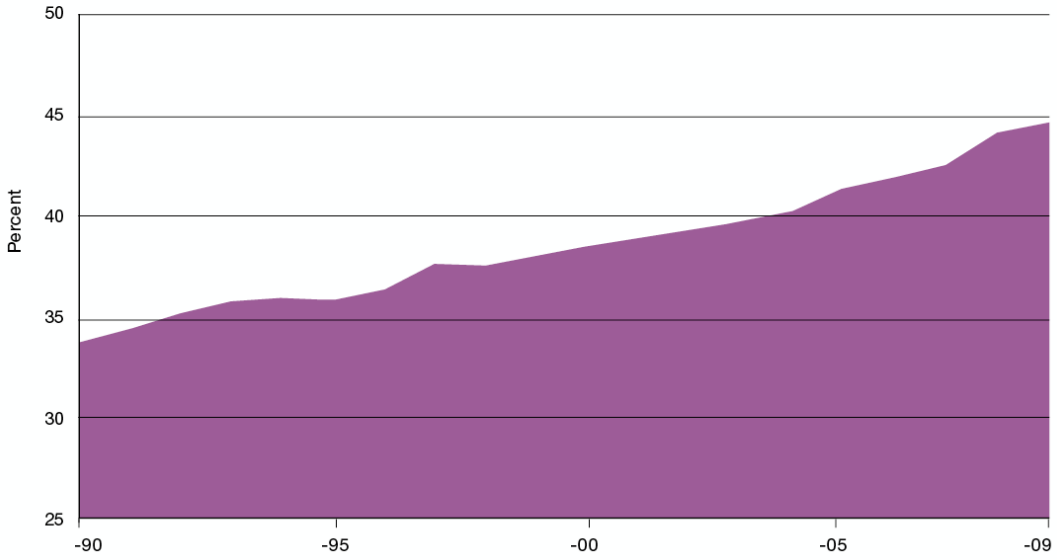
Note: 1. Includes wind power until and including 1996. 2. Nuclear power is shown as gross power, i.e. as the nuclear fuel energy input, in accordance with the UN/ECE guidelines.

Figure 10 Total energy use in Sweden, 1970–2009. Conversion losses in the production sector are apportioned to end users



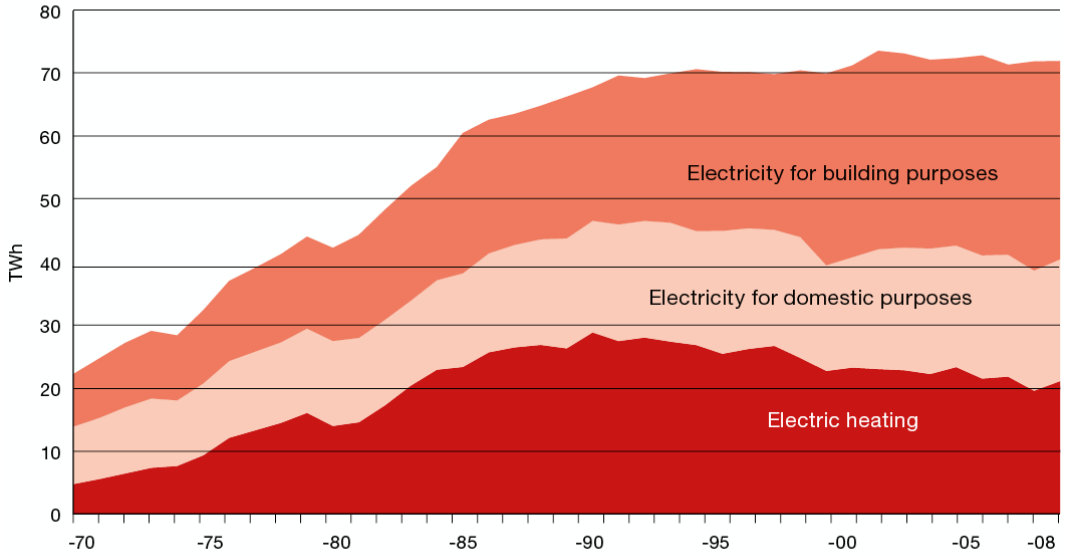
Source: Statistics Sweden and the Swedish Energy Agency.
Note: 1. Foreign aviation included in this item until and including 1989. 2. Foreign aviation included in this item from and including 1990.

Figure 11 Sweden's total proportion of renewable energy use, 1990–2009



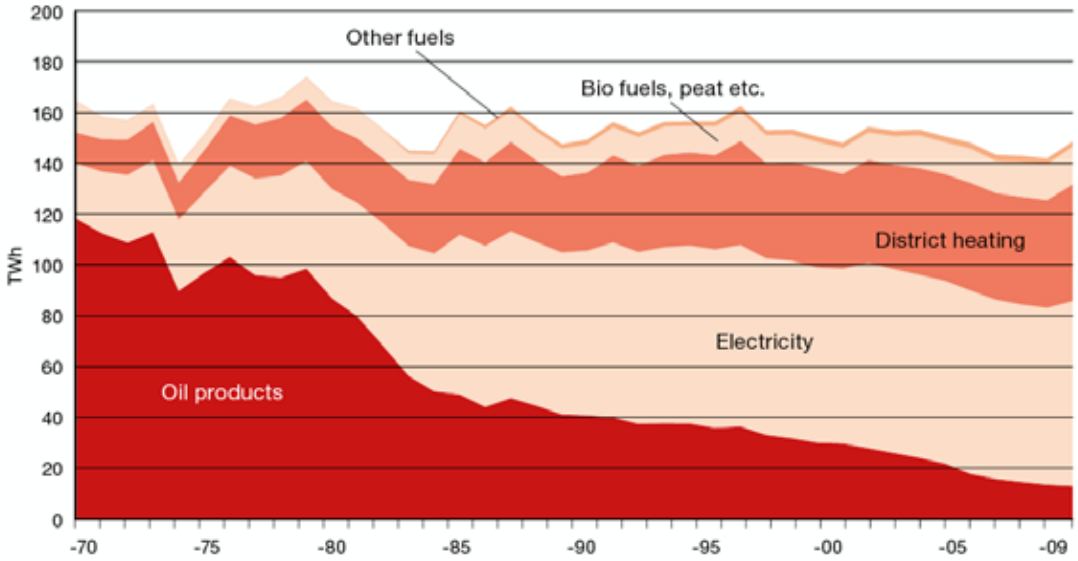
Source: Statistics Sweden and the Swedish Energy Agency.
Note: The proportion for 2009 is based on short-term statistics, and is therefore subject to change.

Figure 12 Electricity use in the residential and services sector, 1970-2008, climate-corrected



Source: Statistics Sweden and the Swedish Energy Agency

Figure 13 Final energy use within the residential and service sectors etc, 1970–2009



Source: Statistics Sweden and the Swedish Energy Agency.

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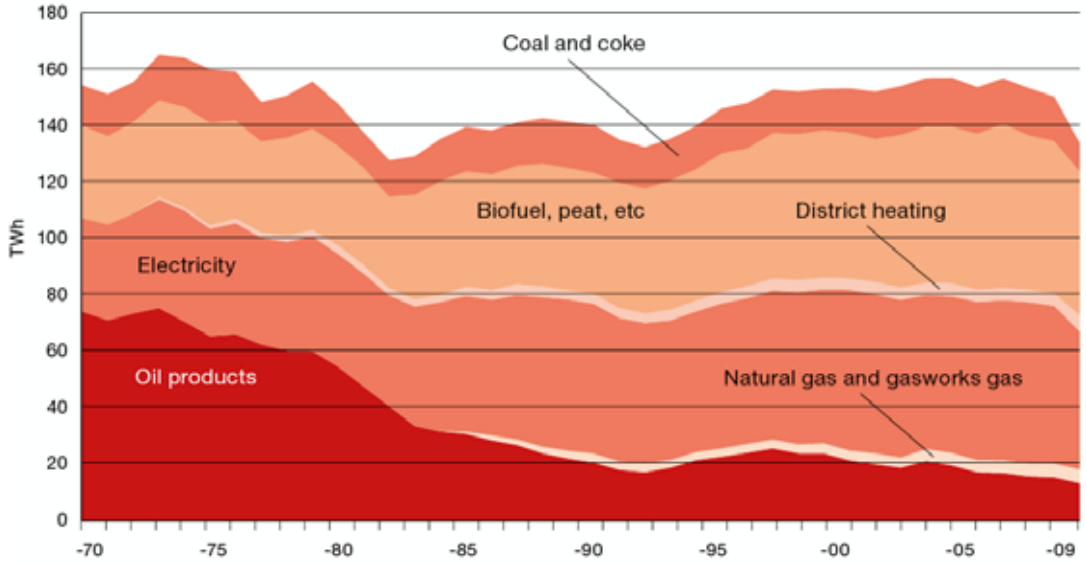
Figure 14 Final energy use in industry, 1970–2009



Source: Statistics Sweden and the Swedish Energy Agency.

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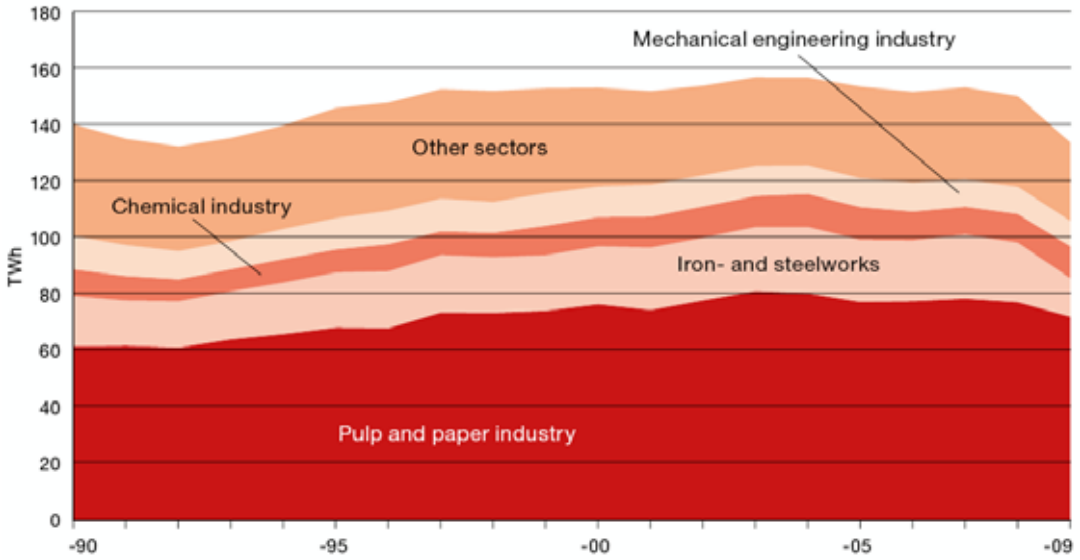
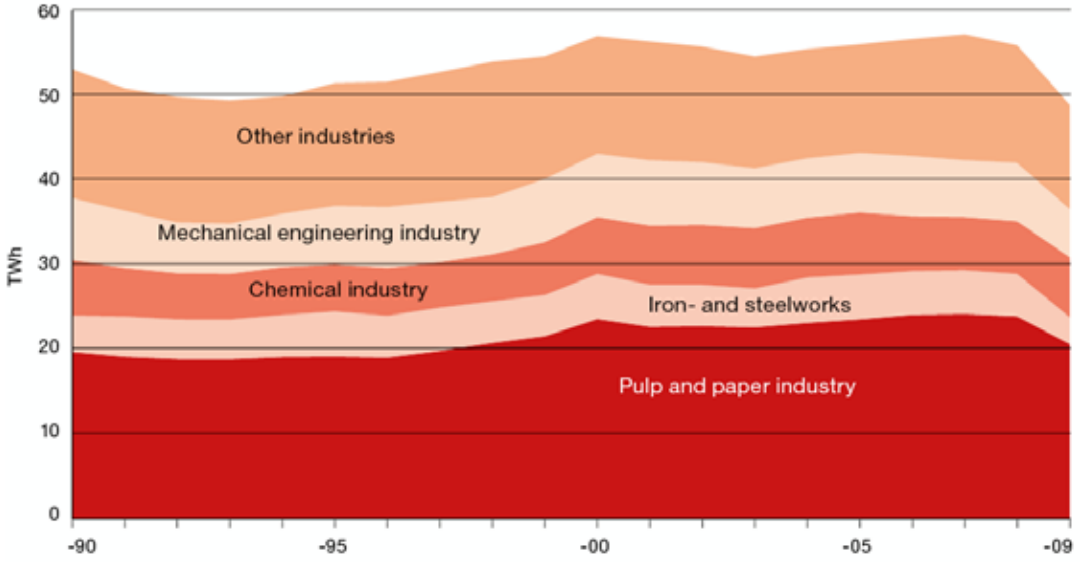
Figure 15 Energy use in industry per sector 1990-2009



Source: Statistics Sweden and the Swedish Energy Agency.

Figure 16 Use of electricity in industry 1970-2009



Source: Statistics Sweden and the Swedish Energy Agency.

