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**REPORT FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE
COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE
COMMITTEE OF THE REGIONS**

Energy prices and costs in Europe

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3 Oil product prices

Main findings

- After three and a half years of relative stability, crude oil prices started to fall in mid-2014, driven by robust supply growth and relatively weak demand. At the beginning of 2016, Brent dropped to 26 USD/bbl, the lowest level since 2003. Since then, prices recovered and since June 2016 Brent has been trading in the 40-50 USD/bbl range.
- Expectations of the global oil market reaching a balance have been pushed back to 2017, although the agreement of OPEC countries reached in September 2016 to cut output may hasten rebalancing. In any case, high stock levels suggest that prices will remain subdued throughout 2016 and 2017. In the longer run, a shortfall in investment is likely to lead to tighter markets and higher prices.
- The crude oil price is the main driver for the development of the wholesale prices of oil products although other factors, like the supply-demand situation in the specific oil product market, refinery maintenance or seasonality can also influence the prices.
- In addition to the crude oil price, the retail price of oil products is also influenced by the costs of refining and distribution, variations in exchange rates (crude oil is traded in US dollar but the finished products are sold at the pump in euros or other national currencies) and tax rates. In fact, the share of crude oil in the final price can be as low as 25% and, therefore, variations in the price of crude oil have a limited impact on the price at the pump.
- In 2014-2015, the high share of taxes, the weakening of the euro and – in part of the Member States – the increasing excise duty rates moderated the pass-through of falling oil prices to the retail prices of oil products in Europe. In 2015, the tax component of the average gasoline and diesel price was 63% and 57%, respectively.

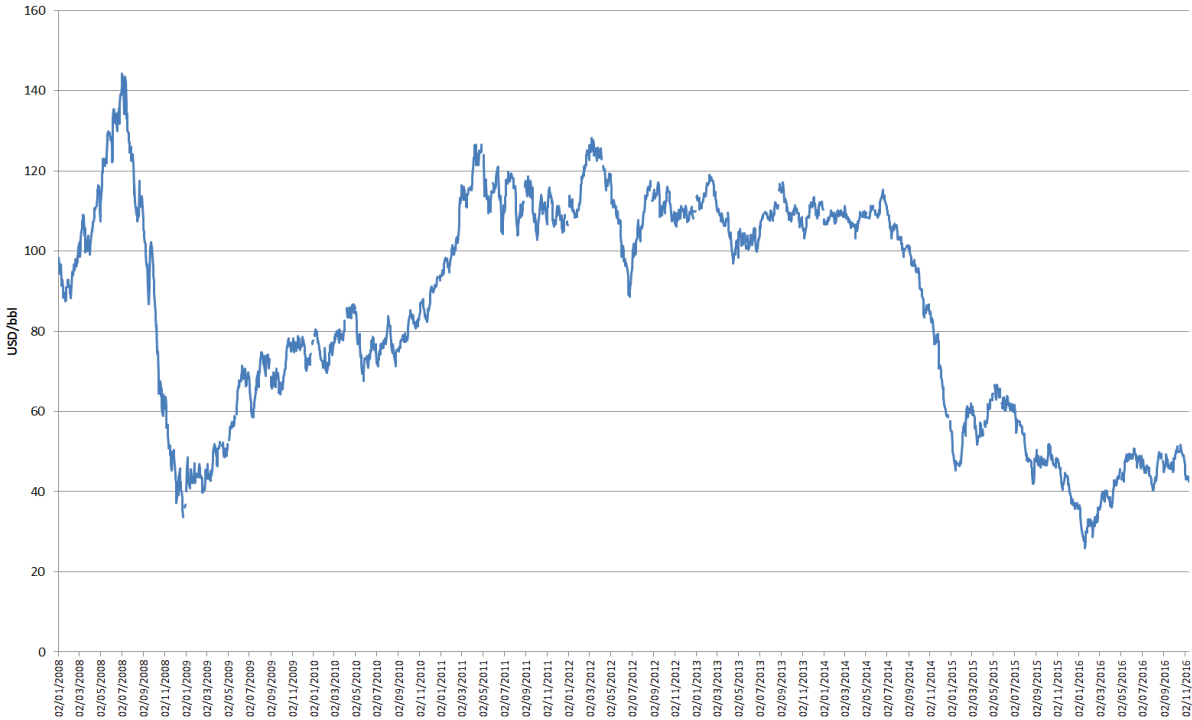
3.1 Crude oil prices

Crude oil prices reached unprecedented levels in 2008, exceeding 140 USD/bbl at the height of the "commodity super cycle" which was driven by the rising demand from emerging markets, particularly China. The price increase was interrupted by the financial crisis, with a sharp downturn in the second half of 2008. However, as demand recovered, prices began to rise again and crossed the 100 USD/bbl level again in early 2011. This was followed by three and a half years of remarkable price stability, with Brent rarely leaving the 100-120 USD/bbl range.

Crude oil prices have been on a declining trajectory since mid-2014, driven by weak demand and robust supply growth. In the first half of 2015, prices bounced back as the falling number of active rigs in the US and the news about oil companies cutting upstream spending have raised expectations that supply growth could soon ease. However, as the global market remained oversupplied, prices continued to decrease. From a 115 USD/bbl peak in June 2014,

Brent dropped to 26 USD/bbl on 20 January 2016, its lowest level since 2003. This means the price decreased by 77% in 19 months. By June, prices recovered to around 50 USD/bbl and, since, then, have been trading in the 40-50 USD/bbl range.

Figure 105 - The Brent crude oil price from 2008



Source: Platts

Weak demand growth

Global oil demand growth has significantly weakened in 2014, mainly because of lower than expected global economic growth and mild winter temperatures. In addition to these cyclical and one-off factors, we can also see deeper underlying changes in oil demand: energy efficiency measures such as CO2 standards for cars are increasingly implemented throughout the world and are starting to have an effect on global demand.¹ The high oil prices of the past decade have also supported a switch to other sources of energy and structural changes in the economic activities.

China remains the main contributor of global demand growth but its demand growth has noticeably slowed down as the country is entering a less oil-intensive stage of development. Concerns over China's growth prospects – in the wake of the stock market turmoil, followed by the devaluation of the yuan in August 2015 – also contributed to the falling oil prices.

¹ According to the IEA's 2015 World Energy Outlook, the coverage of mandatory energy efficiency regulation expanded to 27% of global energy consumption in 2014.

Global demand growth gained momentum and reached a five-year high in 2015 (+1.8 mb/d according to the IEA), helped by economic growth and the lower prices. 30% of the growth was coming from OECD countries and, unusually, even Europe registered a demand growth.

Although the macroeconomic backdrop is expected to improve in 2016 (the IMF, in its January 2016 World Economic Outlook, cited global economic growth rising to 3.4% in 2016 and 3.6% in 2017, from 3.1% in 2015), the IEA forecasts global oil demand growth to slow down to 1.2 mb/d. Almost all of this growth will come from the non-OECD countries. The support provided by low oil prices to demand in 2015 seems to fade away. In fact, several countries wisely used this opportunity to cut or reduce subsidies which curbs their demand outlook.

Robust non-OPEC supply growth

According to the IEA, non-OPEC output grew by a robust 2.5 mb/d in 2014, well above the increase of global demand. The better part of this growth, 1.9 mb/d, came from OECD countries, driven by increasing unconventional oil production in North America. In the last few years, US light tight oil and Canadian oil sands created an important new source of supply. (Production of light tight oil picked up well before 2014, but this additional supply was largely offset by supply disruptions and outages, mainly in Libya and Iran.)

Low oil prices undeniably have an impact on supply: they have prompted the oil industry to slash investment spending and delay or cancel projects. However, it takes time for today's investment decisions to translate into lowered physical supply. In fact, in spite of the falling prices and the investment cuts, non-OPEC supply continued to grow in 2015, although the increase eased to 1.5 mb/d in 2015 which is still a significant growth compared with historical trends.

Even US light tight oil production proved to be rather resilient to low prices. Light tight oil basically requires continuous investments to sustain production, more than conventional oil. Accordingly, analysts expected that low prices would trigger faster supply side reductions. Although drilling activity decreased significantly, this was at least partly offset by improving efficiency and cost reductions. For most of the time, prices remained high enough to support drilling in core areas of major light tight oil plays.

In 2016, lower prices and spending cuts are finally expected to bring non-OPEC supply growth to a halt: according to the IEA, non-OPEC supply is set to decrease by 0.9 mb/d in 2016.

OPEC output policy

In spite of the falling prices, OPEC countries chose not to cut production in an attempt to maintain market share and to squeeze out high-cost producers. This was a fundamental change from OPEC's traditional policy of adjusting supply to balance markets and stabilise prices. In an effort to retain market share, OPEC continues to produce at near-record levels.

Furthermore, the lifting of the Iranian sanctions in January 2016 allowed Iran to increase its oil exports, adding to an already high OPEC output and further delaying the market rebalancing.

On 16 February 2016, three OPEC members – Saudi Arabia, Qatar and Venezuela – plus Russia said they are ready to freeze crude production at January 2016 levels, if other oil producers join this initiative. However, in their meeting on 17 April, producers failed to reach an agreement.

In late September 2016, OPEC ministers tentatively agreed in Algiers to limit their production to between 32.5 and 33 mb/d², in order to accelerate the drawdown of the stock overhang and bring the rebalancing forward. The organization's next formal meeting on 30 November is scheduled to decide on each country's allocation and the date for the ceiling to take effect. In the meantime, OPEC will consult key non-OPEC producers about the possibility of reducing their production.

Outlook

Continued stock builds indicate that the global market remains oversupplied. According to the IEA, the "call on OPEC" (the level of OPEC crude oil production needed to balance global demand and supply) will remain below the current level of OPEC production in 2017.³ This implies that – if OPEC won't change output – the global oil market will not find balance in 2017. The implementation of the OPEC agreement of September 2016 to cut output can potentially bring the rebalancing forward. In any case, the high level of stocks accumulated over the last two years will limit the potential for a significant price rise in the short term. Accordingly, oil prices are expected to remain subdued throughout 2016 and 2017. On the other hand, geopolitical risks remain high and possible supply disruptions can tighten the global oil market.

Sustained low prices are not likely to trigger the necessary supply side investments; upstream investments in the oil sector have indeed dropped sharply. In the longer run, a shortfall in investment will probably lead to tighter markets and higher prices, although the extent and pace at which oil prices will bounce back to higher levels remains to be seen.

On the demand side, efficiency policies and the climate change agreement reached at COP21 are likely to restrain demand for oil, translating in less likely prospects for a high oil price environment in the future.

