ODYSSEE-MURE

**Energy Efficiency Country Profile: Poland**

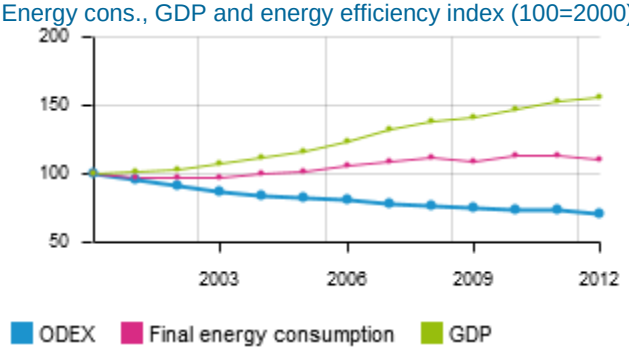
September 2015

# Energy Efficiency Trends

## Overview

Final energy consumption has risen by 15 percent since year 2000. Consumption tended to grow until year 2010 when it exceeded 65 Mtoe. Since then, final energy consumption was decreasing. Gross Domestic Product increased by 59 percent during that period (2000-2013). The average rate of growth amounted to 3.6 percent. ODEX indicator including service sector decreased from 100 points in 2000 to less than 74 points in 2013. The average rate of improvement amounted to 2.3%/year. The pace of improvement was higher in first half of the period.

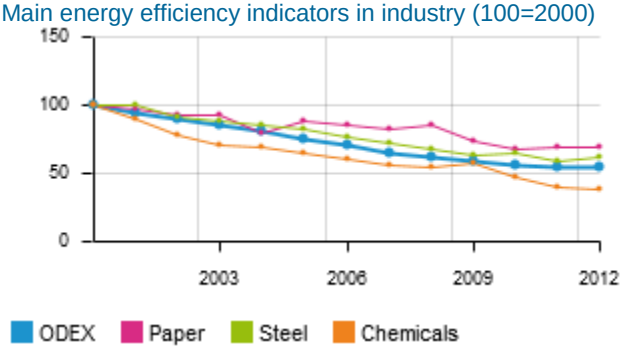
Energy cons., GDP and energy efficiency index (100=2000)




## Industry

Industry ODEX decreased from 100 points in year 2000 to less than 51 points in year 2013, what means average annual improvement of 5.1 percent. The improvement was observed in all sectors of industry. In case of three big energy consuming industries: paper, steel and chemicals, accounting for more than 40 percent of total industry energy different rate of improvement was observed. ODEX for chemicals fell slightly below 40 points, for steel amounted to 63 points and for paper to 79 points, after significant growth in 2013.

Main energy efficiency indicators in industry (100=2000)

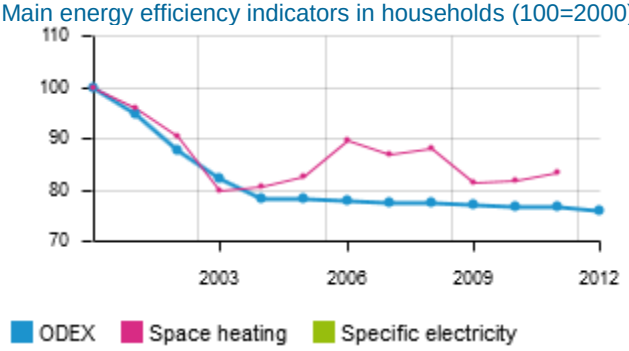



Chemicals : toe per unit of production index
Paper, steel: toe per tonne

## Households

Energy efficiency in households was rapidly improving in early years after 2000. The ODEX indicator declined from 100 in 2000 to 78 points in 2004. Since then the pace of improvement has fallen. In 2013 the ODEX indicator amounted to 76 points. In case of space heating indicator, we can see that after similar decline at the beginning of period, the indicator grew in subsequent years and has remained more or less above the total indicator. This difference reflects behavioral changes that can be connected to economic situation of households.

Main energy efficiency indicators in households (100=2000)

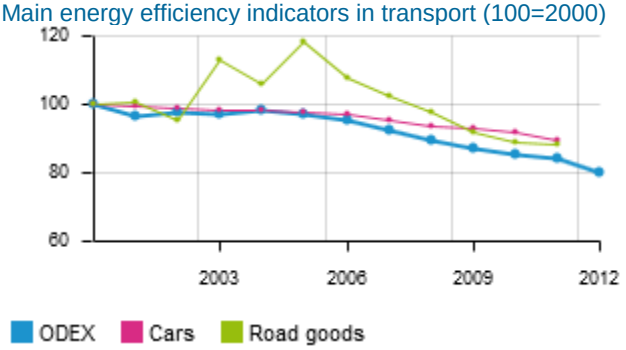



Space heating : koe per $m^2$
Large electrical appliances: kWh per dwelling

## Transport

Energy efficiency indicator in transport declined to 78 points in 2013, 1.9%/year. Energy efficiency in cars improved by 6 percent in years 2000-2013. Efficiency trends in transport of goods shaped different. After the decline in efficiency lasting until 2005 the period of rapid improvement was observed. The rate of improvement amounted to 7.8% per year, with very high level of improvement in years 2012 and 2013.