Figure 17 Specific use of oil in industry, 1970–2009, kWh per SEK of value added, 2000 price levels

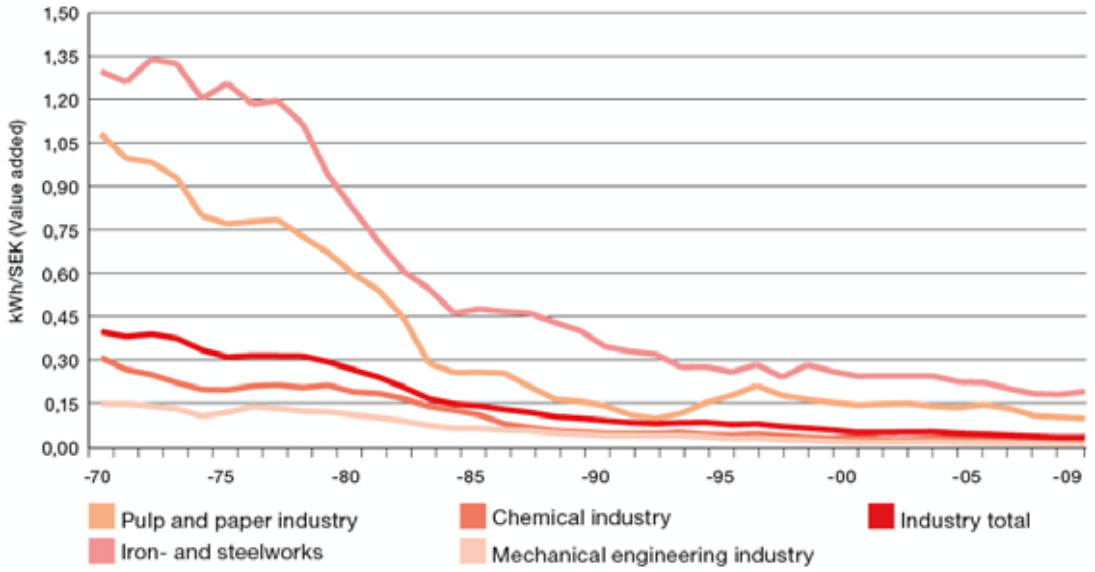
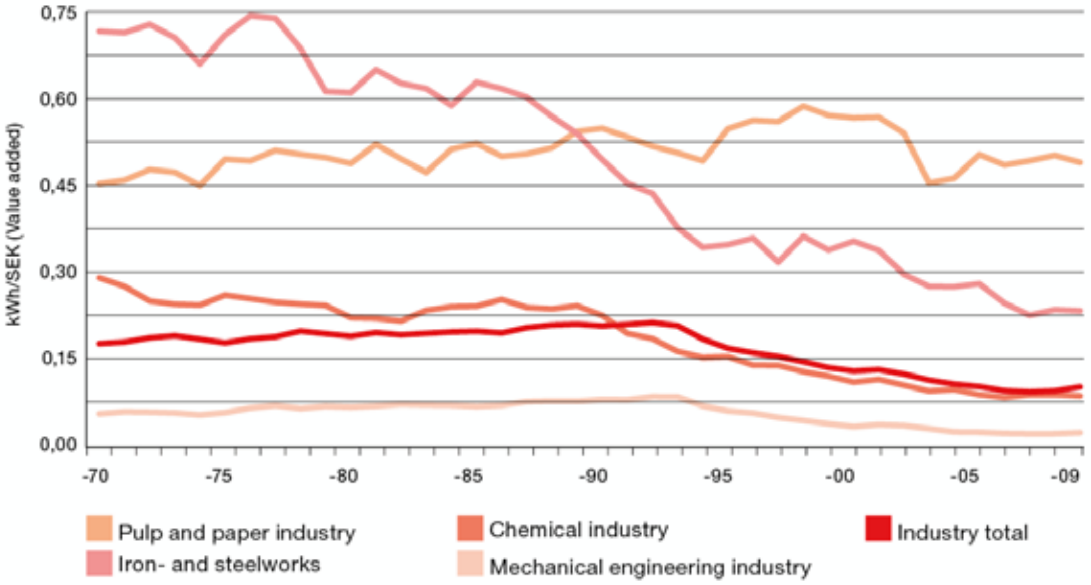


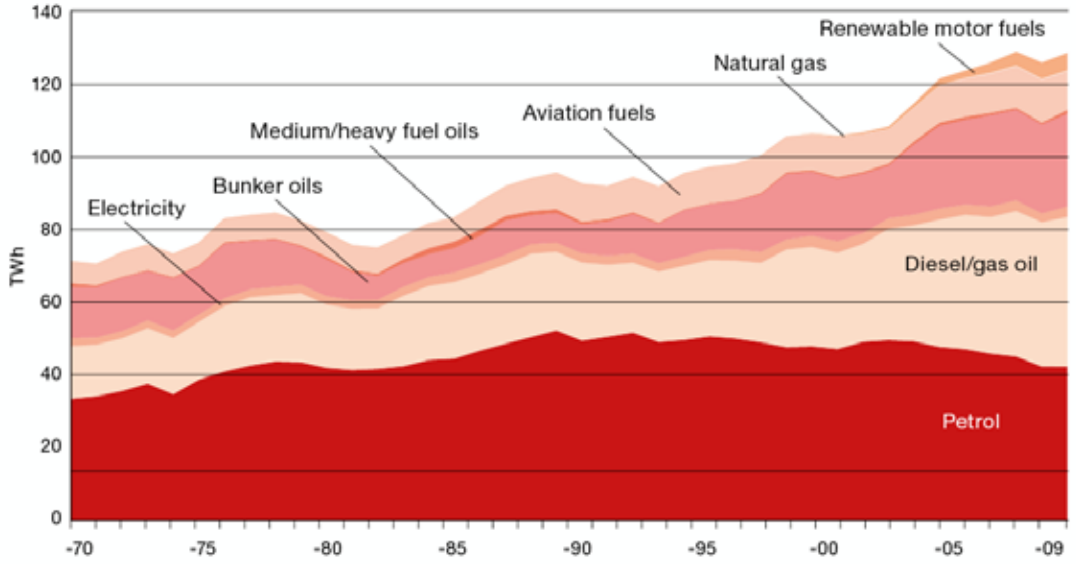
Figure 18 Specific electricity use in industry 1970–2009, kWh per SEK of value added, 2000 price levels



Source figure 17-18: Statistics Sweden and the Swedish Energy Agency.

Swedish Energy Agency

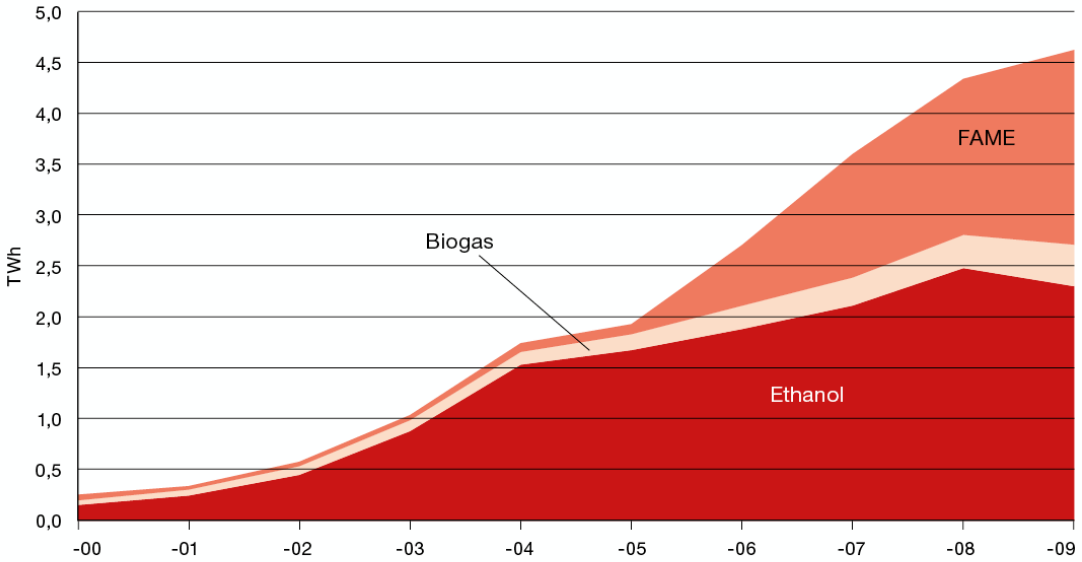
Figure 19 Final energy use in the transport sector 1970–2009, including international transports



Source: Statistics Sweden and the Swedish Energy Agency.

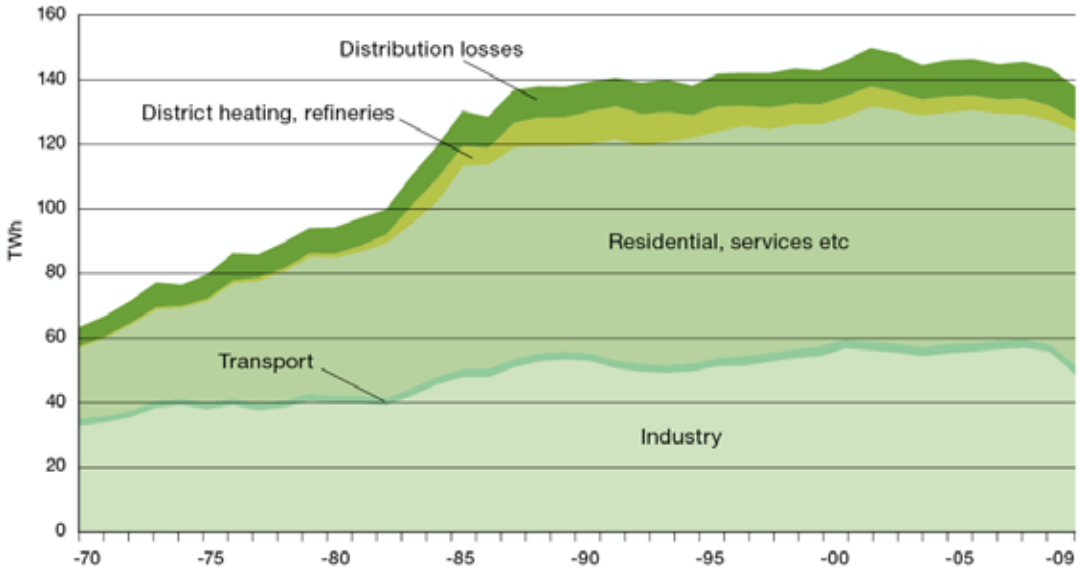
Swedish Energy Agency

Figure 20 Final energy use of renewable motor fuels, 2000-2009



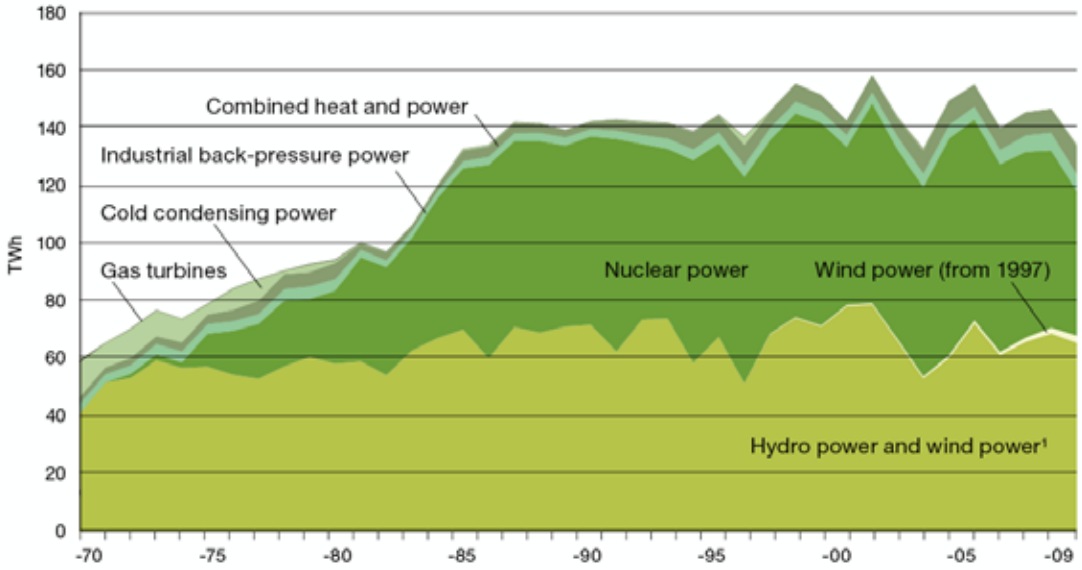
Source: Statistics Sweden, the Swedish Energy Agency and the Swedish Gas Association.

Figure 21 Electricity use in Sweden, by sectors, 1970–2009



Source: Statistics Sweden and the Swedish Energy Agency.

Figure 22 Electricity production in Sweden, by types of production plant, 1970–2009



Source: Statistics Sweden and the Swedish Energy Agency.

Note: 1. Windpower is included in the series up and until year 1996.

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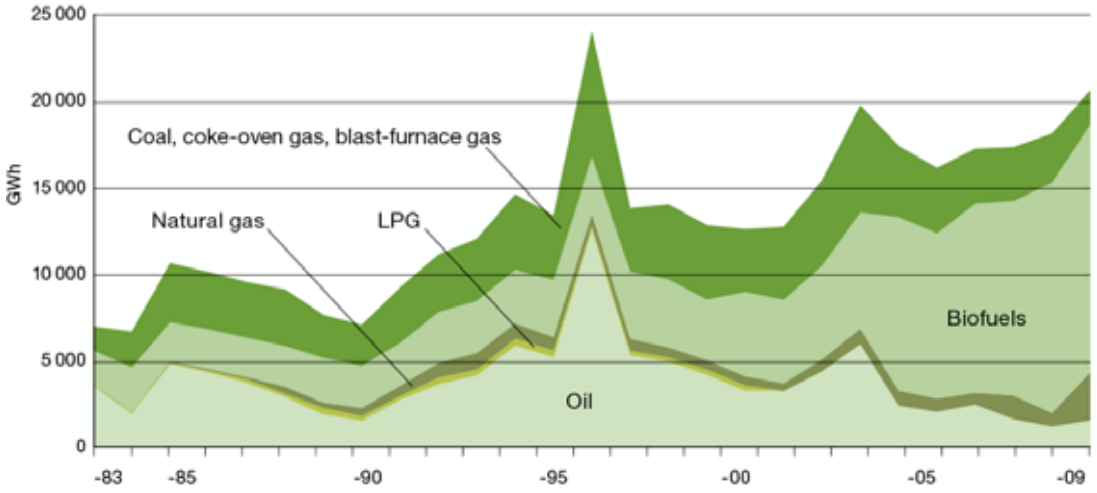
Figure 23 Fuel input for electricity production (excluding nuclear fuel), 1983–2009



Source: Statistics Sweden and the Swedish Energy Agency.