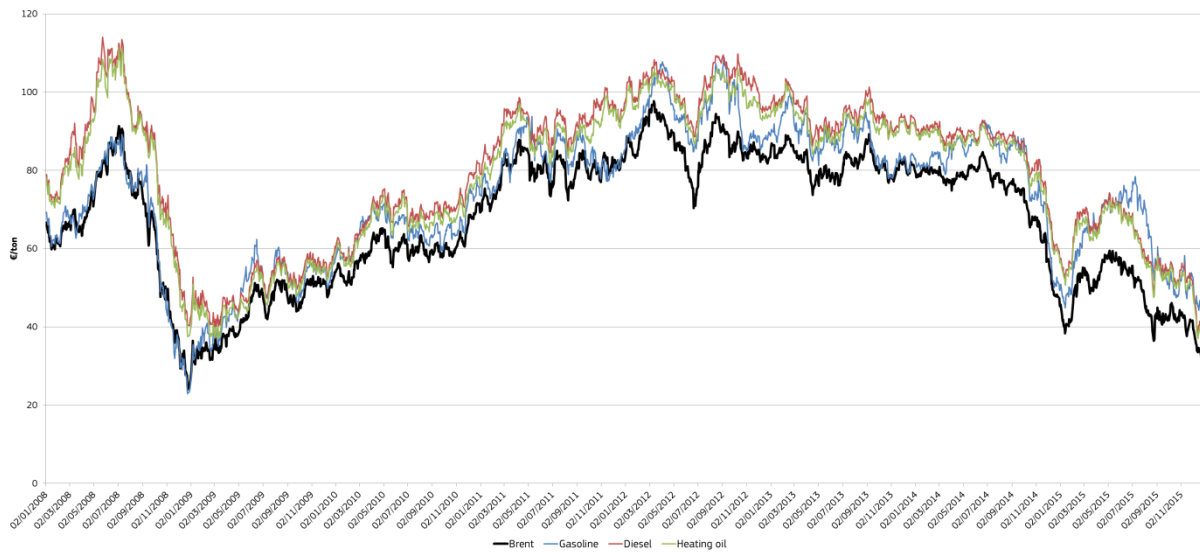
3.2 Wholesale prices of oil products

Crude oil is the main feedstock to produce oil products and, not surprisingly, oil product prices closely follow the development of the crude oil price. This is clearly visible if we compare the Brent oil price with the representative wholesale prices of the main oil products in Western Europe.

² According to the IEA, OPEC output was 33.83 mb/d in October 2016.

³ Oil Market Report, 10 November 2016

Figure 106 - Crude oil (Brent) vs wholesale gasoline, diesel and heating oil prices (2008-2015)

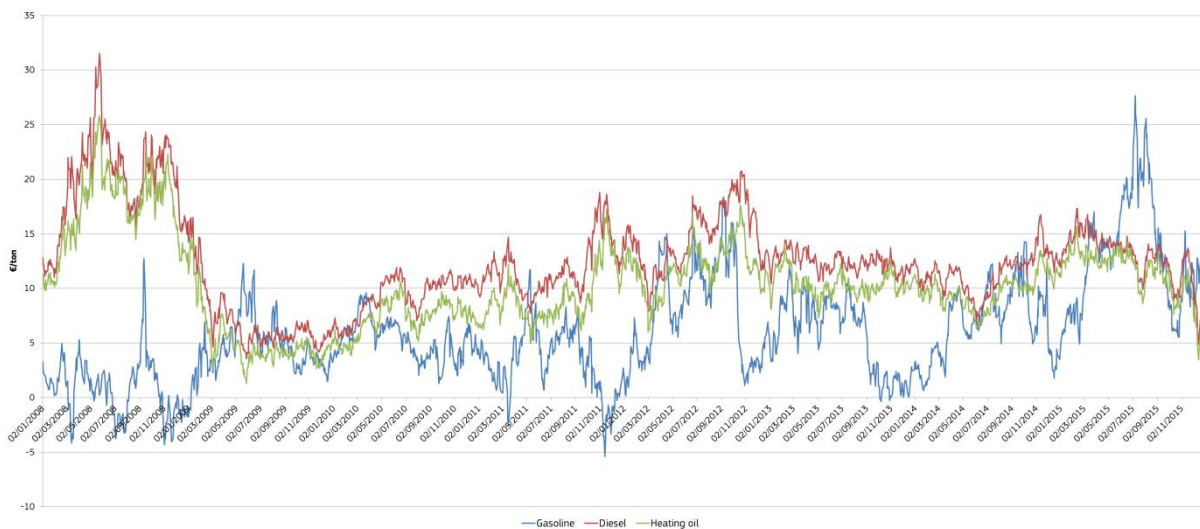


Source: Platts, ECB

The following oil product prices were used: Gasoline Prem Unleaded 10ppmS FOB AR Barge (gasoline), ULSD 10ppmS FOB ARA Barge (diesel) and Gasoil 0.1%S FOB ARA Barge (heating oil)
 Crude oil prices are reported in USD/bbl while product prices in USD/ton. The following conversion rates were used to convert product prices: gasoline 8.5 bbl/ton, diesel and heating oil 7.5 bbl/ton.

Nevertheless, there is no clear one-to-one relationship between crude oil prices and oil product prices. Looking at the crack spreads, i.e. the differential between the price of oil products and crude oil, one can see that these are rather volatile and often follow different paths for different products.

Figure 107 - Crack spreads of gasoline, diesel and heating oil in 2008-2015



Source: Platts, ECB

Crack spreads are calculated as the difference between the Brent crude oil price and the price of the following products: Gasoline Prem Unleaded 10ppmS FOB AR Barge (gasoline), ULSD 10ppmS FOB ARA Barge (diesel) and Gasoil 0.1%S FOB ARA Barge (heating oil)

The supply-demand conditions of the different products are divergent (both from crude oil and from each other) which will affect their crack spreads. For example, the 2008 oil price rise was very much driven by industrial growth in China, leading to a big increase in the demand of middle distillates which is reflected in the high crack spreads of these products. There are also seasonal differences in demand, for example, gasoline demand is higher in the summer, typically resulting in a relatively high crack spread during that period while in times of low demand crack spreads can even turn negative (implying the gasoline is cheaper than crude oil). Oil product supply can also fluctuate, for example as a result of refinery maintenance; this will also affect crack spreads.

On the above figure one can see that European crack spreads have been relatively high in 2015 (averaging 13 €/bbl for both gasoline and diesel) which – in addition to exchange rate developments and high taxes (elaborated in the next subchapter) – limited the pass-through of falling oil prices to retail prices.

3.2.1 Impact of oil prices

Falling oil prices also influence the price of other energy sources, in particular gas. Falling oil prices directly affect the oil-indexed contracts (the role of which is gradually decreasing in Europe) and also put pressure on hub prices. In the last few years, European gas prices have indeed decreased substantially.

In principle, lower gas prices could make gas more competitive to coal and reverse the trend observed in recent years that coal fired generation was cheaper than gas fired. However, coal prices are also on the decline because of the global oversupply so the relative competitiveness of gas has not improved substantially. In fact, since late 2014, the development of European spot prices of coal and gas show a remarkable similarity, suggesting that the relative competitiveness of the two fuels has stabilized. In the second half of 2016, however, coal prices started to increase, thereby improving the relative competitiveness of gas.

3.3 Retail prices of oil products

In addition to electricity and gas, oil products constitute an important part of the energy costs of both households and industry. Oil products have a dominant role in transport where they have limited alternatives, particularly in road freight, maritime and air transport. In case of space heating, the share of oil products is on a declining trend but in certain Member States they still have an important role in this sector.

The retail price of oil products depends on several factors.

Variations in the price of crude oil will obviously have an impact on retail prices but crude oil costs constitute just a part, often a relatively small part, of the final price paid by the consumer. Crude oil is traded in US dollar but the finished products are sold at the pump in euros or other national currencies. Therefore, variations in exchange rates will also influence the crude oil component.

Crude oil has to be refined to produce fuels which can be used in transportation, heating or other uses. After refining, the finished products have to be distributed and sold, typically at

petrol stations. Refining and distribution costs are relatively stable and are not proportional to the crude oil price.

A significant part of the price goes to taxes: excise duties, other indirect taxes and VAT. These taxes make an important contribution to the tax revenue of Member States (see Chapter 8). In case of motor fuels (gasoline and diesel), taxes typically cover more than half of the final price.

Excise duties are generally a fixed amount per quantity (usually litre or kg), i.e. not influenced by the price of crude oil. VAT, on the other hand, is set as a percentage of the price of the product (including the excise duty) and therefore changes in the crude oil price will have an impact on the absolute value of the VAT component.

Rates of both the excise duty and VAT vary by product and by Member State, resulting in significant price differences across Europe. Nevertheless, Member States have no complete freedom when setting the tax rates. The Energy Tax Directive (2003/96/EC) sets minimum excise duty rates for gasoline, gasoil, kerosene, LPG and heavy fuel oil. New Member States were often granted a transition period to reach the minimum level; today, all Member States comply with minimum level.

In case of VAT, the VAT Directive (2006/112/EC) requires that the standard VAT rate must be at least 15%; currently the standard VAT rates applied by Member States range from 17% (in Luxembourg) to 27% (in Hungary). In case of oil products, Member States typically apply the standard VAT rate.⁴

As the share of crude oil in the final price can be as low as 25%, variations in the price of crude oil will have a limited impact on the price at the pump. In fact, the high share of fixed taxes in the price acts as a buffer: fluctuations in the retail price of oil products (particularly motor fuels) are significantly lower than the fluctuation of the crude oil price. Variations in the exchange rate have a similar effect: the oil price and the value of the US dollar usually move in the opposite direction: a strengthening dollar typically coincides with decreasing oil prices and vice versa. This means that changes in the oil price, whether upwards or downwards, are mitigated by the exchange rate and the volatility of the oil price expressed in euros is smaller than the volatility of the price expressed in dollar.

During the recent drop of crude oil prices, the above factors moderated the pass-through to oil product prices in the EU: while crude oil prices fell by 77% between mid-2014 and early 2016, in the same period⁵ the average EU consumer price of gasoline and diesel decreased by 24% and 28%, respectively. In case of heating oil, where the tax component is smaller, the decrease was 45%.

Methodology

The analysis in this section is based on the data of the weekly Oil Bulletin. Pursuant to the Council Decision on Crude Oil Supply Costs and the Consumer Prices of Petroleum Products (1999/280/EC), Member States have to report to the Commission the retail prices of the main petroleum products on a weekly basis. Member States also have to report any changes in the tax rates (VAT, excise duty, other indirect taxes) applicable to these products, allowing us to

⁴ Under certain conditions, Member States can set a lower VAT rate for specific products and services; for example, a few Member States apply a reduced rate for heating oil

⁵ Between 30 June 2014 and 15 February 2016

break down the final price to three main components: the net price, excise duty⁶ and VAT. The reported data are published on the website of DG Energy.⁷

The analysis covers the three main petroleum products sold in the retail sector: gasoline (Euro-super 95), diesel (automotive gas oil) and heating oil (heating gas oil). The time horizon is 2008-2015. All Member States are covered but data for Croatia is available only from 2013. In case of heating oil, Slovakia does not report prices since October 2011 while Greece has not reported from May 2015 to mid-October 2015.

