

Building material sector challenged by soaring energy prices

Energy price hikes are an enormous burden for building material firms as many are very energy-intensive. In this article, we analyse how vulnerable building material suppliers are to changing energy prices in several EU countries



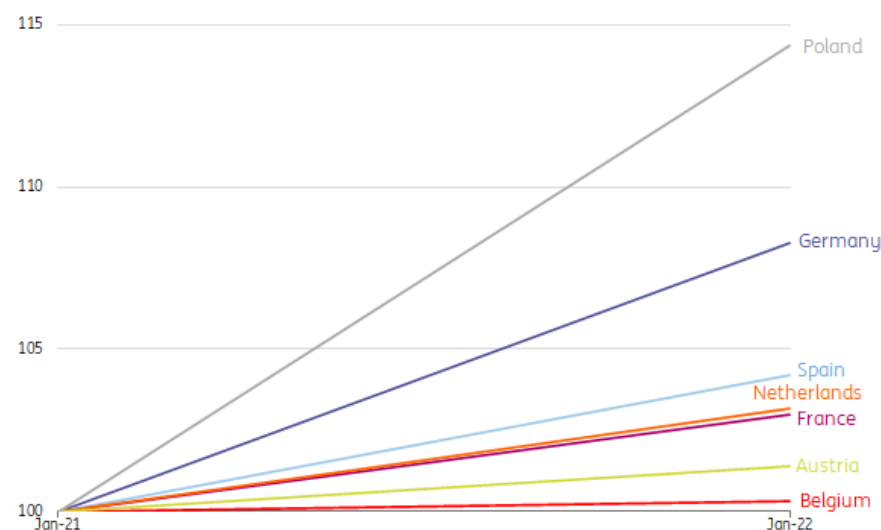
A lot of energy is needed for the production of bricks, cement and concrete

Production volumes increased during the winter

Energy prices (especially gas and electricity) have been soaring for a while. However, this hasn't been a reason for building material suppliers to scale down their production. On the contrary, in many countries production levels in January were well above those of a year earlier. In Poland, the production volume increased by more than 10% and in Germany by 8%. In France, Spain and Germany, volumes have also increased but to a lesser extent.

Increasing building material production volumes despite higher energy prices

Volume production building materials (Index Jan 2021=100 SA)



Source: Eurostat, ING Research

No major scale downs were planned in February

According to the European Commission business survey, a large majority of EU building companies were expecting to further increase output in February. The percentage of companies planning this has been quite stable over the last couple of months. In previous articles ([The ripple effects of soaring energy prices](#) and [Building material prices to remain high until at least the middle of next year](#)) we argued that high energy-intensive building materials (eg. concrete, bricks and cement) are less vulnerable to volatile input prices. It also depends on the hedging strategy of companies. Specifically, some large suppliers of construction companies have bought their energy inputs in advance. For instance, Austrian brick maker Wienerberger recently mentioned in the Financial Times that it has already purchased 90% of its gas for 2022.

But the Russia-Ukraine crisis could change that

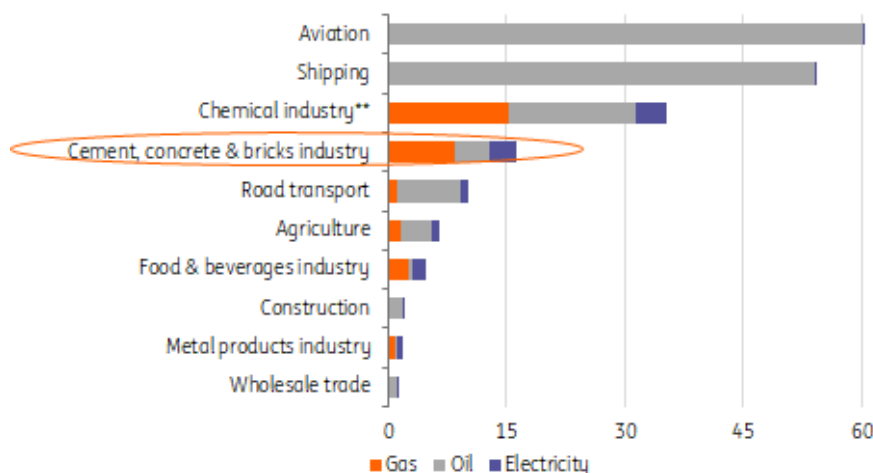
Nevertheless, current skyrocketing energy prices (especially gas and electricity), or even an interruption of Russian gas and oil supply, will harm building material companies. This can result in lower production levels when costs are increasing too much. Below, we analyse how vulnerable building material suppliers are to changing energy prices in several EU countries.

Building material production: energy and especially gas-intensive

A lot of energy is needed for the production of bricks, cement and concrete. This makes the building material industry one of the most energy-intensive sectors after aviation, shipping and the chemical industry. In addition, many building material firms use a large amount of gas in their energy mix compared to other energy-intensive sectors. This makes this sector particularly vulnerable to an interruption of Russian gas supply.