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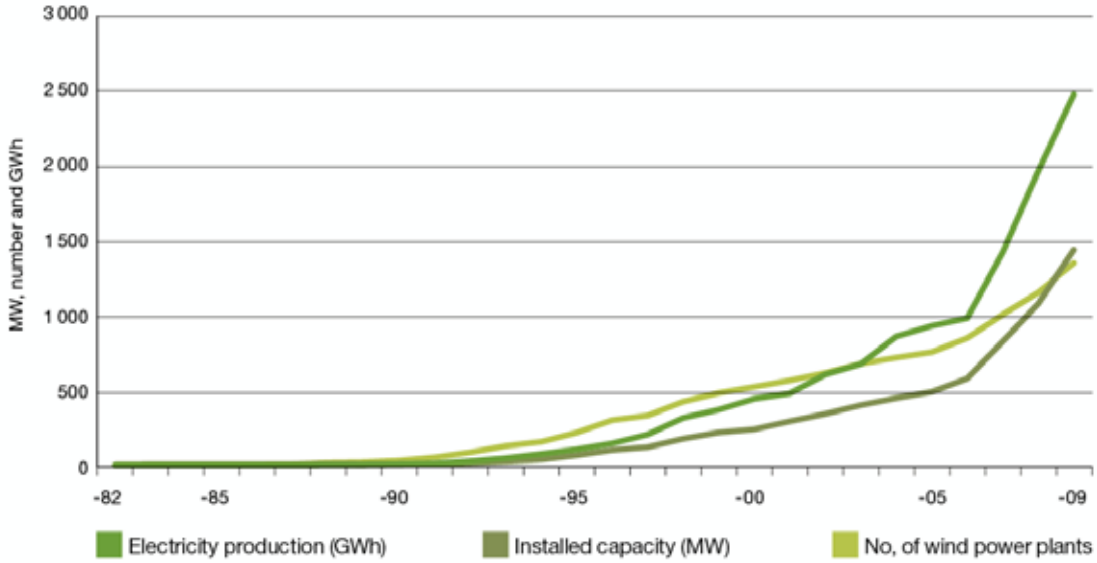
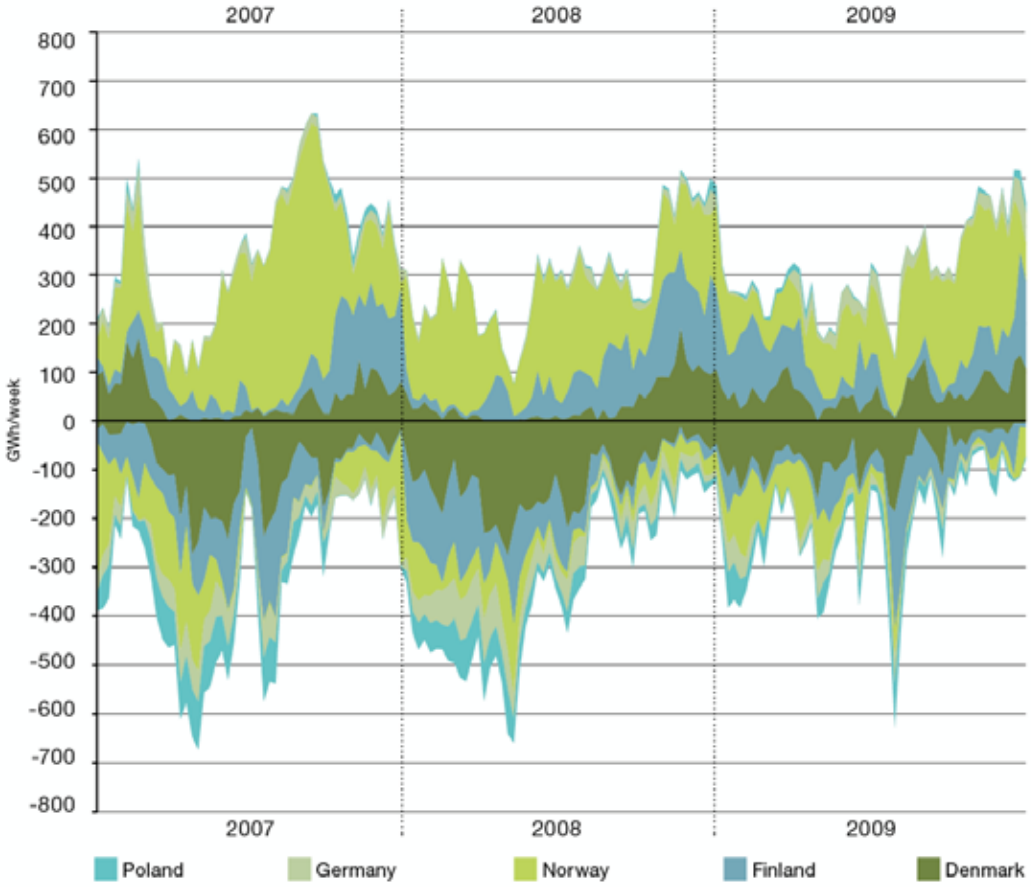
Figure 24 Wind power production, 1982–2009



Source: Wind power statistics, 2009, ES 2010:03

Figure 25 Swedish electricity import (+) and export (-), January 2007–December 2009



Source: Svensk Energi, additional processing by the Swedish Energy Agency.

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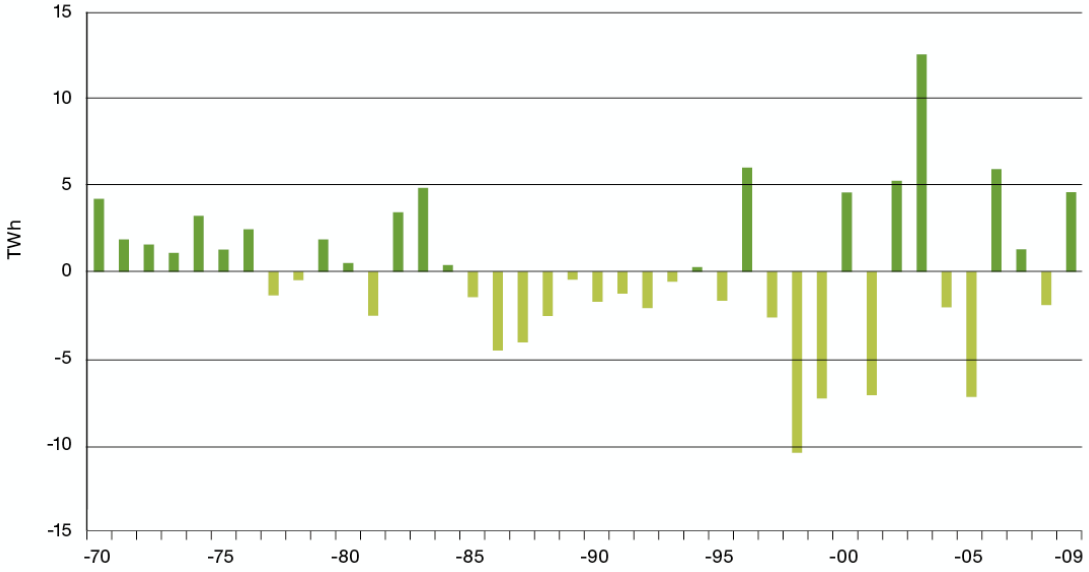
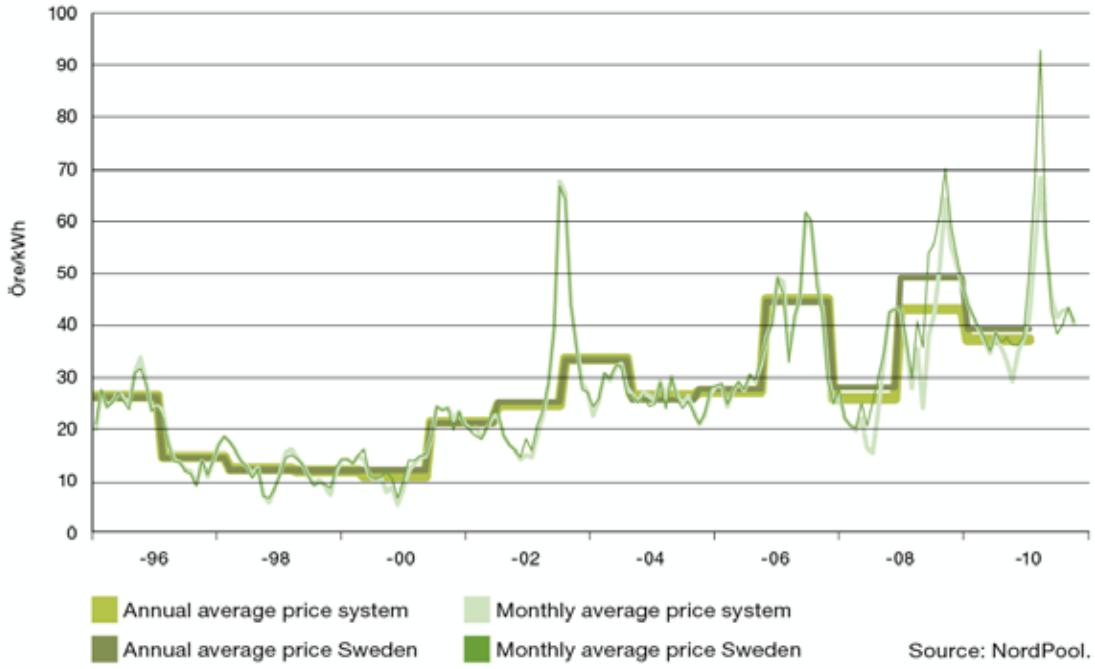
Figure 26 Sweden's net import (+) and net export (-) of electricity, 1970–2009



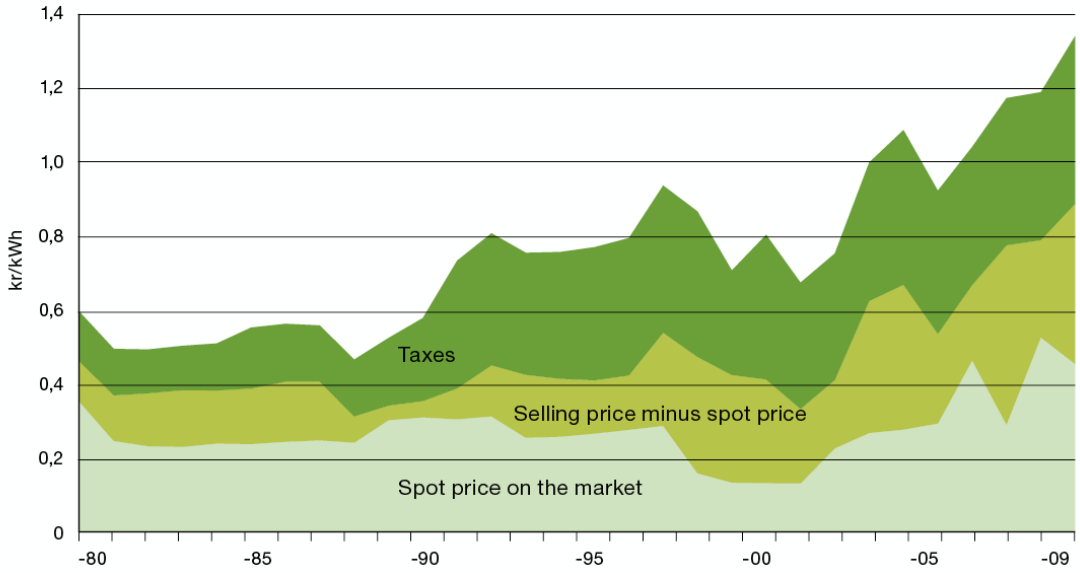
Source: Statistics Sweden and the Swedish Energy Agency.