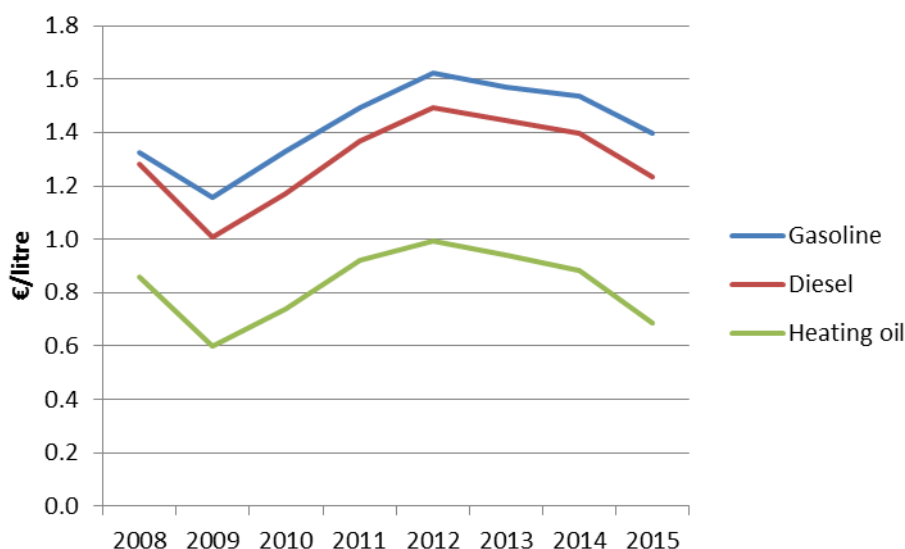
Prices reported in currencies other than the euro were converted into euro, using the ECB exchange rate of the day for which the price applies.

For each year and each Member State an average price was calculated as an arithmetic average of the weekly prices and an EU average price was calculated as the weighted average of these. In the absence of 2015 consumption figures, for 2015 we used the 2014 consumption data as the weight.

Development of oil products prices

While the absolute level of the prices of the three oil products are different, their development over the last 8 years is very similar and basically reflects the evolution of the crude oil price in the same period. The price of all three products decreased significantly in 2009 when oil prices plummeted in the wake of the financial crisis. This was followed by years of gradual increase, with prices peaking in 2012. Since then, average product prices have been on the decline, with the price fall accelerating in 2015.

Figure 108 - Average retail price of oil products in the EU



Source: Oil Bulletin, DG Energy

The difference in the absolute price of the three products can be mostly attributed to the diverging tax rates. In practically all Member States, the excise duty rate of gasoline is higher than that of diesel. The Energy Tax Directive also sets a higher minimum rate for gasoline (0.359 €/litre) compared to diesel (0.33 €/litre). The UK is the only Member State where the two motor fuels are taxed at the same level.

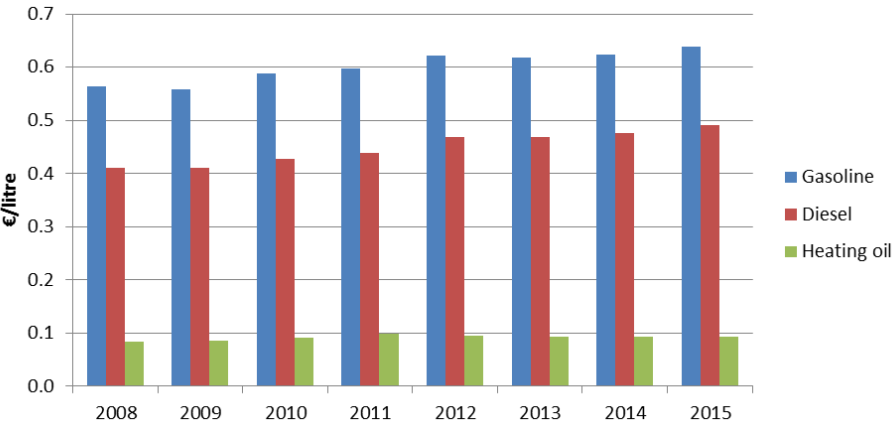
⁶ In this section, other indirect taxes are reported in the excise duty component

⁷ <https://ec.europa.eu/energy/en/statistics/weekly-oil-bulletin>

In case of heating oil, a few Member States (Bulgaria, Hungary, the Netherlands and Romania) apply the same excise duty rates than for diesel. In most Member States, however, heating oil is taxed at a lower level. The minimum rate established by the Energy Tax Directive (0.021 €/litre) is much lower than those for motor fuels. Ireland, Luxembourg, Portugal and the UK also apply a reduced VAT rate for heating oil.

Although excise duty rates are set in absolute values, i.e. as a fixed amount per quantity of the product, several Member States increased the tax rates over the period, resulting in a gradually increasing (weighted) average tax rate. According to the Energy Tax Directive, the minimum excise duty rate for diesel increased from 0.302 €/litre to 0.33 €/litre on 1 January 2010, requiring some Member States to adjust their rates.

Figure 109 - Average excise duty rates for oil products in the EU

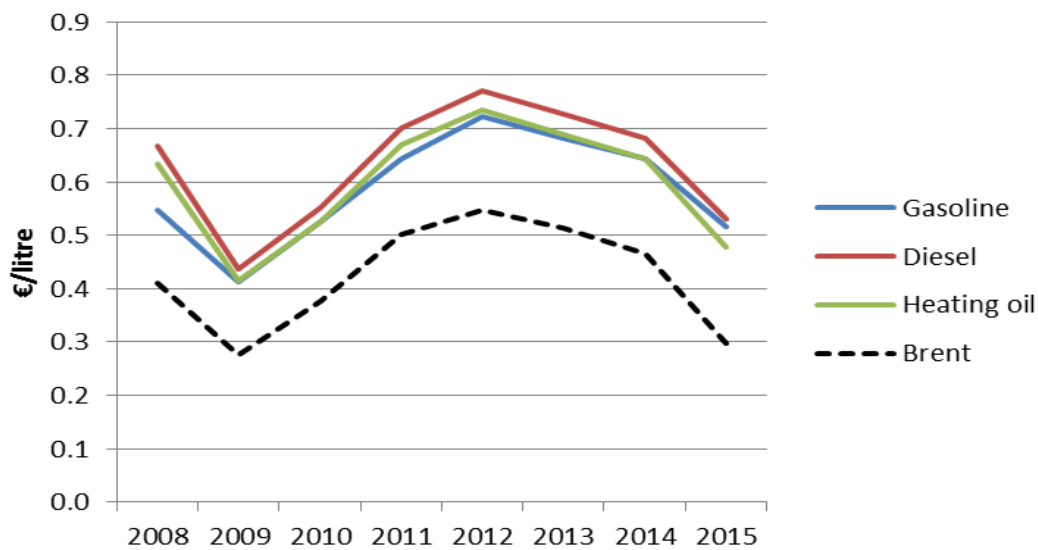


Source: Oil Bulletin, DG Energy

If the net price of the three different products is compared, the difference is significantly lower. In fact, during the whole period the net price of diesel is slightly higher than that of gasoline.⁸ The below figure also depicts the evolution of the Brent crude oil price (recalculated into €/litre), showing that crude oil is clearly the main component of the net price.

⁸ Different net prices between oil products reflect the specific characteristics and particular dynamics of the each oil product market

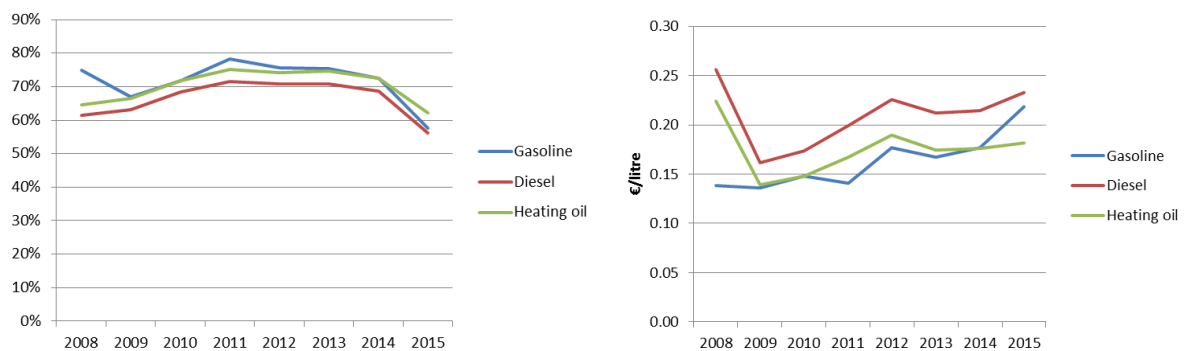
Figure 110 - Average retail price of oil products in the EU, without taxes



Source: Oil Bulletin, DG Energy, Platts

Over the period, crude oil price represented on average about 70% of the net price but in 2015, as crude oil prices dropped significantly, this share decreased to about 60%. The difference between the net price of the products and the crude oil price, which is supposed to cover transport, refining and distribution costs and any profits, have been volatile in 2008-2011 but relatively stable in 2012-2015, except a bigger increase in case of gasoline in 2015.

Figure 111 - Crude oil price as a percentage of average retail prices without taxes and the difference between average retail prices without taxes and the crude oil price



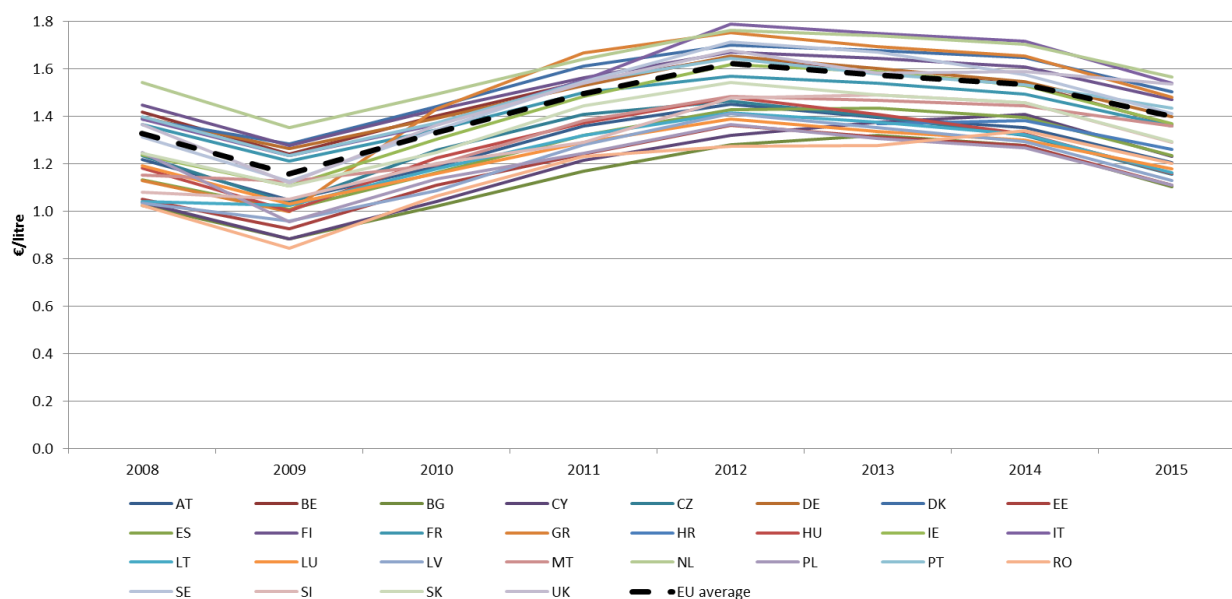
Source: Oil Bulletin, DG Energy, Platts

In the following subsections the average retail price of the individual fuels will be also compared to the corresponding wholesale prices of the products.

