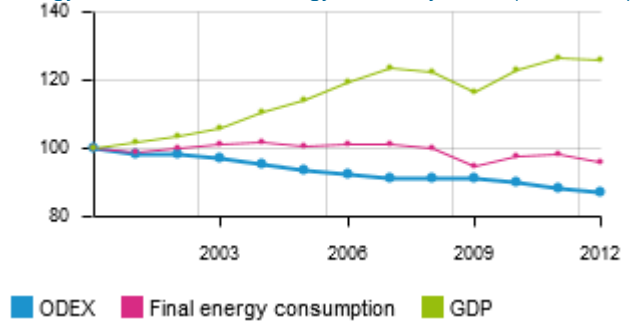


Energy Efficiency Trends

Overview

Final energy consumption in Sweden has shown some decline since the mid-1990s, while GDP has increased by more than 50 per cent in the same period. In 2008-09 there was a temporary drop in final energy consumption due to the sudden crisis, but the Swedish economy recovered remarkably quickly and has been on a growth path ever since while final energy consumption has remained stable.

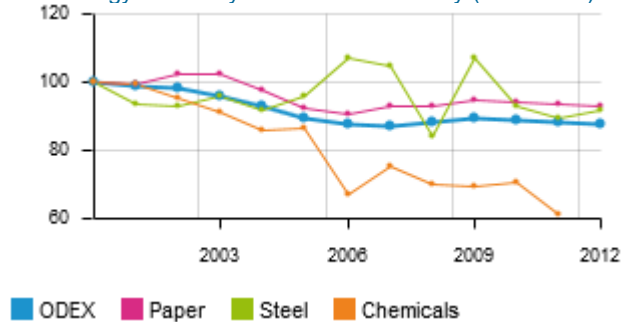
Energy cons., GDP and energy efficiency index (100=2000)



Industry

Swedish industrial production suffered from the decline in global demand in the years following the dip in 2008, but recovered in the following years.. The energy intensive pulp- and paper industry, in particular, is undergoing a phase of profound restructuring due to changing global consumption patterns. Between 2004 and 2012 there was a policy instrument in place targeting energy-intensive industry, which in exchange for an electricity tax waive required participating companies to carry out thorough measures for energy efficiency. This emphasis on energy efficiency in industry has played a significant part in keeping energy consumption stable despite relatively favourable global demand for Swedish industry products.

Main energy efficiency indicators in industry (100=2000)

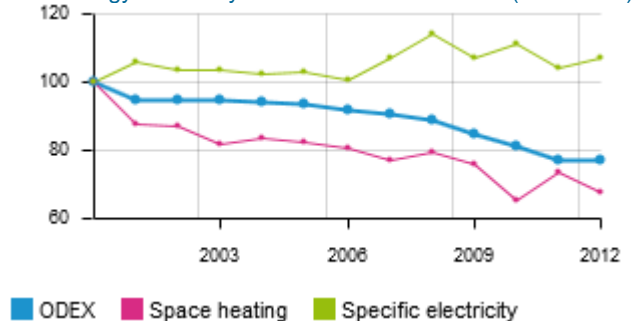


Chemicals : toe per unit of production index
Paper, steel: toe per tonne

Households

Stricter building codes together with active information by e.g. municipal climate and energy advisors have led to a downward trend in energy for space heating. One significant aspect is the very high penetration of heat pumps in Swedish single-family homes, which have reduced overall energy consumption of purchased energy, but increased the specific use of electricity.

Main energy efficiency indicators in households (100=2000)

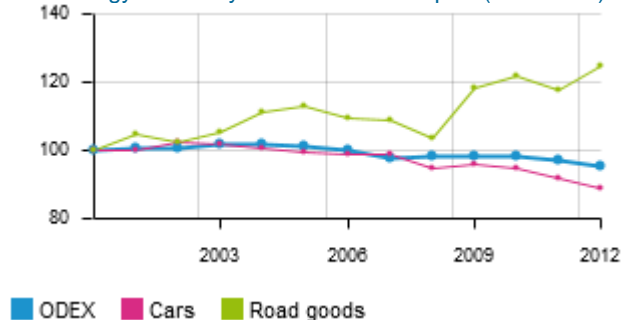


Space heating : koe per m2
Large electrical appliances: kWh per dwelling

Transport

Due to energy efficiency measures, energy use in cars has decreased over time albeit a positive growth in GDP. For road goods, the correlation to GDP is more significant although the energy use per unit has increased less than total energy use. This shows that some energy efficiency has taken place also in goods transports.

Main energy efficiency indicators in transport (100=2000)



Cars: litres per 100 km
Road traffic of goods (trucks): koe per tonne-km

Energy Efficiency Policy

Institutional and energy efficiency targets:

Sweden has a national target of reducing energy intensity of the economy with 20 per cent by 2020. The target is expressed as primary energy/GDP.

In the transport sector there is a target of a fossil-free vehicle fleet by 2030.

Following general elections in September 2014, a new government consisting of the social democrats and the environment party came to power. Simultaneously, several policy instruments for energy efficiency expired. As of autumn 2015 there is no decision on instruments replacing all of those expired.

Main energy efficiency policy measures and their impacts

Sector	Main objectives and measures	Impacts
Cross-sectoral	Energy and carbon dioxide tax, the purpose of which is a combination of reducing harmful emissions while promoting efficient use of all energy.	Significant impact on all sectors except for industry where impact is modest due to waiver for those participating in EU-ETS and some other arrangements.
Industry	Networks for sharing experience in energy efficiency.	No comprehensive results are available, but participating industries indicate successful knowledge-sharing.
Buildings	Building codes	As a result of gradually more stringent building codes over decades, the Swedish building stock is relatively energy efficient.
Transport	Municipal planning	Increasingly efficient use of municipal transportation fleet, such as vehicles for used for the needs of the elderly.
Public services	Municipal energy advisors	The services of the energy advisors has become well-recognized and has been developed in order to meet the needs for SMEs in addition to the general public.
Tertiary	Technology procurement groups.	The concept has spread to new groups, such as the most recent addition of food industry.