Figure 27 Spot prices on Nord Pool. Monthly and annual average prices for the system and for Sweden, January 1996–August 2010



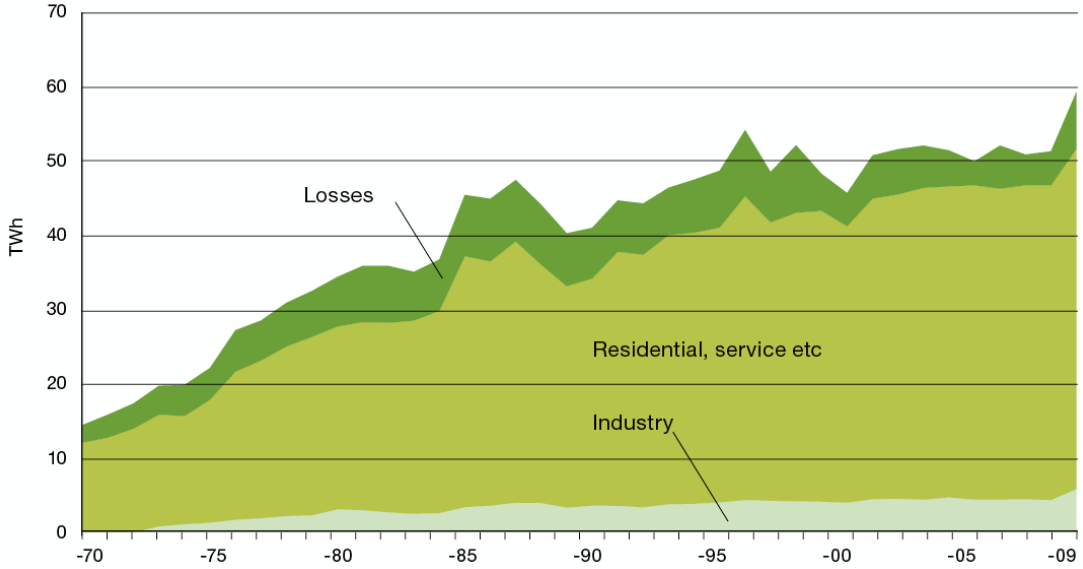
Source: NordPool.

Figure 28 Real price of electricity (2009 price level), 1980-2009



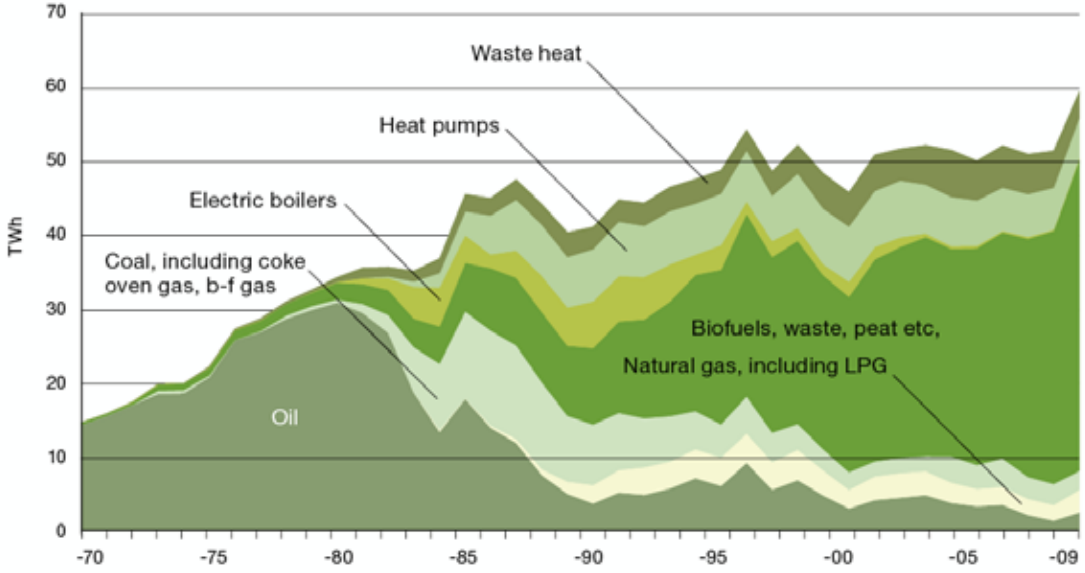
Source: Statistics Sweden, Bank of Sweden, Nordpool.
Note: The prices of electricity for domestic users and for industry have been weighted in proportion to the respective sector proportions.

Figure 29 Use of district heating, 1970–2009



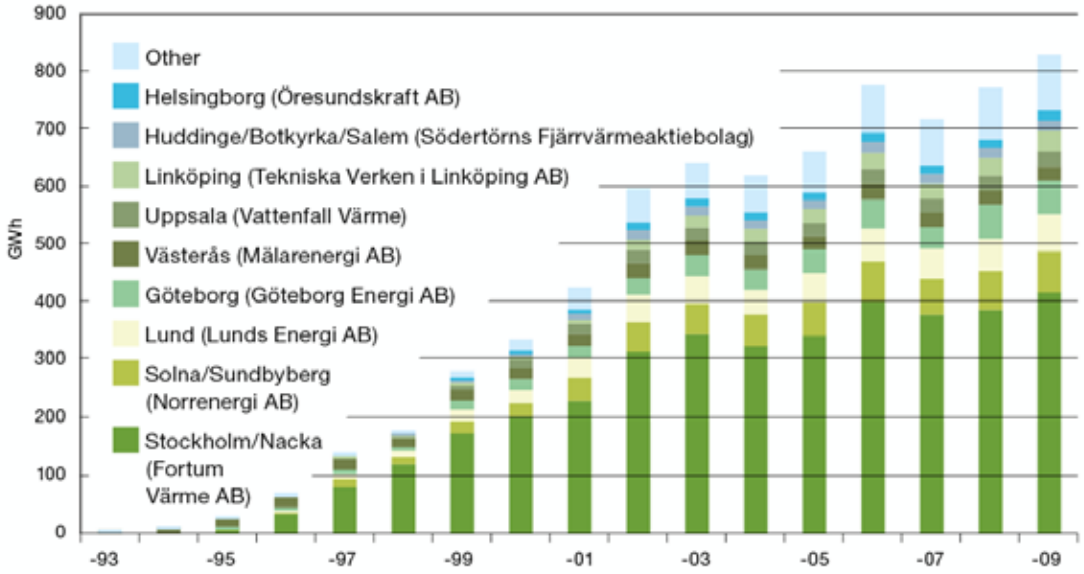
Source: Statistics Sweden and the Swedish Energy Agency

Figure 30 Energy input for district heating, 1970–2009



Source: Statistics Sweden and the Swedish Energy Agency

Figure 31 Supply of district cooling, 1993–2009



Source: Swedish District Heating Association.

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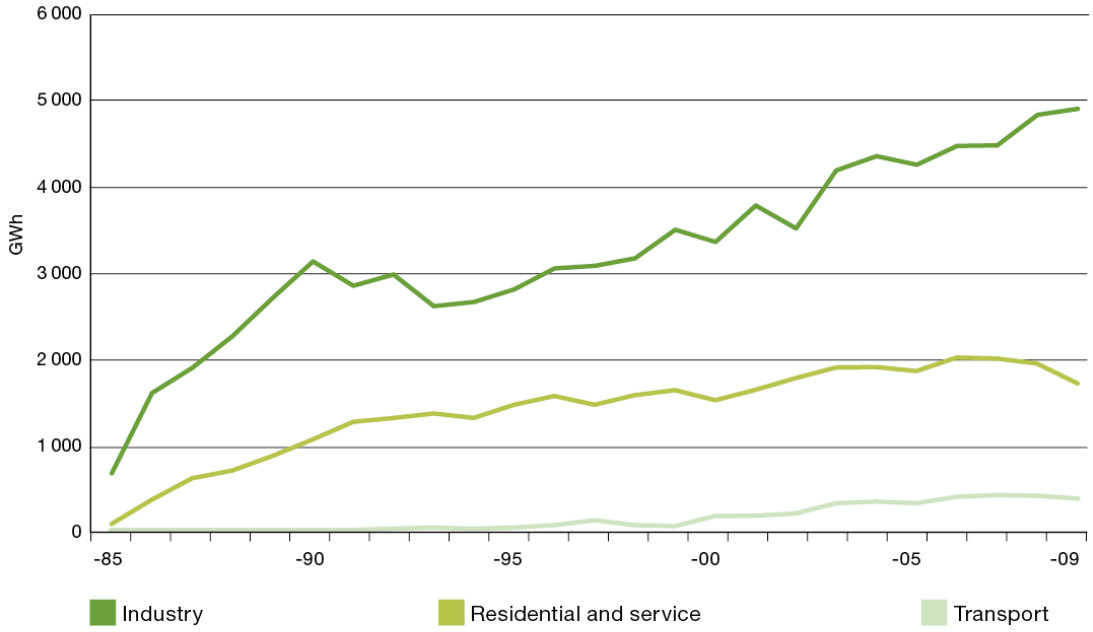
Figure 32 Final use of natural gas in Sweden, 1985–2009, by user sector

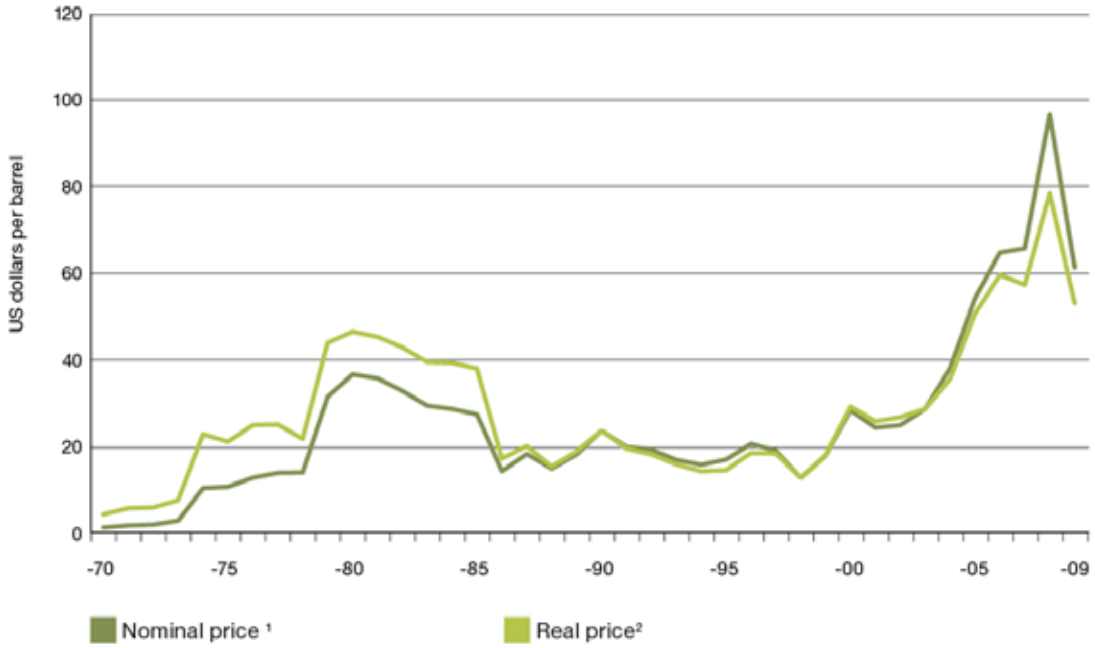


Source: Statistics Sweden and the Swedish Energy Agency.

Figure 33 Import price of natural gas, 1999-2009

Source: IEA Energy Prices & Taxes, Quarterly Statistics, Second Quarter 2010.

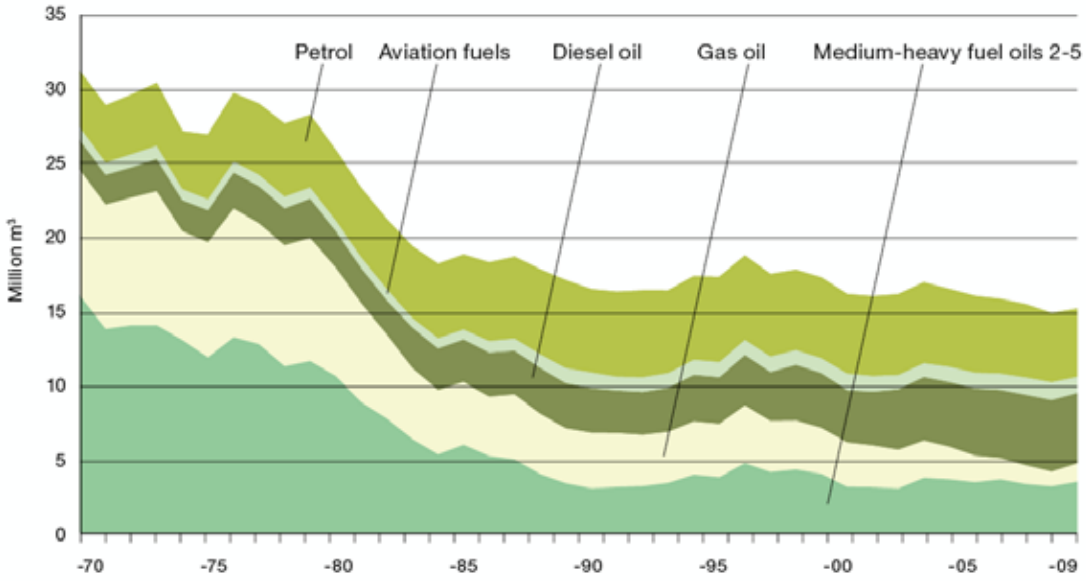
Figure 34 Nominal and real prices of light crude oil, 1970–2009



1) Due to revision of statistics at Bp the timeseries has been revised back to 1984.
2) Global real prices deflated with MUV-index from The World Bank.

