

INDUSTRIAL ENERGY CONSUMPTION

INDUS 1

Historically energy-intensive, Walloon extractive and manufacturing industry saw its final energy consumption drop sharply in the 2000s. The economic crisis and in particular its impact on the steel industry from 2009 onwards accelerated the transformation of Walloon industry towards less energy-intensive sectors. Industry, with 36% of total consumption⁴, nonetheless remained the leading final energy consumer sector in Wallonia in 2014.

Decoupling of industrial needs

In 2014, the final energy consumption of the extractive and manufacturing industry was 43 TWh compared to 76 TWh in 1990. More than 90% of the consumption was for energy use (combustion), the remainder being used as raw materials in manufacturing processes. The four sectors with the highest energy consumption in 2014 were non-metallic minerals (36%), chemicals (23%), steel (12%) and food (11%). Since 1990, energy consumption per unit of wealth produced² has fallen sharply. This evolution is the result, firstly, of the decline in energy-intensive sectors accompanied by the development of industrial activities with high added value and lower energy consumption and, secondly, an improvement in the energy efficiency of firms, encouraged in particular by branch agreements.

The effects of the crisis on the steel industry

A major factor explaining the drop in energy consumption is the decline of the Walloon steel industry. In 2000, this sector accounted for 45% of final energy consumption in the extractive and manufacturing industries. Energy consumption by the steel industry fell almost constantly between 2000 and 2008, falling by 71% between 2008 and 2009. While energy consumption accompanied the fall in production, it should be noted that this sector also recorded an improvement in its energy efficiency thanks to the development of the electricity process, which is less energy-intensive, at the expense of the oxygen process³.

Solid fuels declining, alternative energies on the up

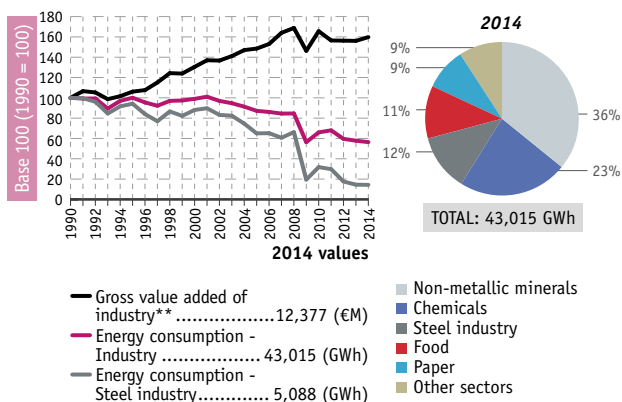
The energy mix used by industry has also changed significantly, which has had an impact on the sector's air pollutant emission levels⁴. Natural gas has been the most widely used energy resource since 2004 and accounted for one-third of the industry's final energy consumption in 2014. Accompanying the developments in the steel sector, consumption of solid energy excluding biomass (coal, lignite, etc.) fell by 85% between 1990 and 2014 and accounted for 12% of final consumption in 2014. At the same time, alternative energies⁵ increased by 66% and accounted for 23% of energy consumption in 2014, a level similar to that of electricity, which rose slightly over the period (+6%).

Sector policies

Since the early 2000s, Wallonia has mainly focused its energy efficiency policy in the industrial sector on voluntary agreements, referred to as branch agreements⁶. These agreements have been renewed (second generation) for the 2014-2020 period with the main industrial federations. The Marshall Plan 4.0 envisages the extension of this principle to small and medium-sized enterprises and micro-enterprises, by simplifying it and accompanying it with financing.

[1] Including non-energy uses | [2] → ENER 2 | [3] Electric steel is produced from recycled materials, while oxygen steel is produced from processed minerals using blast furnaces. | [4] → INDUS 2 | [5] Renewable, from cogeneration and industrial waste, particularly in cement plants | [6] → INDUS 7

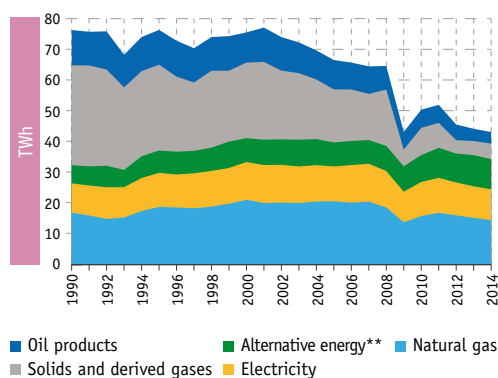
Fig. INDUS 1-1 Final energy consumption* of industry in Wallonia



* Including non-energy uses
** Excluding price changes

SOERW 2017 – Source: SPW - DG04 - DEBD (energy balances);
FPB, BISA, IWEPS, SVR (HERMREG model)

Fig. INDUS 1-2 Final energy consumption* of industry by source in Wallonia



* Including non-energy uses
** Renewable, from cogeneration and industrial waste

SOERW 2017 – Source: SPW - DG04 - DEBD (energy balances)