Main energy efficiency indicators in transport (100=2000)




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

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# Energy Efficiency Policy

## Institutional and energy efficiency targets:

Pursuant to Directive 2012/27/EU, a national energy efficiency target for 2020 was set as the achievement of primary energy consumption reduction by 13,6 Mtoe in the years 2010-2020, which in the conditions of economic growth also means an improvement of energy efficiency of the country economy. The target was also expressed in terms of an absolute level of primary energy consumption in 2020, which is 96,4 Mtoe and final energy consumption - 71,6 Mtoe. Poland has made s significant progress on the way to meeting its national target in the field of energy efficiency improvement, i.e. achieving, by the 2016, the final energy savings of no less than 9% of the average national final energy consumption in 2001-2005.

Top down calculations showed achieved 4,24 Mtoe energy savings in 2010 that is equivalent of 8,3% of average consumption from 2001-2005. The respective values for 2013 are 9,626 toe and 18,8%. ODEX calculations show energy savings of 3,284 Mtoe in 2013 assuming 2010 as a base year.

The Third National Energy Efficiency Action Plan (2014) is summarizing undertaken measures and up to date energy efficiency improvements of national economy and its sectors. New and existing measures and policies concerning different sectors are in details provided.

## Main energy efficiency policy measures and their impacts

| Sector | Main measures | Impacts |
|---|---|---|
| **Cross-sectoral** | Energy efficiency improvement scheme (White Certificates) under the Energy Efficiency Law.<br>The priority programme "Smart Power Grids";<br>Operational Programme Infrastructure and Environment 2014-2020 (Investment Priority 4.iv.) – Development and implementation of smart distribution systems at average and low voltage levels;<br>Information and educational campaigns;<br>Operational Programme Infrastructure and Environment 2014-2020;<br>Regional Operational Programmes 2014-2020. | White certificates - in the 2NEEAP, the expected primary energy savings were estimated at 2,2 Mtoe. First tender brought result at 79,58 ktoe yearly savings, the second – 57,180 ktoe and third 149,886 ktoe. |
| **Industry and Small Medium Business** | Support to entrepreneurs focused on low-emission economy and resource-efficient economy Part 1 – Energy/Electricity audits of enterprise;<br>Support to entrepreneurs focused on low-emission economy and resource-efficient economy Part 2 – Increasing energy efficiency;<br>Access to financial instruments dedicated to SMEs (PolSEFF);<br>Improvement of energy efficiency, Part 4 – Energy saving investments in Small and Medium Business;<br>Operational Programme Infrastructure and Environment (Measure 9.1) - Highly efficient power generation;<br>Operational Programme Infrastructure and Environment (Measure 9.2) - Efficient energy distribution;<br>Operational Programme Infrastructure and Environment 2014-2020 (Investment Priority 4.ii.) – Promoting energy efficiency and usage of renewable energy sources in enterprises. | |
| **Buildings, including public** | Thermal modernisation fund (of budget 1999-2014 equal 1,885 billion PLN and achieved finally in 2014 energy costs savings over 0,8 billion PLN per year).<br>Green Investment Scheme. Part 1 – Energy management in buildings of selected public sector entities;<br>Operational Programme Infrastructure and Environment 2014-2020 (Investment Priority 4.iii.) – Supporting energy efficiency, intelligent energy management and use of renewable energy source in public infrastructure, including public buildings and residential sector;<br>Improvement of energy efficiency, Part 3 - Subsidized loans to build energy-efficient homes;<br>Operational Programme PL04 "Saving energy and promoting renewable energy sources" in Financial Mechanism EOG in years 2009-2014 (area no. 5 - energy efficiency and area no. 6 – renewable energy sources);<br>Green Investment Scheme, Part 5 - Energy management in buildings of selected public sector entities;<br>Efficient use of energy (Part 4 - LEMUR) - Energy-efficient public utility buildings;<br>Operational Programme Infrastructure and Environment (Measure 9.3) – Thermal modernisation of public utility buildings;<br>Efficient use of energy (Part 6 – SOWA) – Energy - efficient street lighting systems. . | |
| **Transport** | Operational Programme Infrastructure and Environment 2007-2013 (Measure 7.3) – City transport in metropolitan areas and (Measure 8.3) – Development of intelligent transport systems; | |

Green Investment Scheme (Part 7 - Gazela) - Low-emission urban transport.