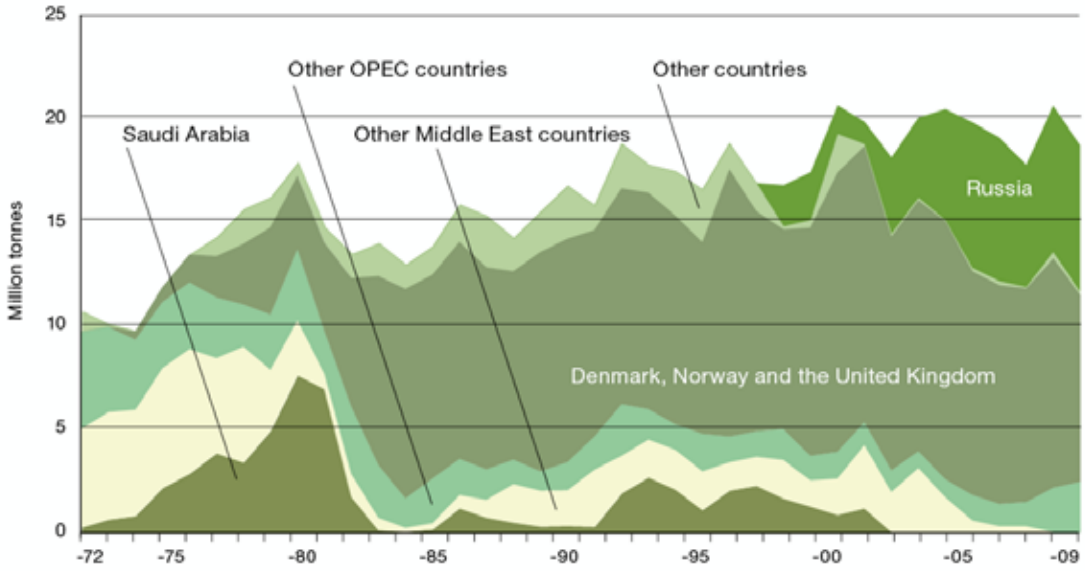
Source: www.bp.com and the World Bank.

Figure 35 Use of oil products in Sweden, including international transport, 1970–2009



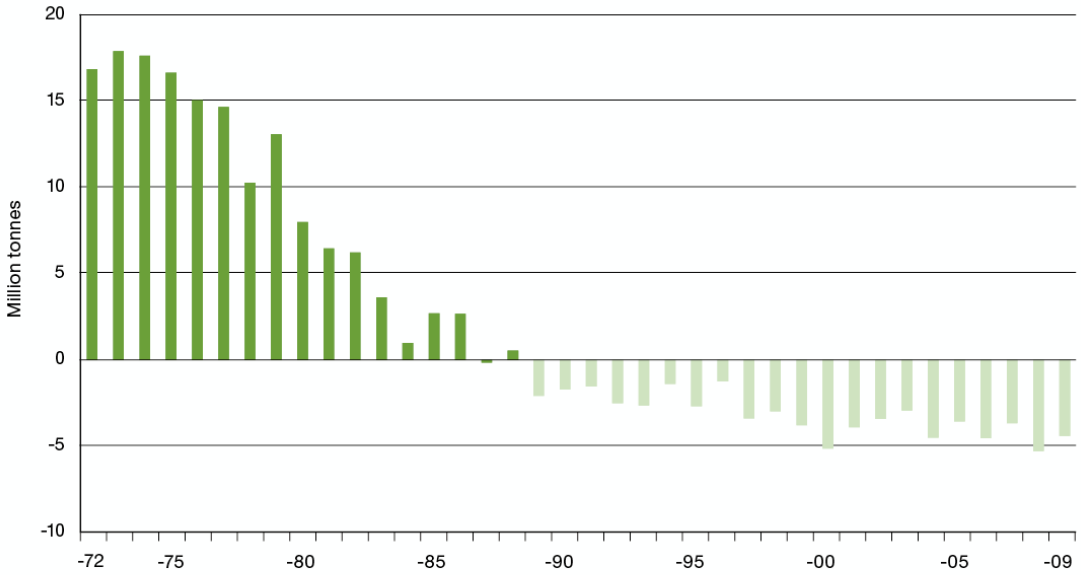
Source: Statistics Sweden and the Swedish Energy Agency.

Figure 36 Swedish net imports of crude oil and oil products, by country of origin, 1972–2009



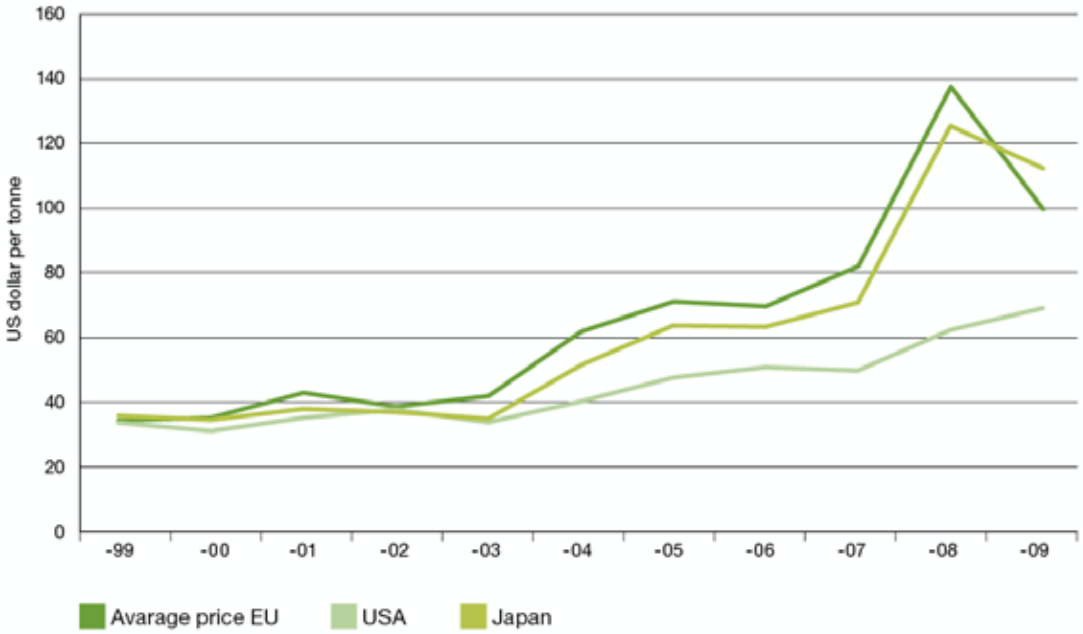
Source: Statistics Sweden and the Swedish Energy Agency.
Note: Until and including 1997, imports from Russia is included in the category other countries.

Figure 37 Net imports (+) and exports (-) of refinery products, 1972–2009



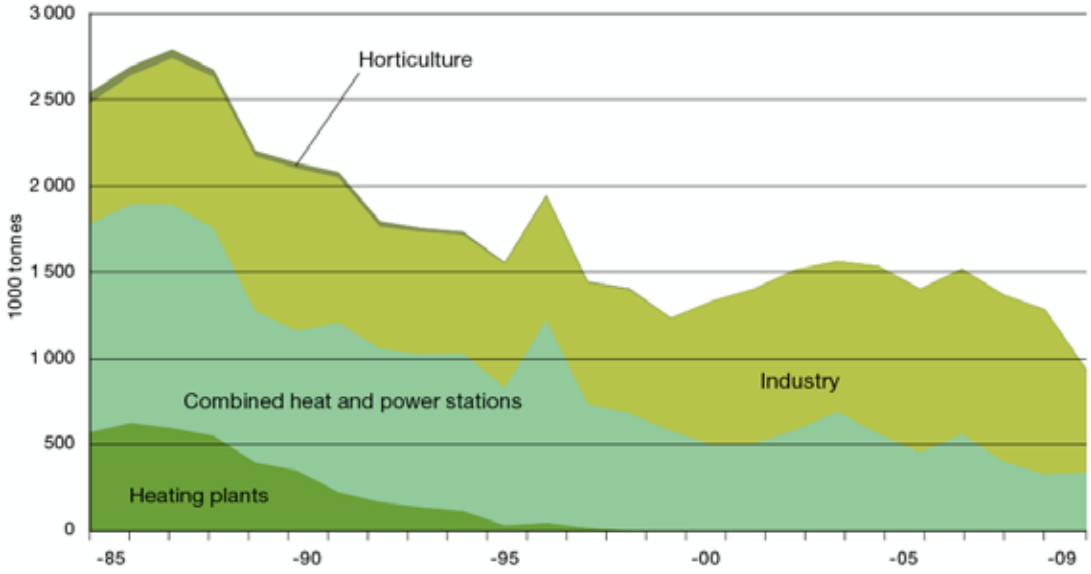
Source: Statistics Sweden and the Swedish Energy Agency.

Figure 38 Coal prices in the EU, USA and Japan, 1999-2009



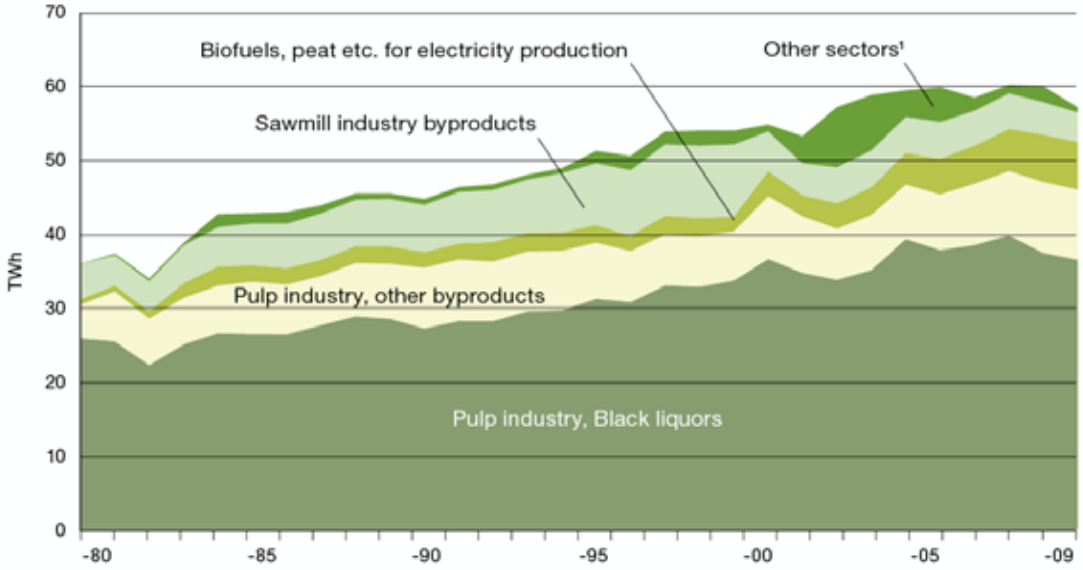
Source: IEA Energy Prices & Taxes, Quarterly Statistics, Second Quarter 2010.

Figure 39 Use of energy coal in Sweden, 1985–2009



Source: Statistics Sweden and the Swedish Energy Agency.

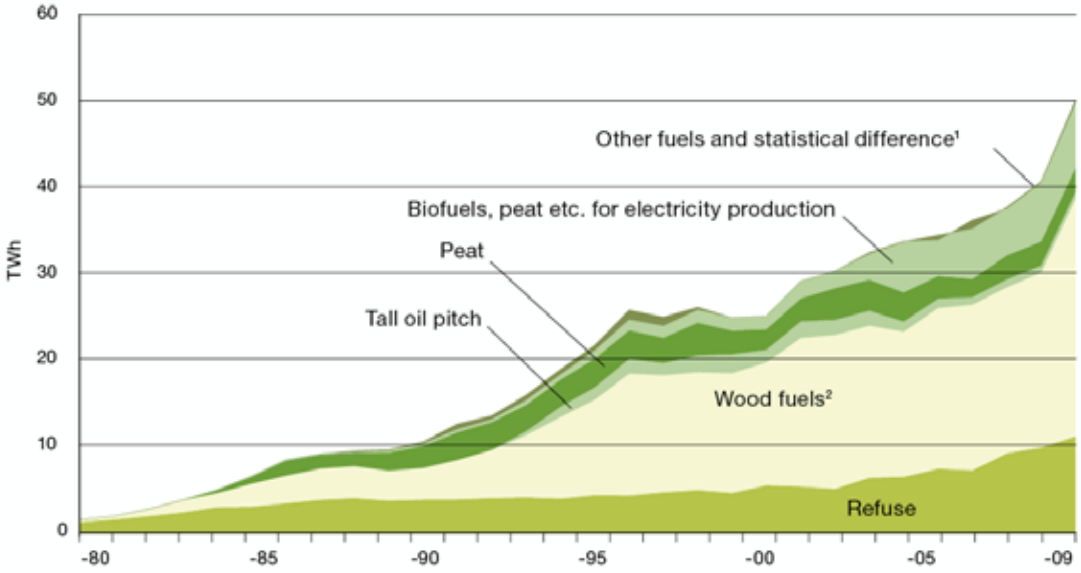
Figure 40 Use of biofuels, peat etc. in industry, 1980–2009



Source: Statistics Sweden and the Swedish Energy Agency

Note: 1. The short term statistics for other sectors is continously underestimated. Other sector includes food, chemical and manufacturing (engineering) industry among others