3.3.1 Gasoline

In most Member States, the evolution of gasoline prices clearly followed the trend of the crude oil price but there have been considerable differences in the absolute level, mainly explained by the diverging excise duty and VAT rates. Average prices moved in a relatively wide range, with the difference between the highest and lowest price being about 0.5 €/litre. This range has slightly narrowed over the period, from 0.52 €/litre in 2008 to 0.46 €/litre in 2015, indicating some degree of price convergence.

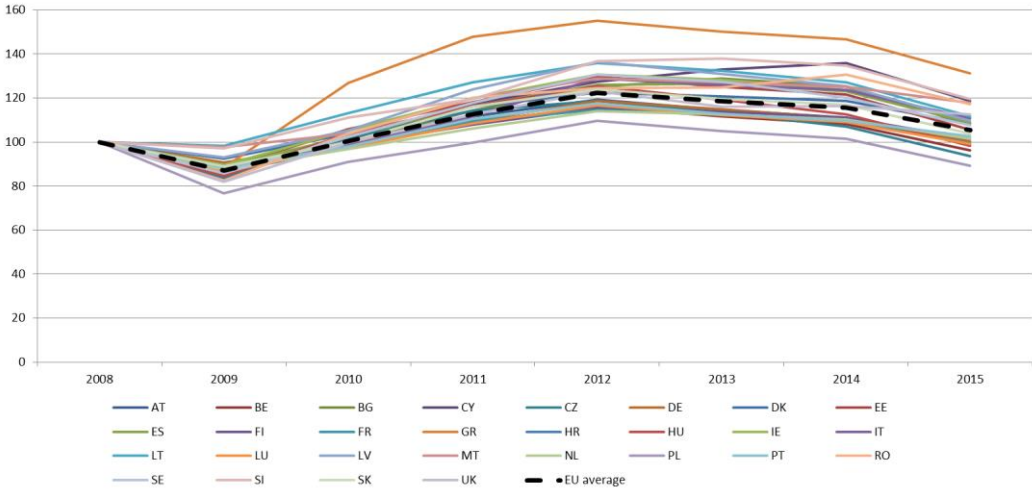
Figure 112 - Average retail price of gasoline by Member State



Source: Oil Bulletin, DG Energy

Greece showcased the biggest relative increase in gasoline prices: while in 2008-2009 Greek prices were well below the EU average, since 2011 they are among the highest, mainly as a result of the sharp increase of the excise duty rate. In 2015, EU average gasoline prices were 5% higher than in 2008; in case of Greece, the increase was 31%. At the other end of the spectrum, prices in Poland decreased by 11%, mainly because of the depreciation of the national currency (measured in Polish zloty, the average price increased).

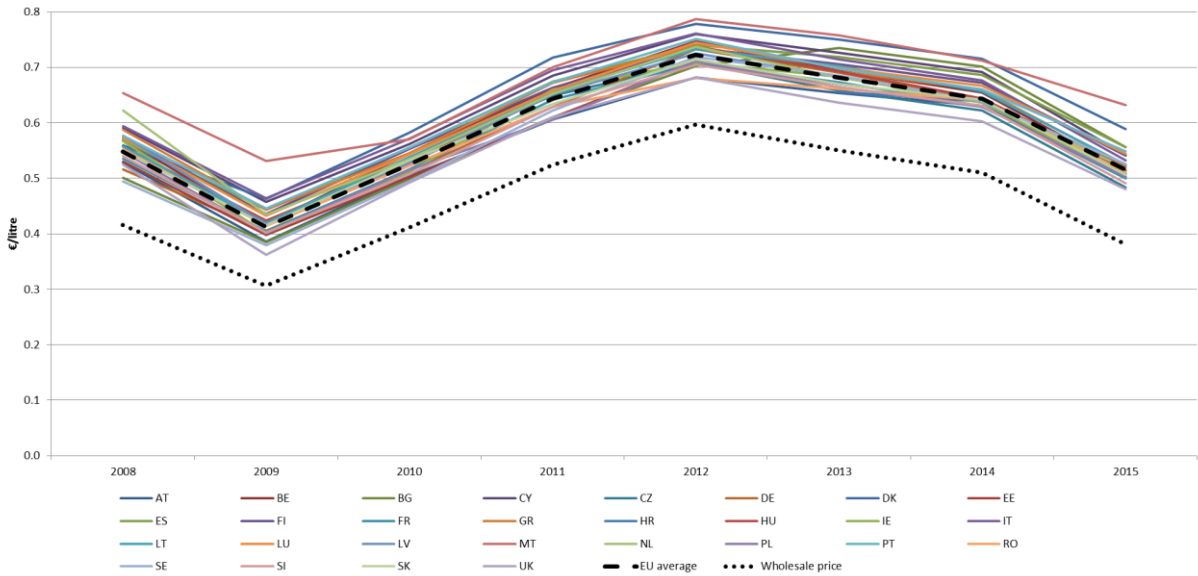
Figure 113 - Average retail price of gasoline by Member State, 2008=100



Source: Oil Bulletin, DG Energy

Looking at net prices, the dispersion is smaller, the difference between the highest and the lowest price is usually 0.10-0.15 €/litre. The net price depends on a number of factors, including the source of supply (local refinery or import), industry structure and competition. In 2015, the highest net price was reported by Malta while the lowest by the UK. (Yet, because of the high excise duty, the UK has one of the highest gasoline prices in the EU.) Comparing the average net price with a representative wholesale price (Platts Gasoline Prem Unleaded 10ppmS FOB AR Barge), the difference is relatively stable, amounting to 0.13 €/litre in each of the last four years.

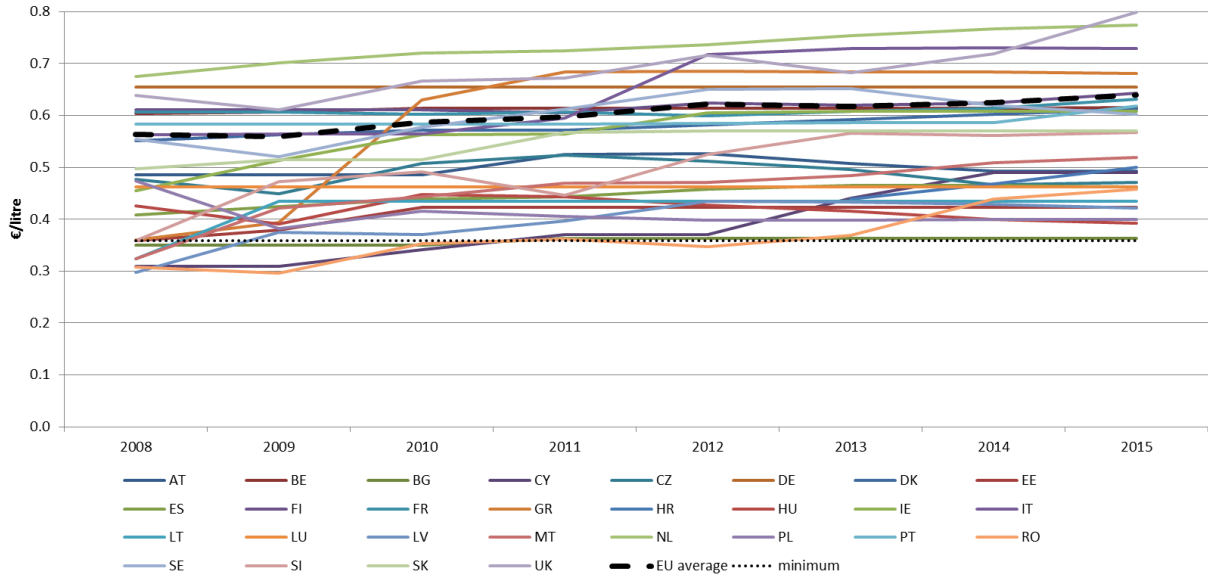
Figure 114 - Average retail price of gasoline by Member State, without taxes



Source: Oil Bulletin, DG Energy, Platts
 The wholesale price is Gasoline Prem Unleaded 10ppmS FOB AR Barge reported by Platts

Excise duty is an important component of the retail gasoline price; in 2015, in half of the Member State it exceeded the net price. Over the years, we see a gradual increase of the average excise duty rate. While in 2008 this was 56 eurocent/litre, by 2015 it increased to 64 eurocent/litre (an increase of 14% in 7 years). The average VAT rate also increased during this period, from 19.3% in 2005 to 21.0% in 2015. In most Member States, excise duty rates increased between 2008 and 2015, with the biggest increases in Greece (89%), Malta (60%), Cyprus (58%) and Slovenia (58%). Germany and Luxembourg are notable exceptions: in these countries, the excise duty rate for gasoline has not changed since 2003 and 2007, respectively. In three Member States, the Czech Republic, Hungary and Poland the excise duty rate measured in euro was lower in 2015 than in 2008, mainly because of exchange rate developments (in national currencies, the excise duty rates increased). The UK and the Netherlands apply the highest excise duty for gasoline; Bulgaria has the lowest rate, just above the minimum level.

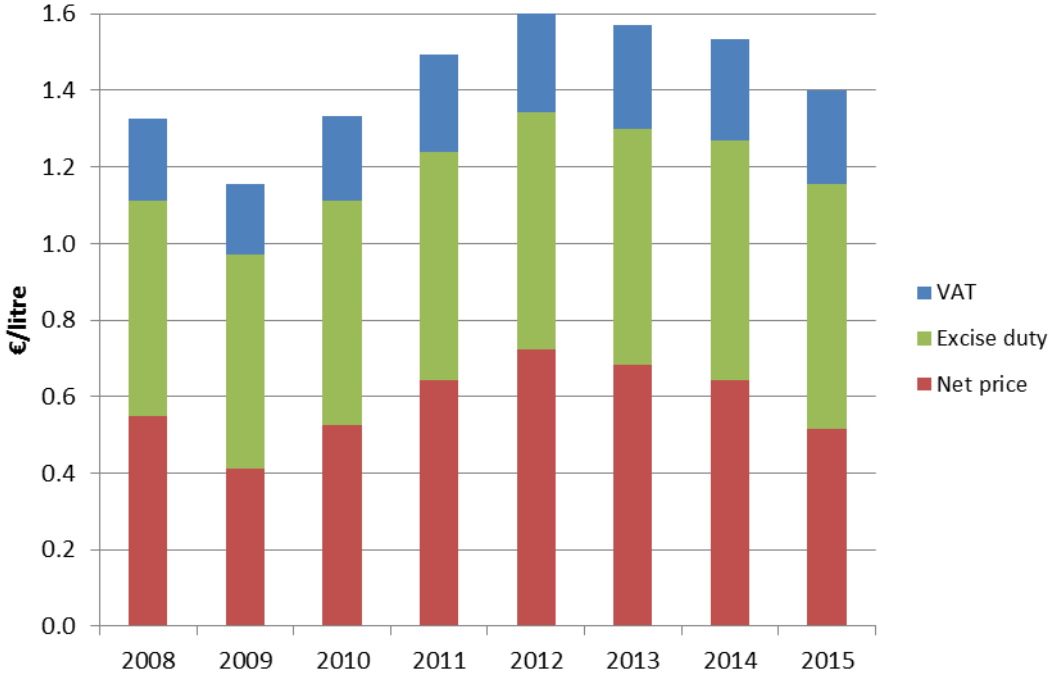
Figure 115 - Average exercise duty rate of gasoline by Member State



Source: Oil Bulletin, DG Energy

In the last few years, in line with the decreasing oil prices, the average retail price of gasoline decreased. However, because of the fixed (or, in case of several member States, increasing) excise duty rates, the share of the tax component gradually increased, from 55% in 2012 to 63% in 2015. In absolute terms, the tax component decreased, but only marginally, from 0.90 €/litre in 2012 to 0.88 €/litre in 2015.

