

ELECTRICITY AND HEAT FROM COGENERATION

Cogeneration is the recovery of heat released during the generation of electricity (or motive power) to heat a building or provide input for an industrial process. This process makes it possible to improve energy efficiency and make best use of primary energy sources, including renewable energies.

Production from cogeneration on the rise

In 2014, Wallonia generated close to 2,093 GWh of net electricity and 6,245 GWh of heat from cogeneration, from 11,556 GWh of primary energy¹. Between 1997 and 2014, the total amount of heat and electricity produced by cogeneration units increased by 74%. The electricity and heat produced from renewable sources experienced the largest increases with respectively 9.8 times and 2.8 times more energy produced in 2014 than in 1997. Conversely, heat production from fossil fuels had fallen back to its 1997 level by 2014.

Numerous stakeholders involved

The production of cogeneration units comes mainly from private companies (self-producers), with public generation² accounting for 35% of electricity and 12% of heat from cogeneration in 2014. Although the tertiary, residential and agriculture sectors have a relatively large number of plants (87, 31 and 15 respectively in 2014), the most powerful cogeneration units are located in industrial establishments, particularly in the paper and cardboard, chemical and agri-food sectors, which together accounted for nearly 80% of all electricity and heat production from cogeneration in 2014.

Increase of renewables in primary energy sources

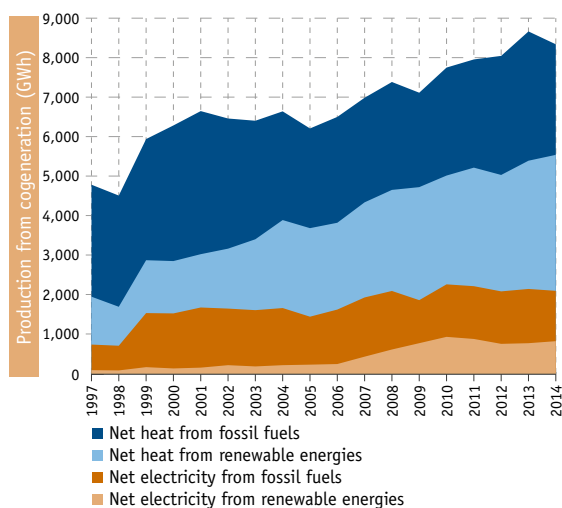
Cogeneration makes it possible to make better use of energy resources and limit atmospheric emissions of certain pollutants (particularly CO₂) compared to the separate generation of electricity and heat. This process also contributes to the development of renewable energies, since they make up a significant proportion of the primary energy used. In 2014, 54% of the energy used as inputs in cogeneration units was renewable, making it the leading fuel used ahead of natural gas (38%). The energy mix changed significantly between 1998 and 2014. While the primary sources used in 1998 included blast furnace gas or heavy fuel oil, the primary energy mix used in 2014 was almost exclusively made up of renewable fuels and natural gas.

Measures to promote the development of the sector

Cogeneration policies aim both to develop quality (certified) cogeneration and to promote the use of renewable energies. In order to meet these objectives, various tools have been put in place by the Walloon authorities³: green certificates, (micro) subsidies, tax incentives, facilitators, research and development programmes, etc.

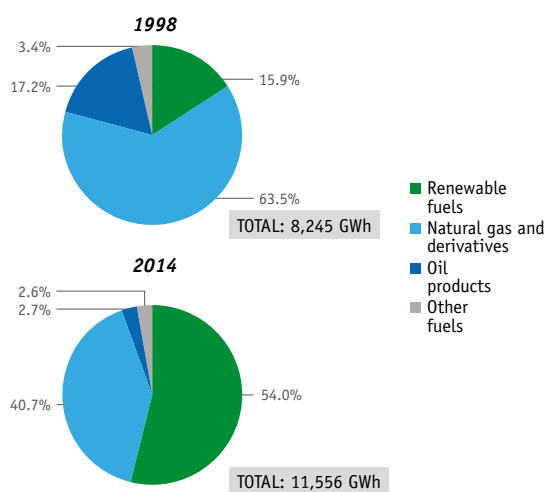
[1] → Maps 14 & 15 | [2] Including partnerships between public producers and self-producers | [3] More information at <http://energie.wallonie.be>

Fig. ENER 3-1 Energy production from cogeneration units in Wallonia



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

Fig. ENER 3-2 Fuel consumption used in cogeneration in Wallonia



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