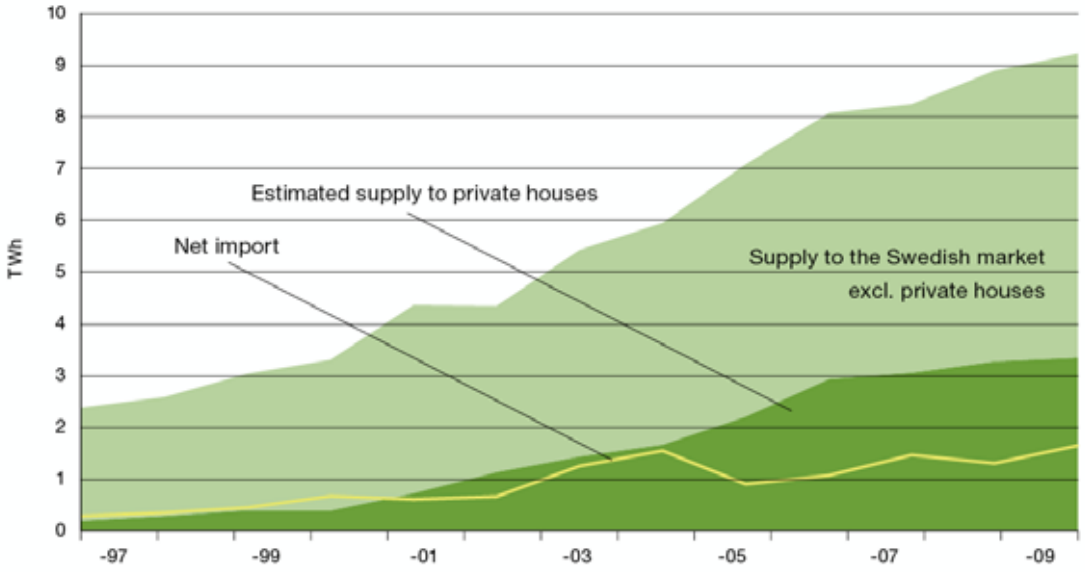
Figure 41 Use of biofuels, peat etc. in district heating plants, 1980–2009



Source: Statistics Sweden and the Swedish Energy Agency

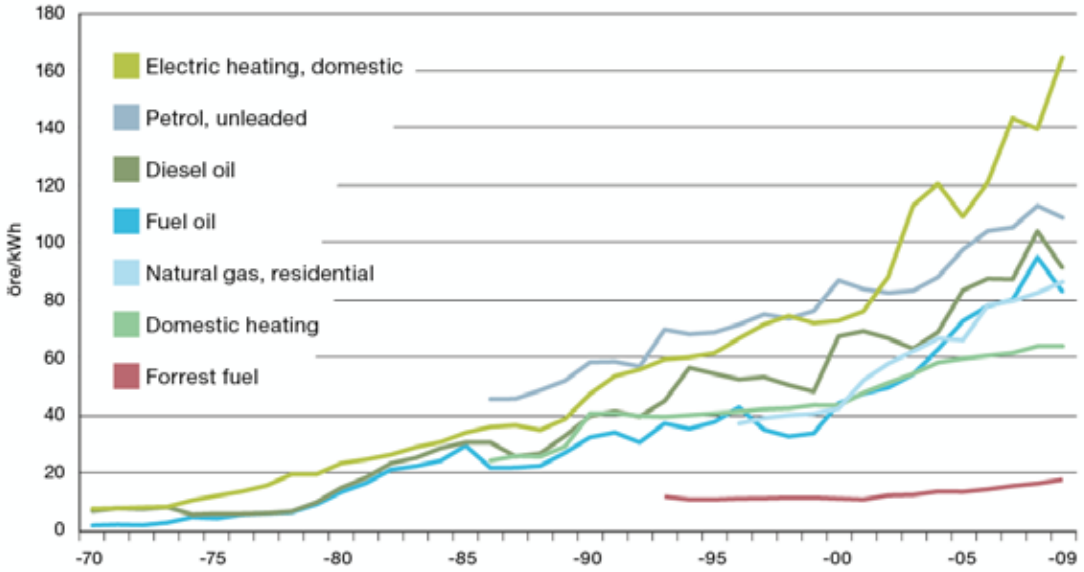
Notes: 1. The difference is due to two different statistical sources. 2. The short-term statistics is continuously overestimated.

Figure 42 Supply of pellets to the Swedish market, 1997–2009



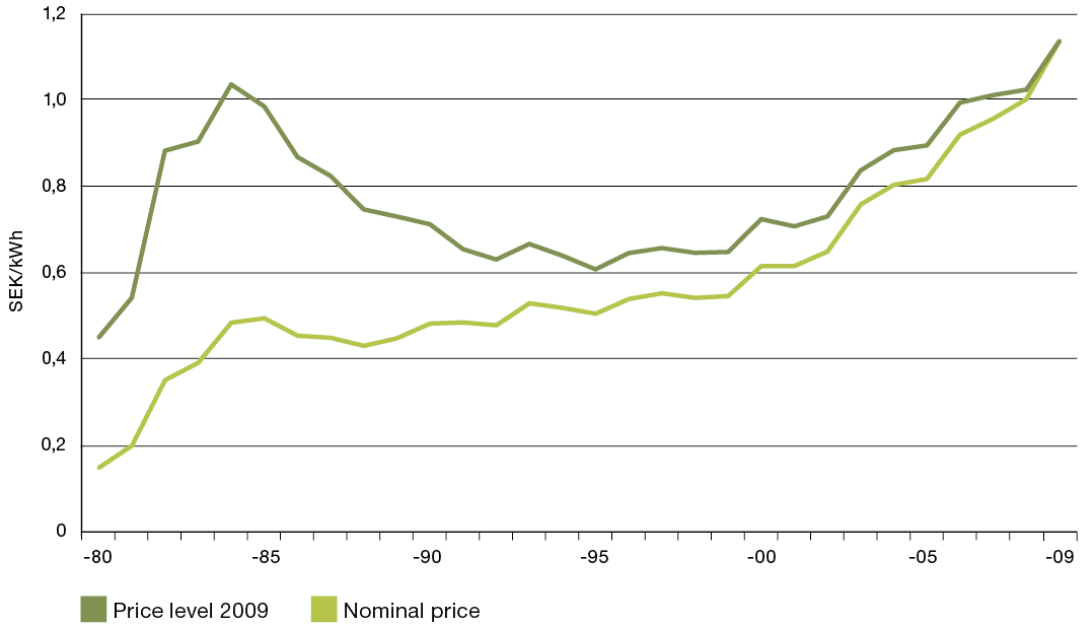
Source: Swedish Association of Pellet Producers

Figure 43 Actual commercial energy prices in Sweden, including tax, 1970-2009



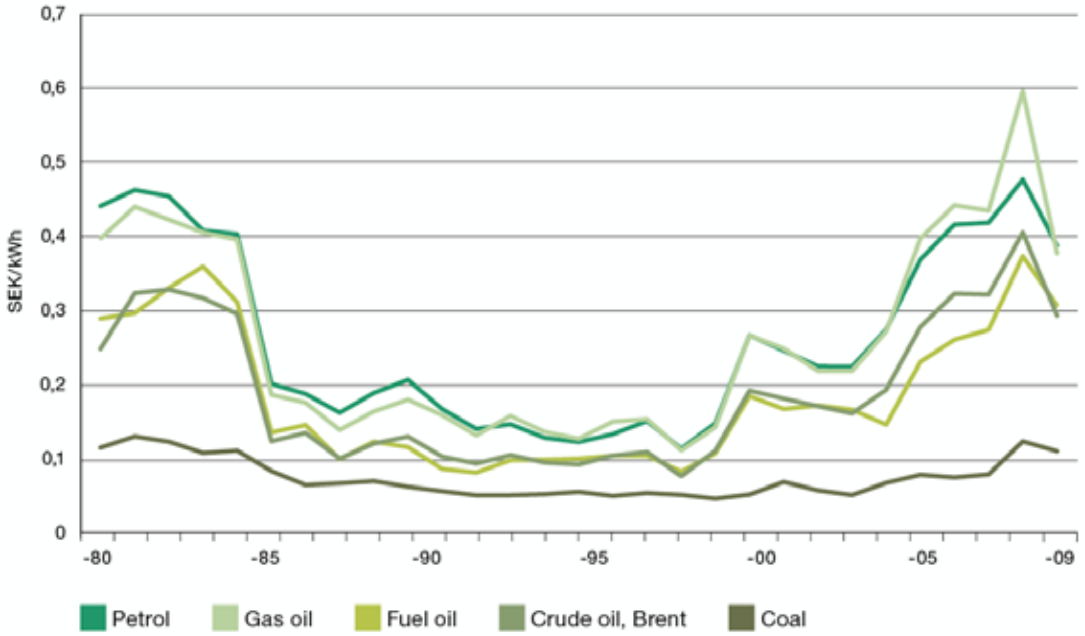
Source: Swedish Petroleum Institute, Statistics Sweden, Swedish Energy Agency and Eurostat.
Note: Unless outherwise stated, prices and taxes for 1993 are for supplies for non-industrial use. VAT is included in district heating, domestic electric heating and natural gas for domestic use.

Figure 44 Price of purchased energy (relative to 2009 price level)



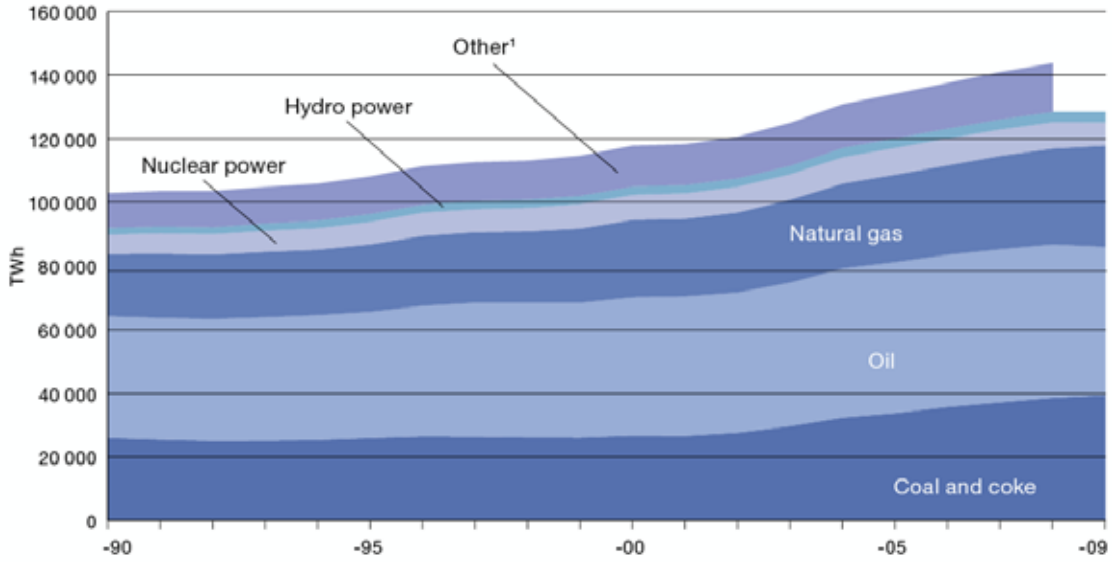
Source: Statistics Sweden, Bank of Sweden and IEA Energy Prices and Taxes.

Figure 45 Import price trends 1980-2009 (relative to 2009 price level)



Source: Statistics Sweden, Bank of Sweden and IEA Energy Prices and Taxes

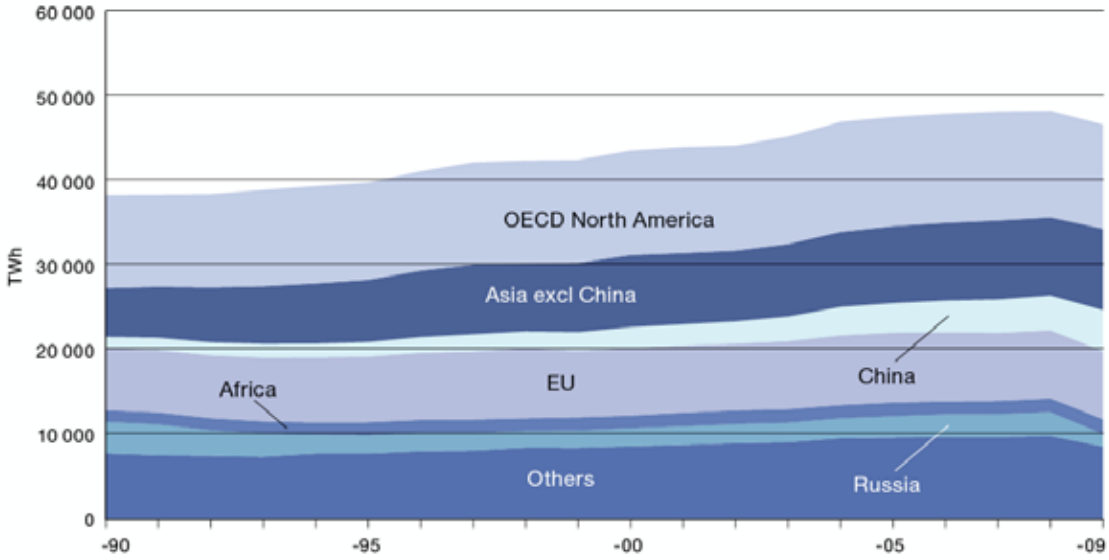
Figure 46 Total world energy supply, 1990-2009



Source: IEA Energy Balances of Non-OECD Countries, 2010 och BP Statistical Review of World Energy, 2010.