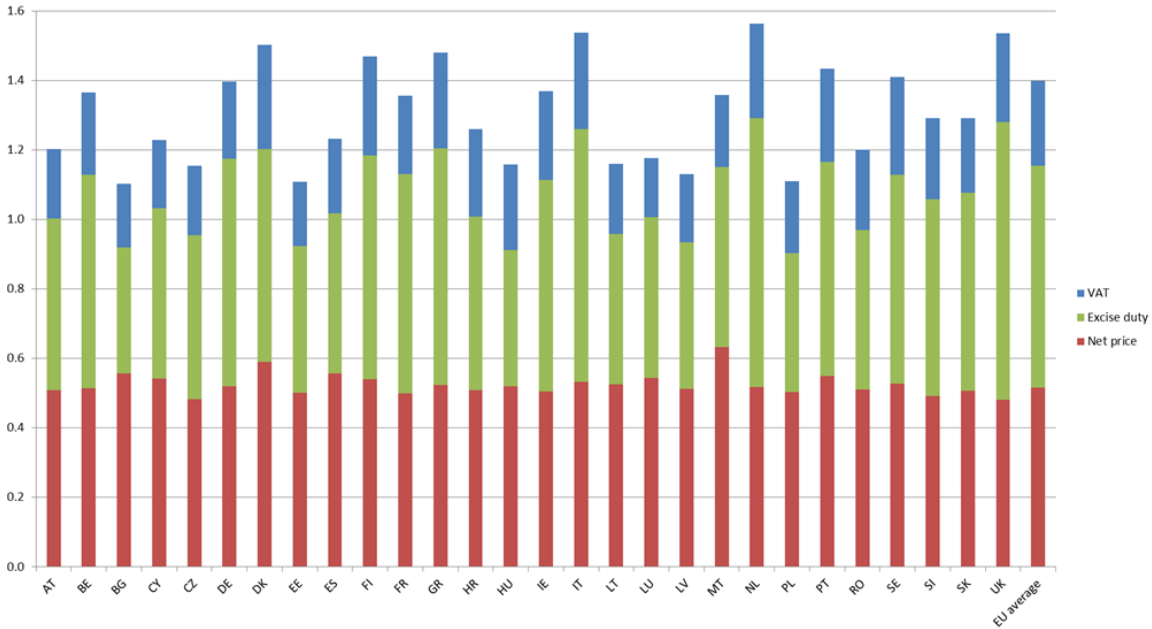
Figure 116 - Average retail price of gasoline in the EU by price component



Source: Oil Bulletin, DG Energy

The below graph show the composition of the average gasoline price by Member State in 2015.

Figure 117 - Average retail price of gasoline in 2015 by Member State and price component

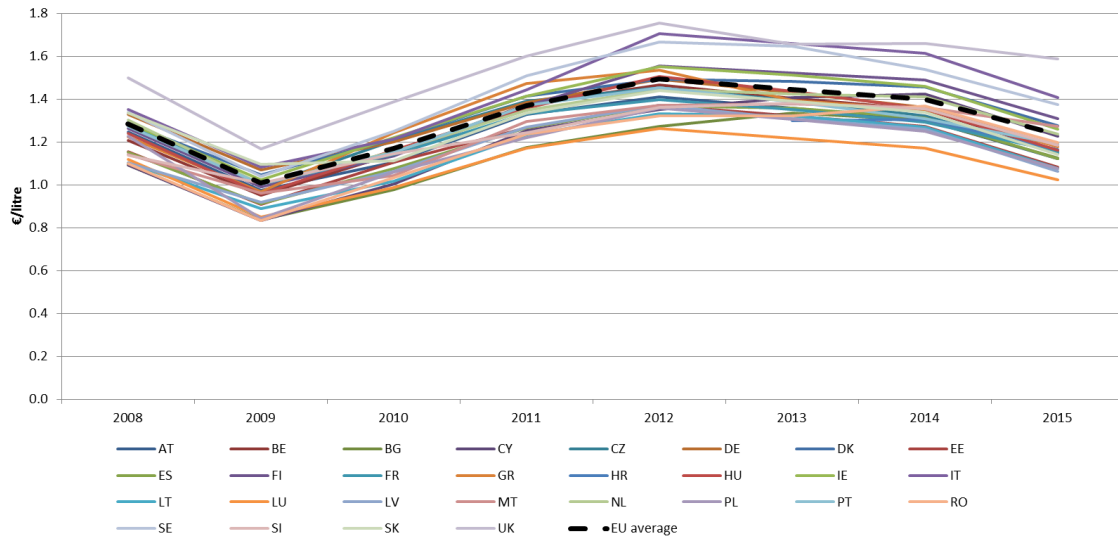


Source: Oil Bulletin, DG Energy

3.3.2 Diesel

Similarly to gasoline, the evolution of diesel prices clearly followed the trend of the crude oil price, with considerable differences in the absolute level, mainly explained by the diverging excise duty and VAT rates. Average prices moved in a relatively wide range and, contrary to gasoline, this range has widened over the years: it was 0.40 €/litre in 2008 but grew to 0.56 €/litre in 2015. If the three most expensive countries are disregarded, the range is considerably narrower. In 2015, the UK was by far the most expensive, 0.18 €/litre above the second most expensive country, Italy.

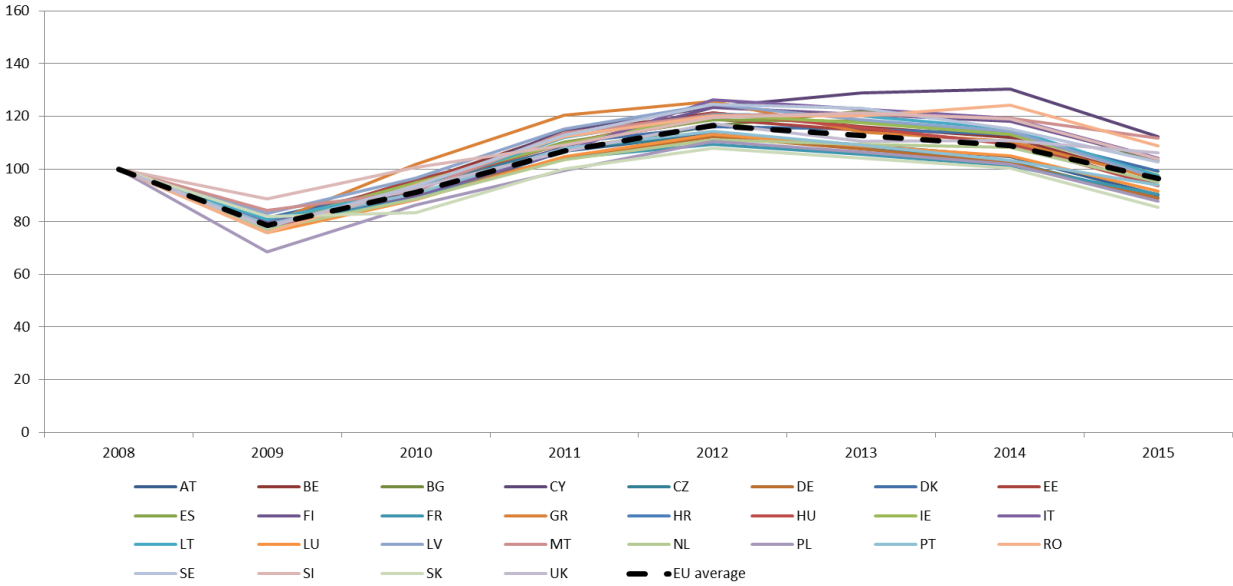
Figure 118 - Average retail price of diesel by Member State



Source: Oil Bulletin, DG Energy

Cyprus experienced the biggest relative increase in diesel prices: in 2008 it had the lowest price in the EU but after significant increases in the excise duty rate the price reached the EU average by 2013. In 2015, EU average diesel prices were 4% lower than in 2008; in case of Cyprus, the price increased by 12%. In Slovakia, in turn, the price fell by 15% between 2008 and 2015, helped by a reduction of the excise duty rate introduced in 2010.

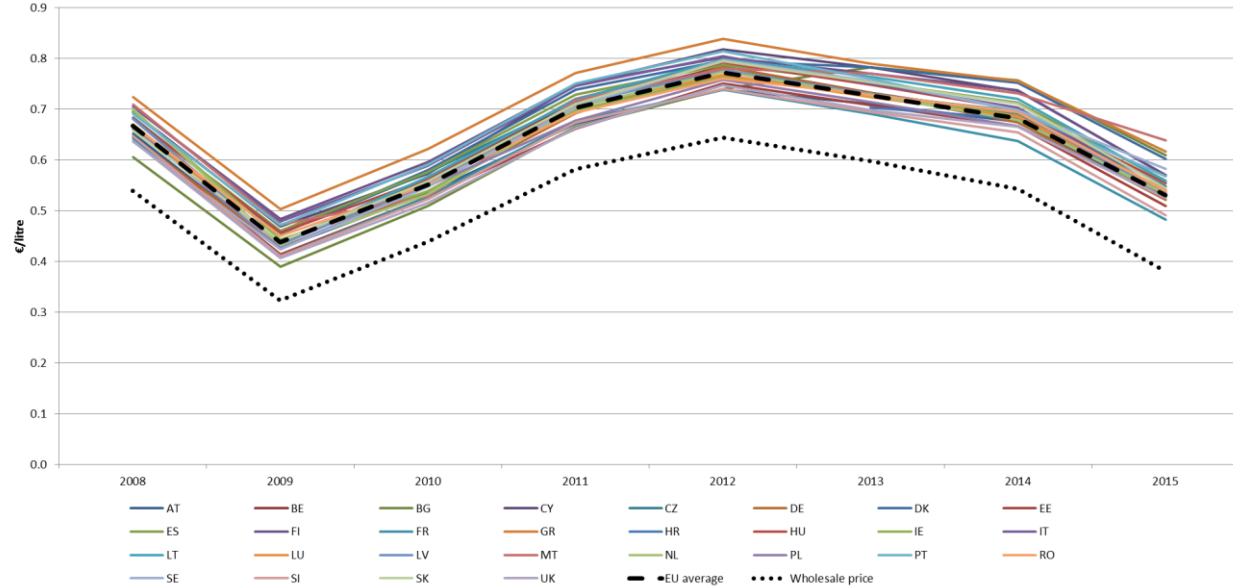
Figure 119 - Average retail price of diesel by Member State, 2008=100



Source: Oil Bulletin, DG Energy

In case of net prices, the difference between the highest and the lowest price has been 0.10-0.12 €/litre but increased to 0.16 €/litre in 2015. Similarly to gasoline, Malta had the highest net price of diesel in 2015; the lowest net price was reported in France. Comparing the EU average net price with a representative wholesale price (Platts ULSD 10ppmS FOB ARA Barge), the difference has increased from 0.11 €/litre in 2010 to 0.15 €/litre in 2015.