Building material industry is energy and gas-intensive

Use of terajoule energy per €1m value added output, EU-27 in 2018*



Source: Eurostat, ING Research

*Latest data available, **Estimate

Various energy mixes in countries

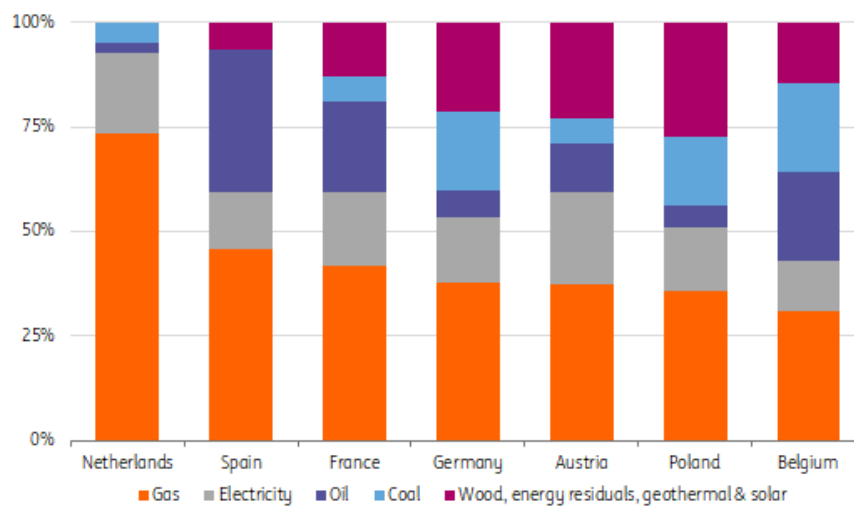
Not all building material companies use the same energy source. It is far more diverse than for instance in the transport sector. Besides gas, electricity and oil and (to a lesser extent) coal are also often used sources. The amount varies per country. The Dutch building material sector has the least diverse energy mix. Almost 75% of the used energy is gas, which makes Dutch cement, bricks and concrete companies the most exposed companies to gas price volatility.

Gas counts for about 40% of energy use

Building material sectors in other countries have more mixed energy use. However, in general, gas counts for about 40% of energy use. Belgium and Polish concrete, cement and bricks firms use on average the least amount of gas. They rely more on oil and coal. German firms have the largest amount of alternative energy sources such as wood, energy residuals and solar.

Dutch building material companies are very dependent on gas

Used energy sources in terajoule in the cement, concrete and brick industry, 2019



Source: Eurostat, ING Research

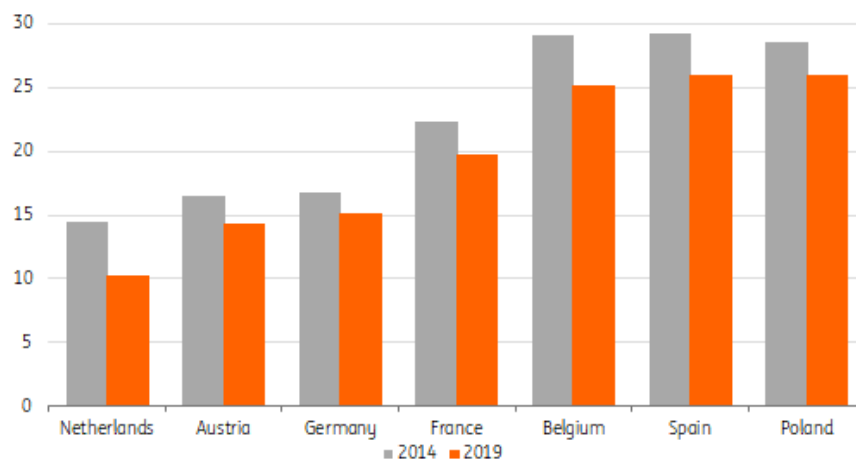
Energy intensity between building material suppliers differs

Not only is the amount of gas in the energy mix important in terms of a company's vulnerability to energy prices, but the energy intensity of the company also matters. This varies among countries and could also be explained by a composition effect. In Belgium, Spain and Poland, energy use in the building material industry in terajoule per unit output is high. Dutch and Austrian building material firms use the least terajoules per unit output. That makes corporations in these countries less vulnerable to energy price hikes.

An interesting point to note is that the building material sector in all the seven countries that we analysed became more energy-efficient between 2014-19. This makes them less dependent on energy prices and more sustainable. In addition, there has been a clear shift to biomass and renewables. For instance, in Germany, the share of renewables increased from 5% to 21% in this period.

Spanish, Belgium and Polish building material companies are the most energy intensive

Use of terajoule energy per €1m value added output in cement, concrete and brick industry



Source: Eurostat, ING Research

A trade-off between energy intensity and energy mix

Hence, the impact of soaring energy prices depends on the energy intensity of the building material sector and the specific energy source, as gas and electricity prices have faced the highest price increases up to this point. Some countries (for example, Belgium and Poland) make less use of oil and gas for the manufacturing of building materials but use a relatively large amount of energy. By comparison, Dutch building material plants are mainly heated by gas but are very energy efficient compared to other countries. Spain, and to a lesser extent France, have the worst of both worlds. They depend mainly on price popping energy sources and need to use a lot of these resources as they are relatively energy inefficient.

Author

Maurice van Sante

Senior Economist Construction & Team Lead Sectors

maurice.van.sante@ing.com

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