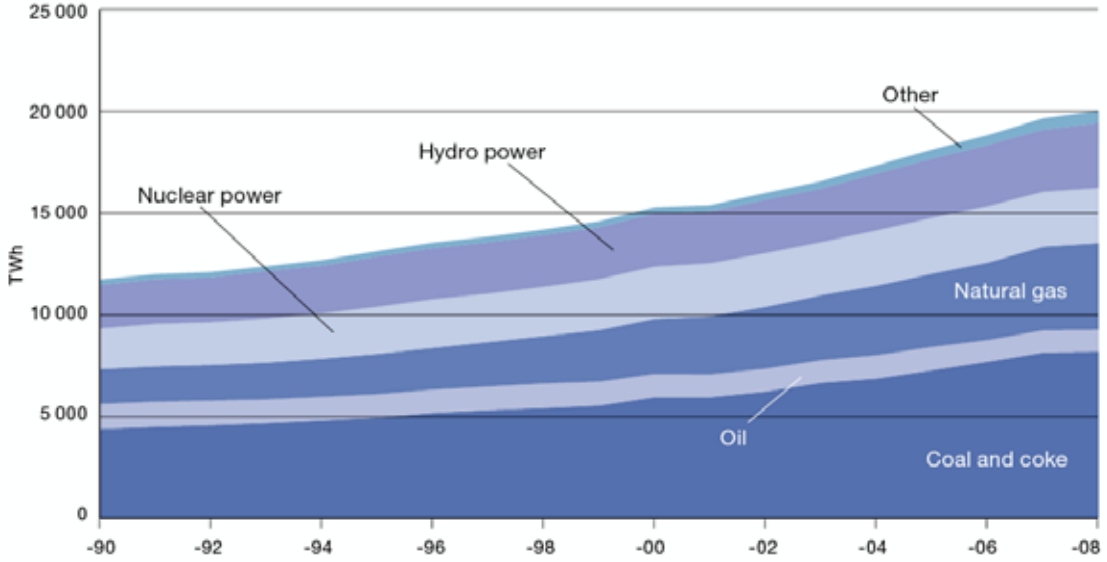
Note: 1. There is no statistics for renewable fuels year 2009.

Figure 47 Global supply of oil 1990-2009



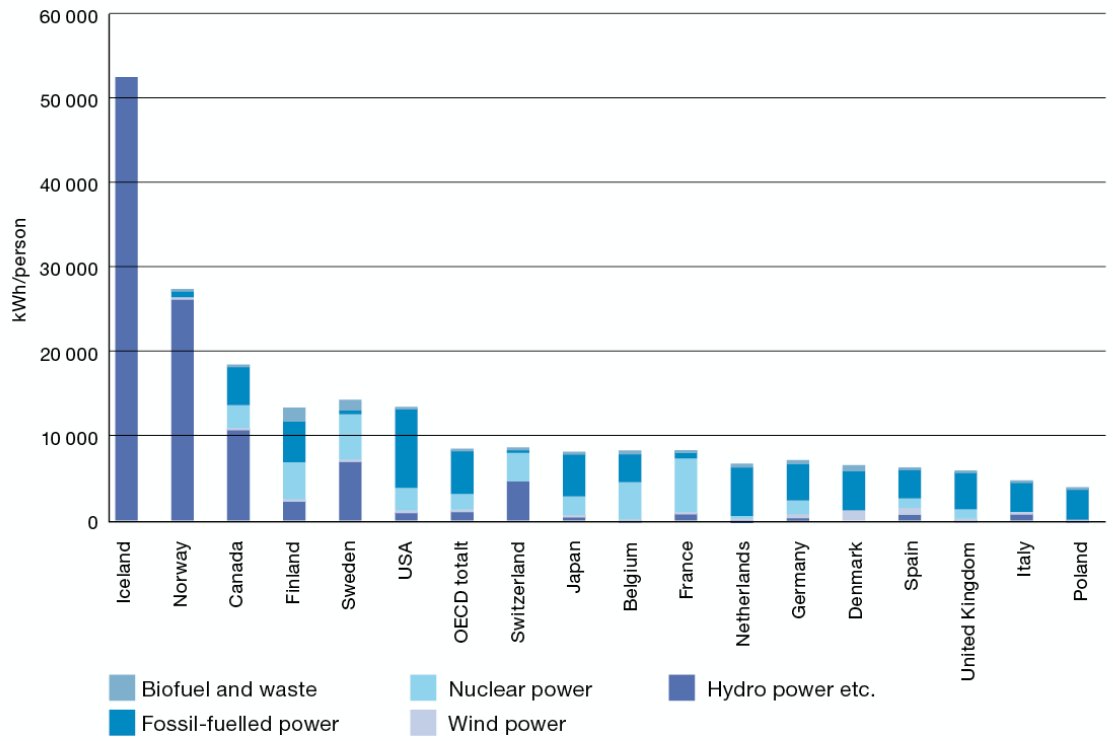
Sources: Energy Balances of Non-OECD Countries 2010, Energy Balances of OECD Countries 2010 and BP Statistical Review of World Energy, 2010.

Figure 48 World power generation by energy resource, 1990-2008



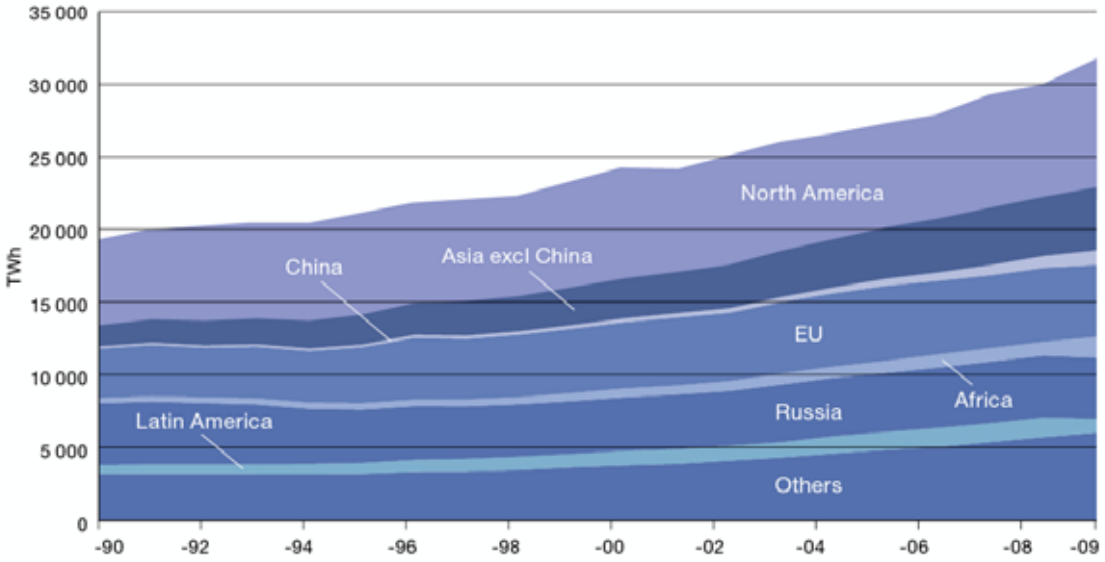
Source: IEA Energy Balances of Non-OECD Countries 2010.

Figure 49 Specific electricity production per inhabitant by power source, 2009



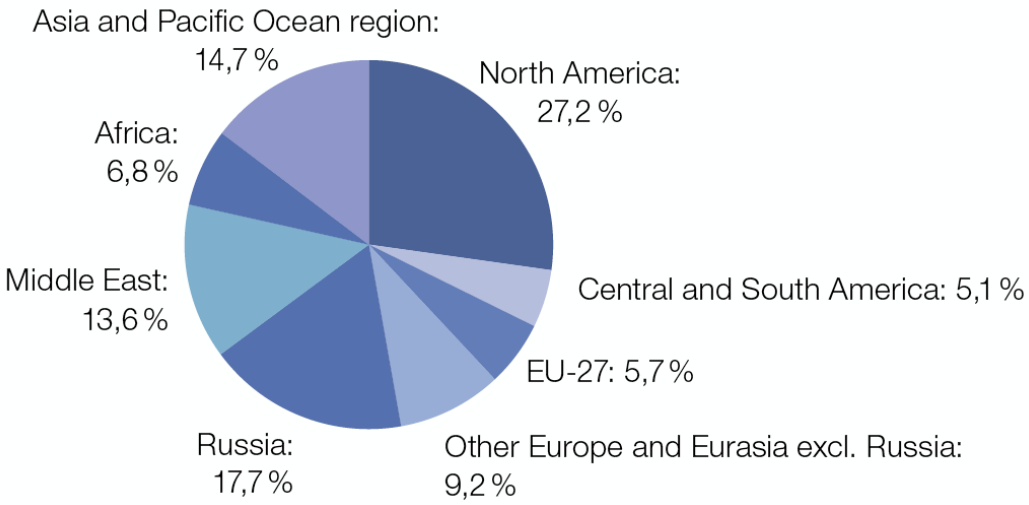
Source: Electricity information 2010 IEA/OECD.

Figure 50 Global supply of gas 1990-2009



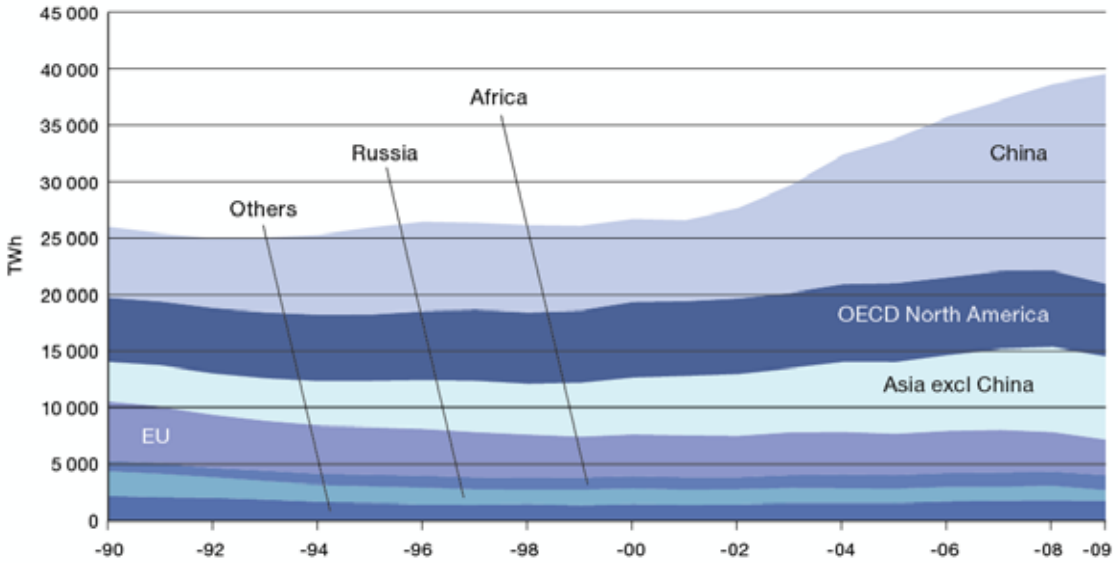
Sources: IEA Energy Balances of Non-OECD Countries, 2010, IEA Energy Balances of OECD Countries, 2010. For 2009, BP Statistical Review of World Energy, 2010.

Figure 51 World production of natural gas, 2009



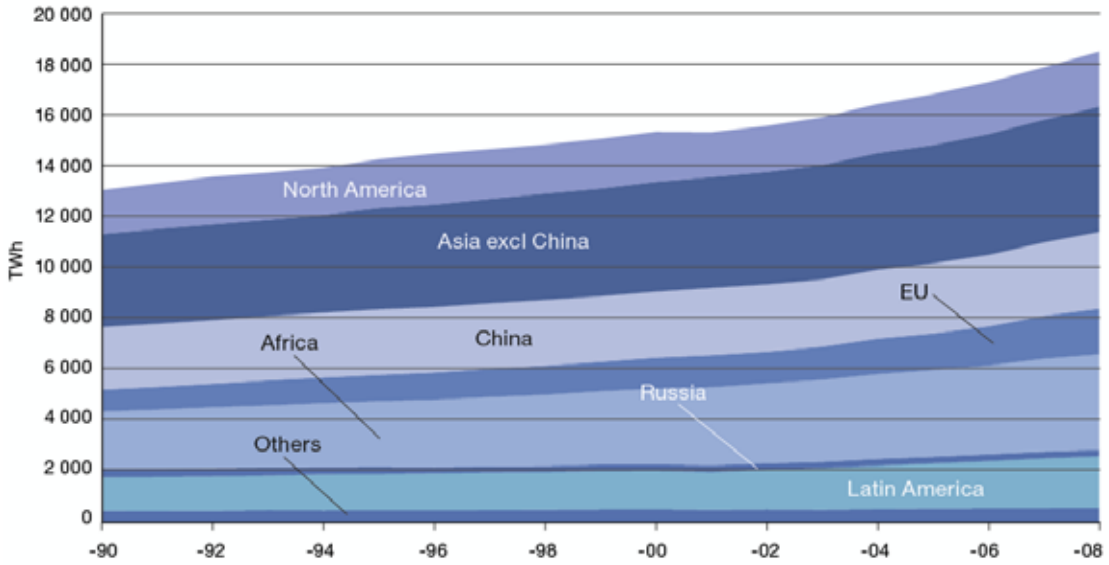
Source: The BP Statistical Review of World Energy 2010, www.bp.com

Figure 52 Global supply of coal 1990-2009



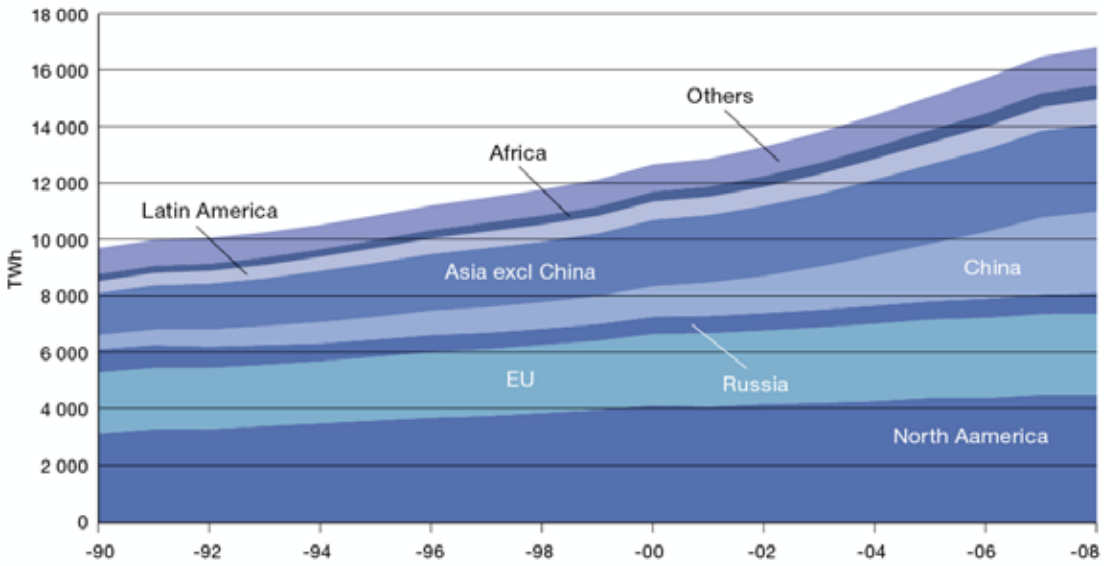
Source: IEA Energy Balances of Non-OECD Countries, 2010. IEA Energy Balances of OECD countries, 2010. For 2009, BP Statistical Review of World Energy, 2010.
Note: Revised figures relative to those shown in previous edidtion.