Figure 120 - Average retail price of diesel by Member State, without taxes

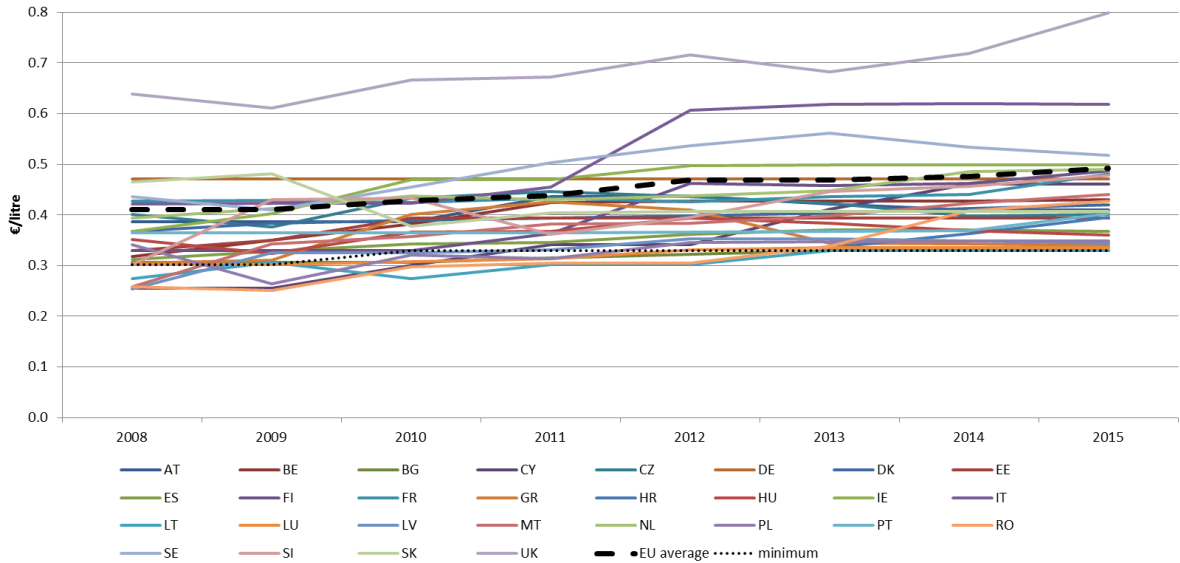


Source: Oil Bulletin, DG Energy, Platts
 The wholesale price is ULSD 10ppmS FOB ARA Barge reported by Platts

The average excise duty rate of diesel increased from 0.41 €/litre in 2008 to 0.49 €/litre in 2015 (an increase of 20% in 7 years). Although this increase is faster than in case of gasoline, the difference between average excise duty rate of gasoline and diesel remained stable at 0.15

€/litre throughout 2008-2015. The average VAT rate of diesel also increased during this period, from 19.1% to 20.9%. With two exceptions, excise duty rates increased in all Member States between 2008 and 2015, with the biggest increases in Cyprus (80%), Malta (71%), Romania (66%) and Slovenia (58%). In Germany, the excise duty rate for diesel has not changed since 2003 (similarly to the excise duty of gasoline). Slovakia is the only country where the excise duty was lower in 2015 than in 2008, as a result of a cut in the rate in 2010. The excise duty rate applied by the UK and Italy is significantly higher than in the rest of the countries. In contrast, several Member States (Bulgaria, Greece, Latvia, Lithuania and Luxembourg) impose a rate at or just above the minimum level.

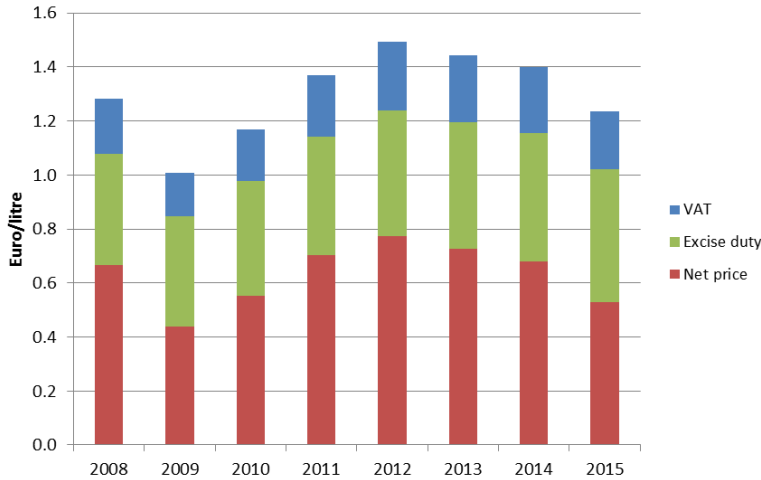
Figure 121 - Average excise duty rate of diesel by Member State



Source: Oil Bulletin, DG Energy

Since 2012, the average retail price of diesel decreased, with the share of the tax component increasing from 48% in 2012 to 57% in 2015. In absolute terms, the tax component decreased marginally, from 0.72 €/litre in 2012 to 0.71 €/litre in 2015.

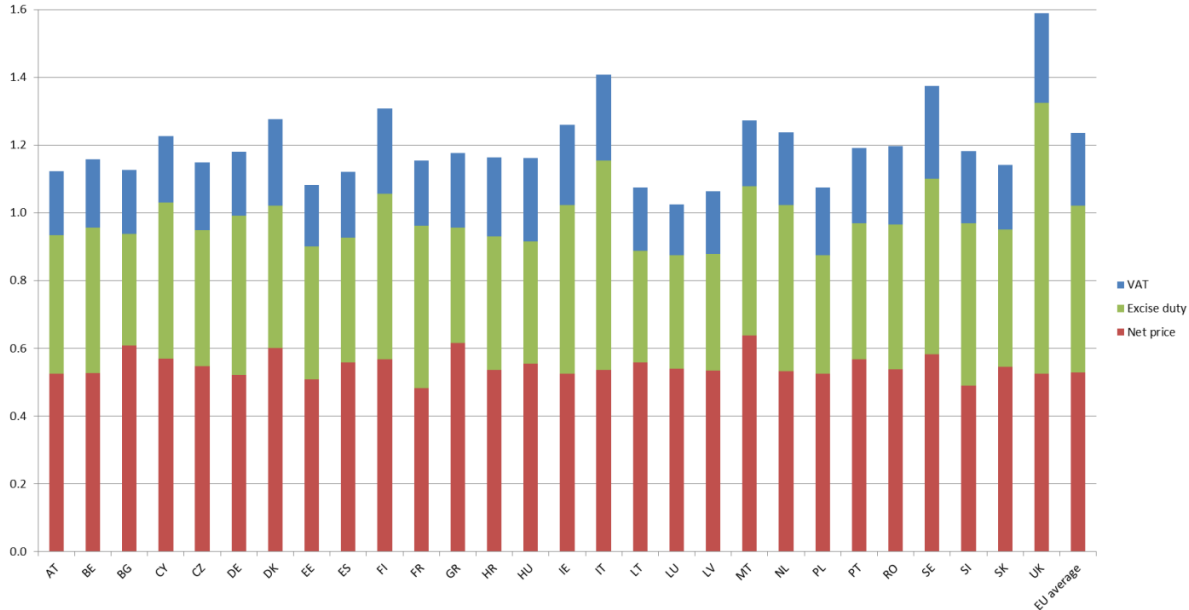
Figure 122 - Average retail price of diesel in the EU by price component



Source: Oil Bulletin, DG Energy

The below graph show the composition of the average diesel price by Member State in 2015.

Figure 123 - Average retail price of diesel in 2015 by Member State and price component

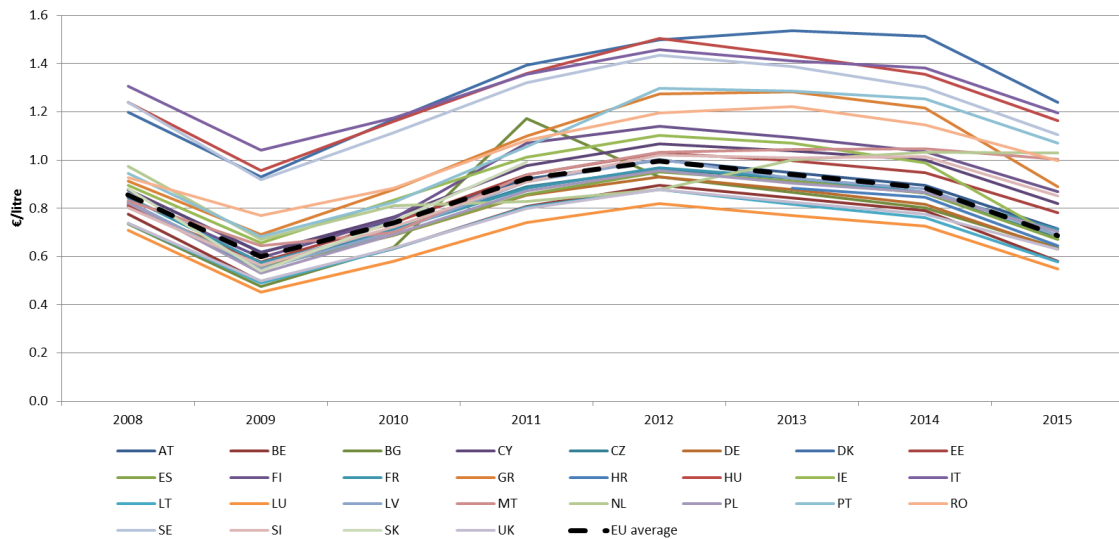


Source: Oil Bulletin, DG Energy

3.3.3 Heating oil

The big differences in the excise duty rates result in a wide dispersion of heating oil prices across the EU. The difference between the highest and lowest price increased from 0.60 €/litre in 2008 to 0.79 €/litre in 2014 but decreased to 0.69 €/litre in 2015. In the most expensive Member State, Denmark, the price in 2015 was 126% higher than in the cheapest Member State, Luxembourg. Many of the most expensive countries have a rather low level of heating oil consumption. Germany is by far the biggest consumer of heating oil in the EU and its price is below the EU average.

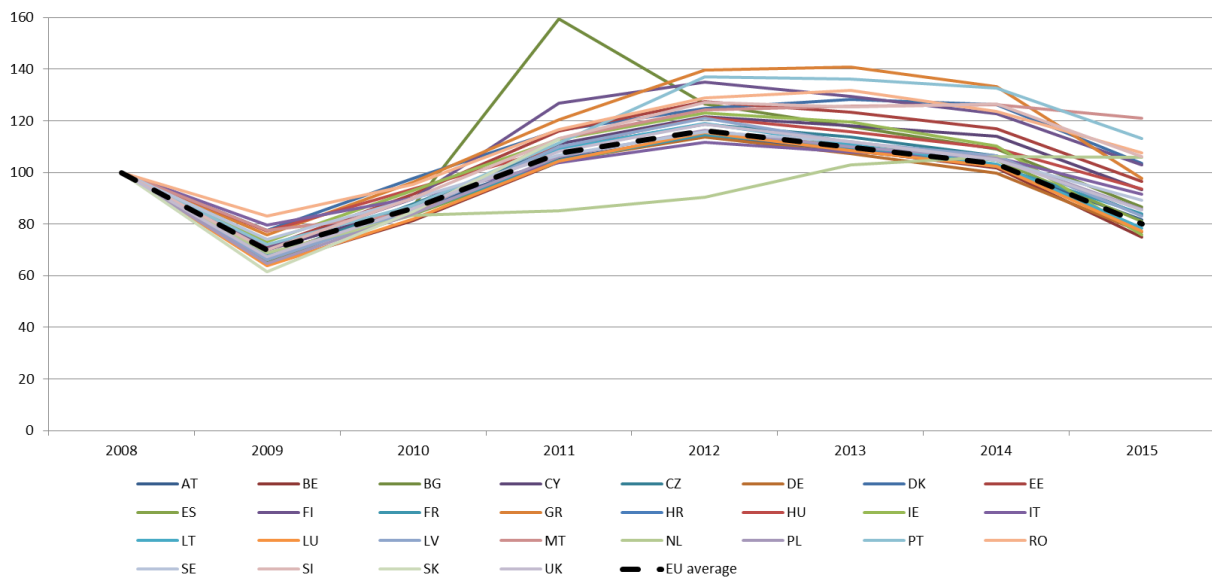
Figure 124 - Average retail price of heating oil by Member State



Source: Oil Bulletin, DG Energy

Malta experienced the biggest relative increase in heating oil prices: in 2008 its price was around the EU average but today it is considerably higher. In 2015, EU average heating oil prices were 20% lower than in 2008; in case of Malta, the price increased by 21%. Belgium experienced the biggest price drop between 2008 and 2015, 25%.

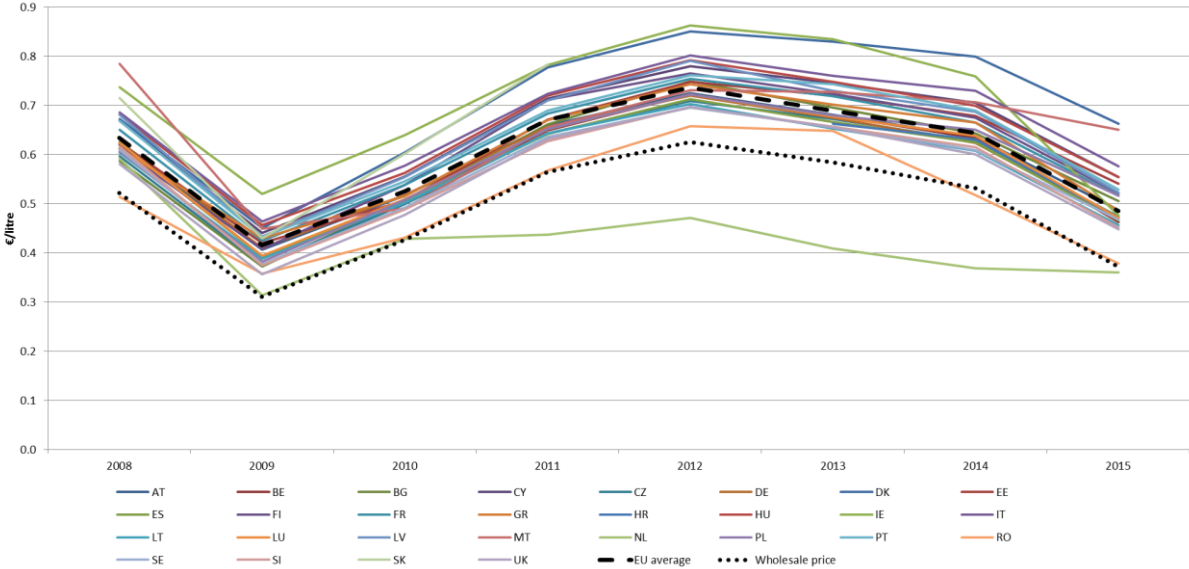
Figure 125 - Average retail price of heating oil by Member State, 2008=100



Source: Oil Bulletin, DG Energy

Also in case of net prices, the difference between the highest and the lowest price is rather high (0.21-0.43 €/litre), significantly higher than for motor fuels. Denmark had the highest net price of heating oil in 2015; the lowest net price was reported in the Netherlands. Comparing the EU average net price with a representative wholesale price (Platts Gasoil 0.1%S FOB ARA Barge), the difference has been stable in the 0.10-0.11 €/litre range. Curiously, the Dutch price is lower than the wholesale price while the Romanian price is more or less equal to it.

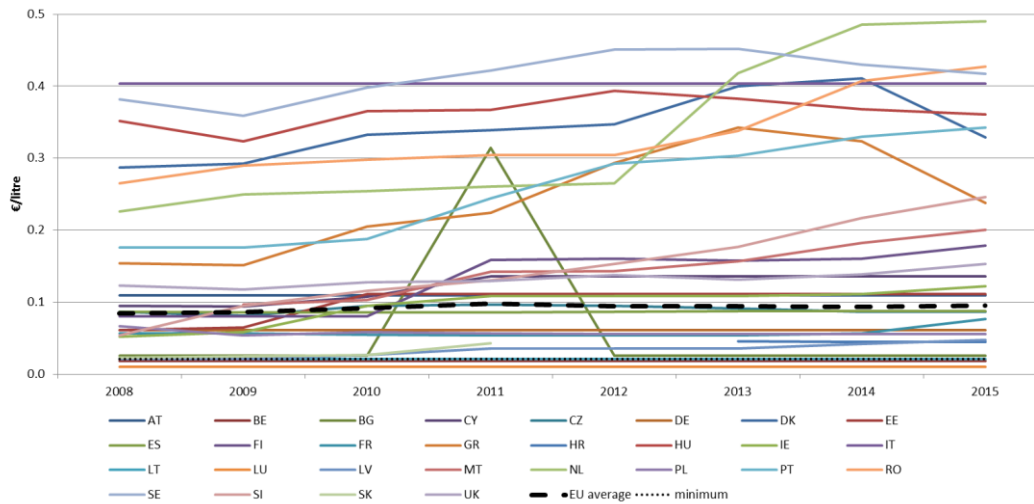
Figure 126 - Average retail price of heating oil by Member State, without taxes



Source: Oil Bulletin, DG Energy, Platts
 The wholesale price is Gasoil 0.1%S FOB ARA Barge reported by Platts

The average excise duty rate of heating oil increased from 0.08 €/litre in 2008 to 0.10 €/litre in 2015 (an increase of 13% in 7 years). Although most Member States apply a higher rate, the main consumer of heating oil, Germany, has an excise duty of only 0.06 €/litre. The average VAT rate of heating oil also increased during this period, from 19.3% to 20.2%. Several Member States increased the excise duty rate between 2008 and 2015, but in a couple of countries (Austria, Germany, Italy, Lithuania, Luxembourg, Spain) it remained unchanged. Bulgaria significantly increased the excise duty rate in 2011 but returned to the previous, lower rate the following year. The Netherlands has the highest excise duty rate (0.49 €/litre in 2015) while Luxembourg's tax rate is only 0.01 €/litre. The rates applied by Belgium and Luxembourg are lower than the minimum level set by the Energy Tax Directive (0.021 €/litre); Lithuania uses the minimum level.

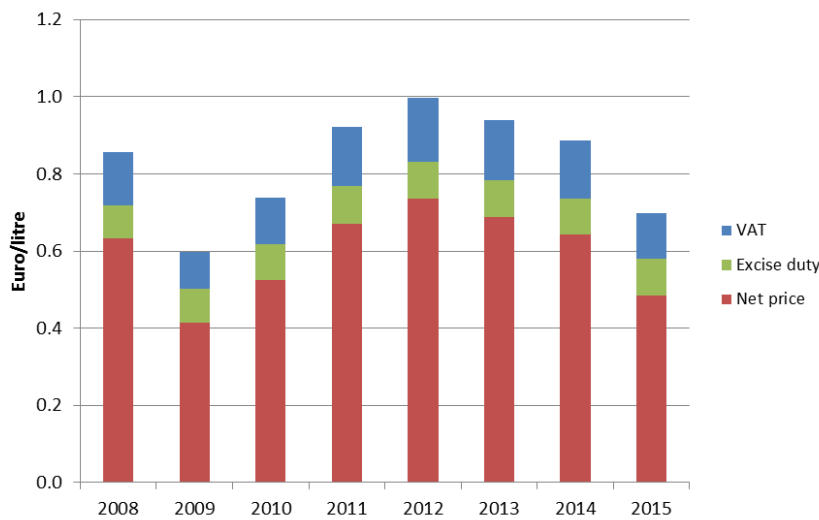
Figure 127 - Average excise duty rate of heating oil by Member State



Source: Oil Bulletin, DG Energy

The average retail price of heating oil significantly decreased since 2012, with the tax component increasing from 26% in 2012 to 31% in 2015. In absolute terms, the tax component decreased from 0.26 €/litre in 2012 to 0.21 €/litre in 2015.

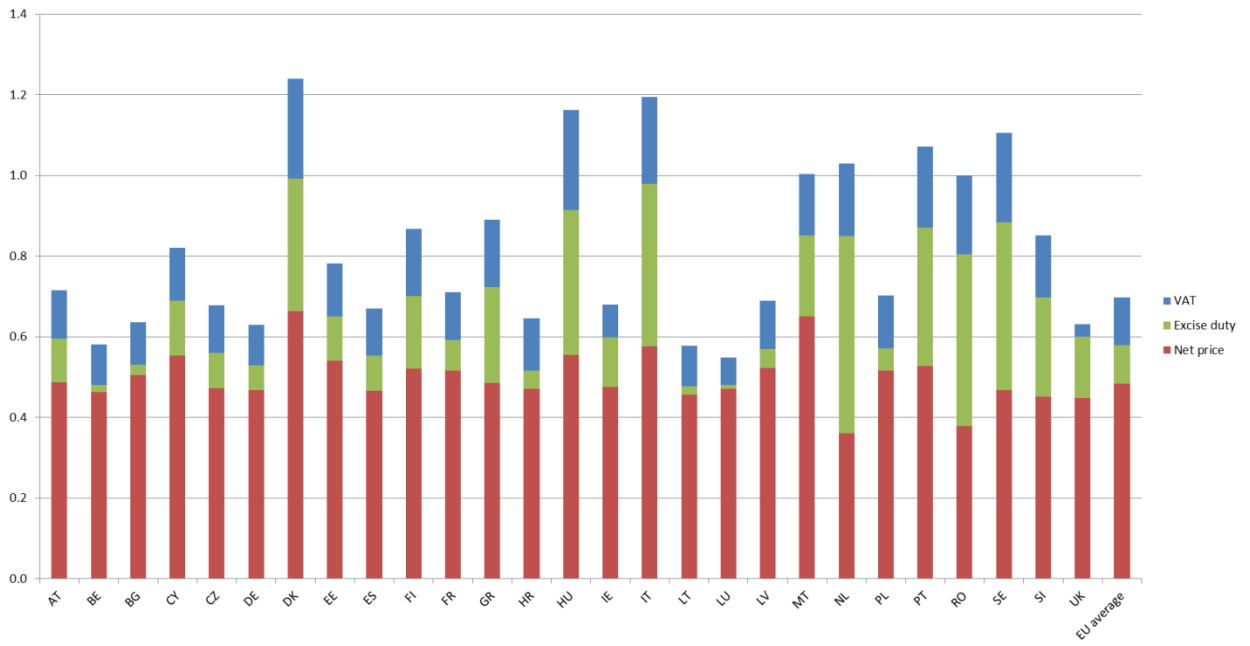
Figure 128 - Average retail price of heating oil in the EU by price component



Source: Oil Bulletin, DG Energy

The below graph show the composition of the average heating oil price by Member State in 2015.