Figure 53 Global supply of renewable energy 1990-2008



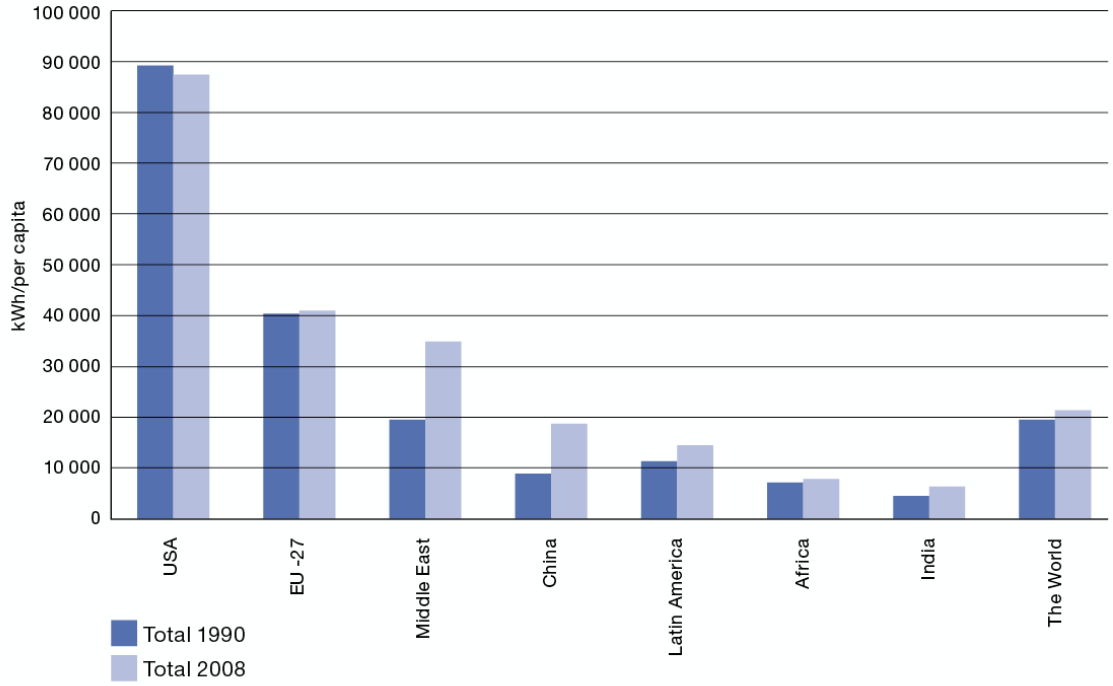
Source: IEA Energy Balances of Non-OECD Countries, 2010. IEA Energy Balances of OECD Countries, 2010.

Figure 54 World power use by region 1990-2008



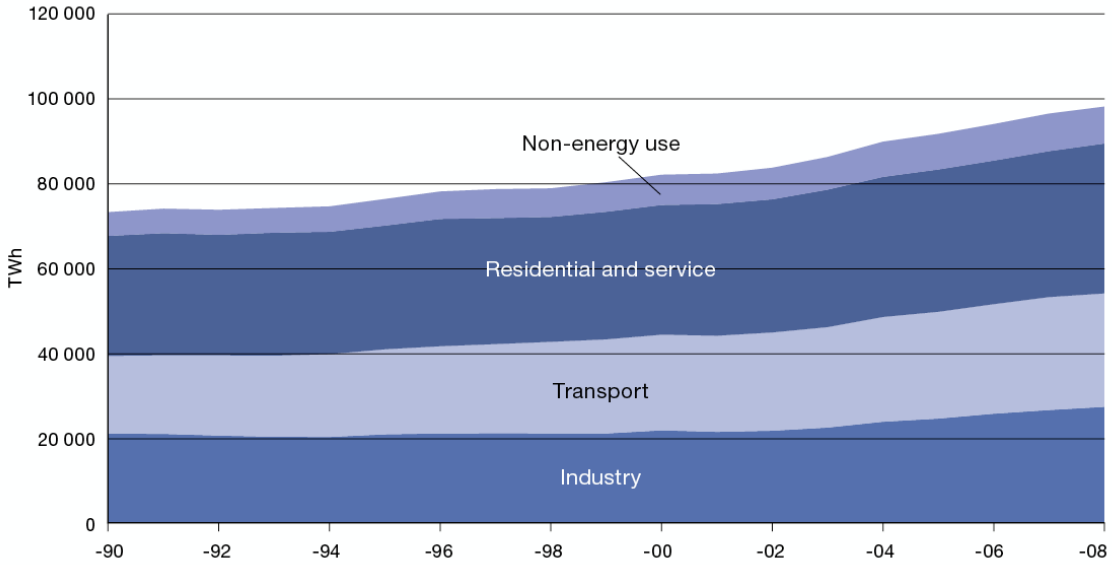
Sources: IEA Energy Balances of Non OECD Countries 2010, IEA Enegy Balances of OECD Countries 2010.

Figure 55 Regional energy use for 1990 and 2008



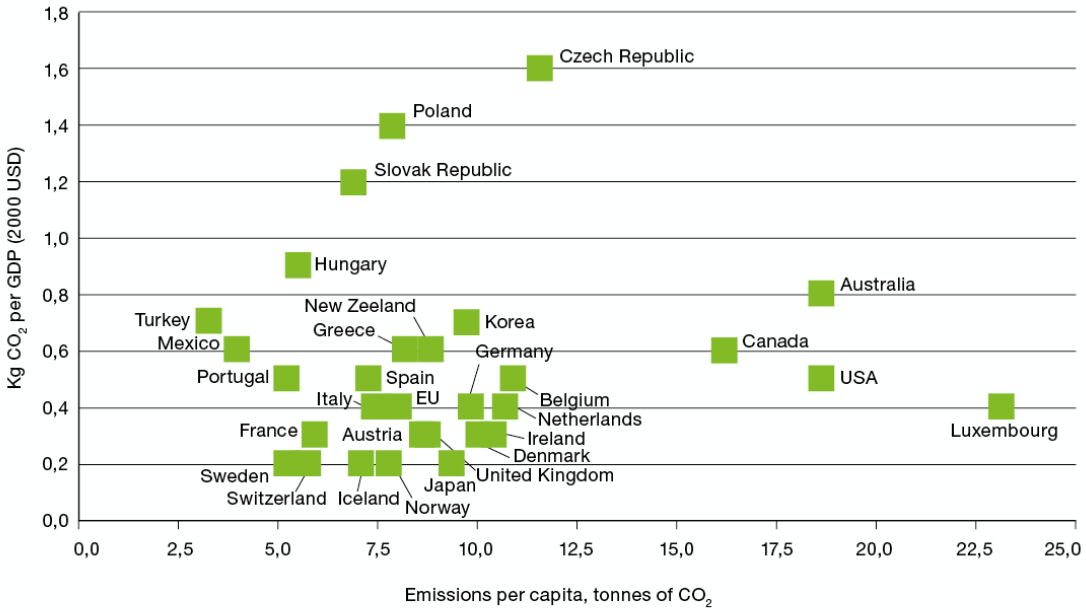
Sources: IEA Energy balances of Non OECD Countries 2010, IEA Energy Balances of OECD Countries 2010.
Note: Figures for all years have been revised relative to those shown in previous edition.

Figure 56 Total world energy use per sector 1990-2008



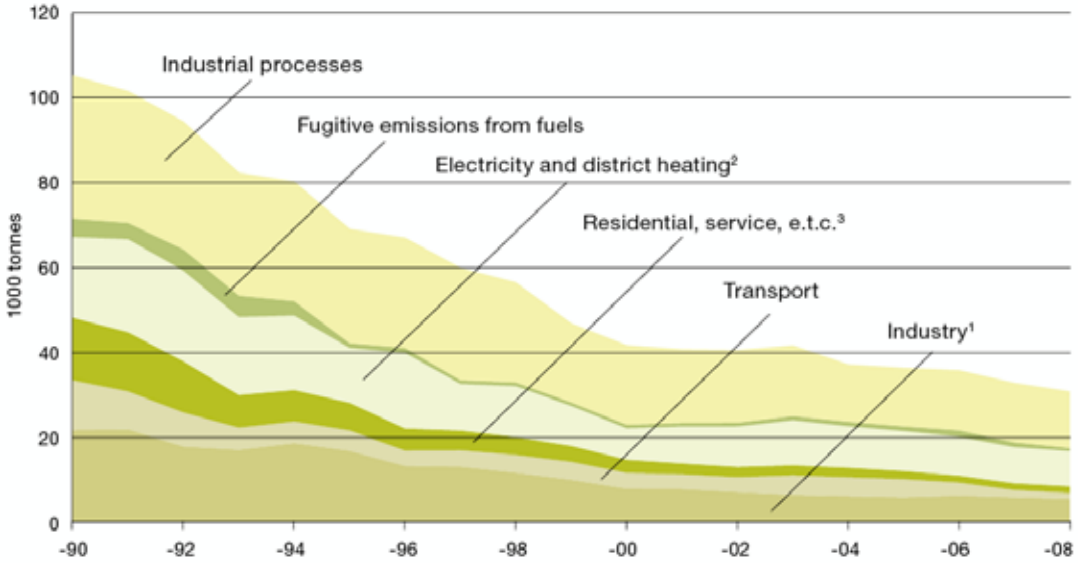
Source: IEA Energy Balances of Non-OECD Countries 2010, IEA Energy Balances of OECD countries 2010.

Figure 57 Emissions of carbon dioxide in total, per capita and per GDP in EU and OECD countries, 2007



Source: OECD in figures - 2009 edition.

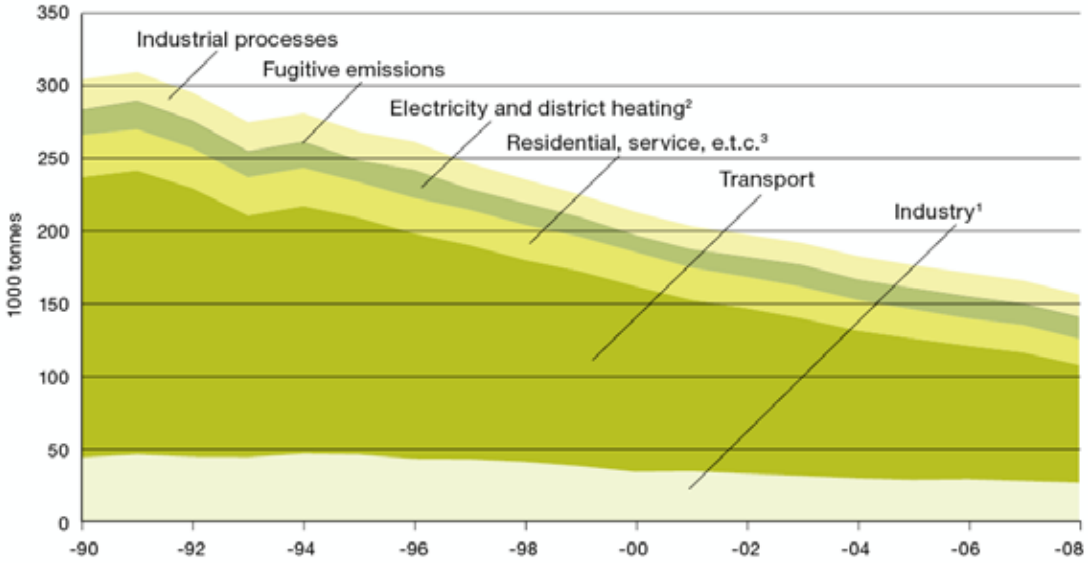
Figure 58 Emissions of sulphur dioxide (SO_2) in Sweden 1990–2008



Source: Swedens reporting to the UN CLRTAP, Swedish Environmental Agency 2010, Processed by the Swedish Energy Agency.

Note. Details are revised compared to earlier editions. 1. Including electricity production from industry and hazardous waste incineration. 2. Including coke-oven plants and and refineries. 3. Including agriculture, forestry and fishing.

Figure 59 Emissions of nitrogen oxides in Sweden 1990–2008



Source: Swedens report to the UN CLRTAP, Swedish Environmental Protection Agency 2010, Data processed by the Swedish Energy Agency. Note: Details are revised compared to earlier editions.
1. Including electricity production from industry and hazardous waste incineration. 2. Including coke-oven plants and refineries. 3 Inlcuding agriculture, forestry and fishing.

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