Figure 129 - Average retail price of heating oil in 2015 by Member State and price component



Source: Oil Bulletin, DG Energy

Energy costs

4 The EU energy bill

Main findings

- High import dependency means that the EU faces an important energy import bill.
- In 2013, the EU's estimated import bill reached EUR 400 billion. Since then, falling energy prices allowed the import bill to fall significantly, although the weakening of the euro has partly offset this effect.
- In 2015, the estimated import bill amounted to EUR 261 billion, 35% less than in 2013. In 2 years, the import bill decreased by EUR 142 billion, about 1% of EU GDP, thereby giving a significant boost to the economy.
- Crude oil is by far the main component of the import bill, making up 68% of the total in 2015. The share of gas and hard coal was 28% and 4%, respectively.
- Russia is the main supplier of all three fossil fuels: crude oil, natural gas and hard coal. In 2015, 34% of the import bill went to Russia. Russia was followed by Norway (19%) and Nigeria (7%).

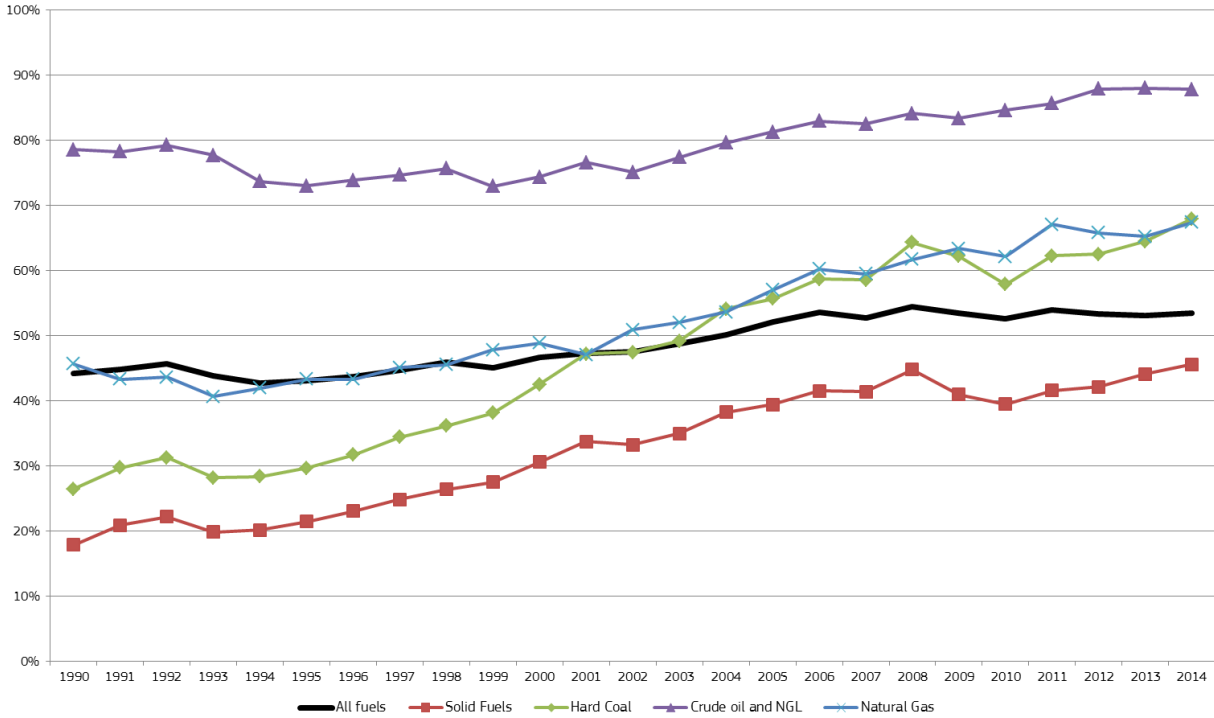
Introduction

The EU is a net importer of energy: in 2014, the import dependency⁹ stood at 53.5%, i.e. the EU needed to import just over half of the energy it consumed. Import dependency is particularly high in case of fossil fuels: in 2014, it was 88% for crude oil, 67% for natural gas and 46% for solid fuels (from which 68% for hard coal).

EU energy import dependency seems to have stabilised in recent years: since 2005, it has been fluctuating between 52% and 55%. While the import dependency of fossil fuels continues an increasing trend, their share within the energy mix is gradually decreasing. The share of renewables, on the other hand, is steadily growing and these are typically produced within the EU.

⁹ Import dependency is calculated as net imports divided by gross inland consumption

Figure 130 - EU import dependency by fuel



Source: Eurostat

The high import dependency poses significant challenges in terms of energy security and the diversification of suppliers and supply routes but, in addition, it also means that the EU is facing an important energy import bill.

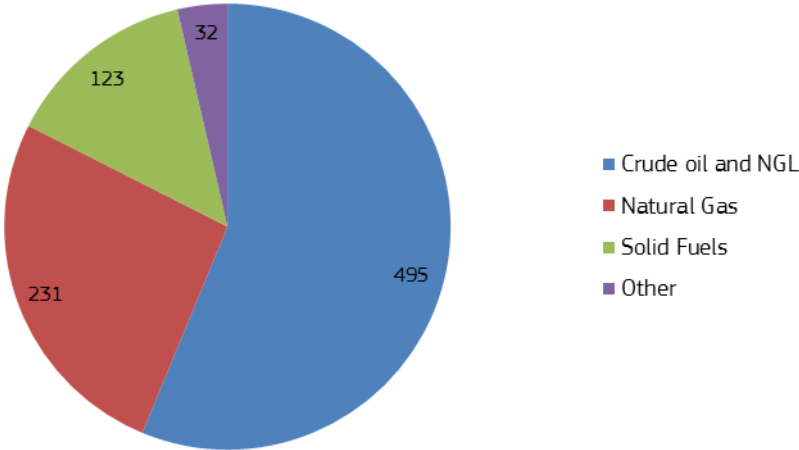
In this chapter we outline the main drivers of the import bill and estimate its size in the last couple of years.

Scope

In this analysis, we focus on the import bill of the EU as a whole, therefore only extra-EU imports are considered. (When the import bill of an individual Member State is looked at, it is of course reasonable to take all imports into account, including those coming from other Member States.)

The analysis covers the main fossil fuels: crude oil, natural gas and solid fuels. These fuels cover nearly three-quarters of the EU's gross inland energy consumption and the overwhelming majority (96% in 2014) of net energy imports. Crude oil alone makes up more than half of the EU's net energy imports.

Figure 131 - EU net imports of energy in 2014 (mtoe)



Source: Eurostat

In addition to crude oil, the EU is also an importer of petroleum products. However, considering the practical difficulties of finding reliable volume and price data for a multitude of products with different specifications and the fact that the EU is also exporting petroleum products and exports and imports are of a similar magnitude (the EU typically exports motor gasoline and imports middle distillates), petroleum products were not included in the calculation of the import bill.

Lignite/brown coal is typically not traded internationally and the imports arriving to the EU are negligible. Therefore, the analysis of solid fuels was restricted to hard coal.

In terms of time horizon, we provide import bill estimates for the period 2013-2015.

4.1 Drivers

The import bill basically depends on the volume and the average price of imports. Like most commodities, energy sources are typically traded in US dollars and therefore the development of the USD/EUR exchange rate will also influence the import bill (if expressed in euros).

Volumes

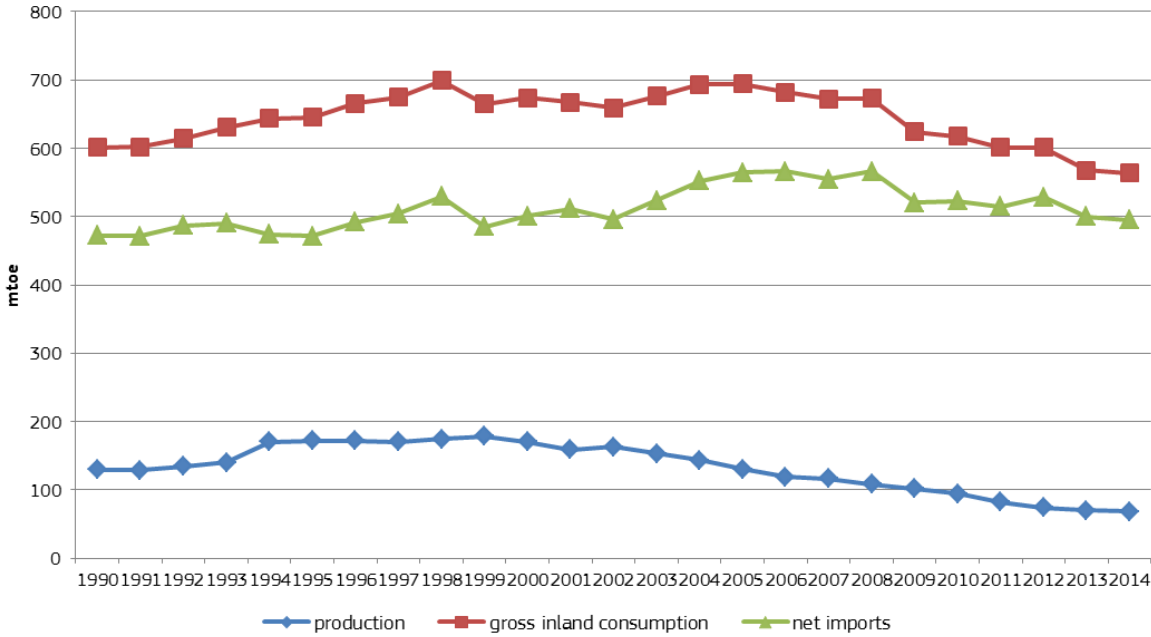
Import volumes will depend mainly on the level of consumption. In addition, the development of indigenous production (falling production results in increasing import dependency even if consumption is unchanged) and, to a smaller extent, stock changes can also affect import volumes. In principle, exports can also influence import volumes (higher exports has to be offset by higher imports) but extra-EU exports of crude oil, natural gas and coal are negligible.

In this section, we give short overview of the long-term trends of EU imports, based on Eurostat annual statistics (available until 2014).

EU imports of fossil fuels showed a marked increasing trend during the 1990s and for most of the 2000s. Since then, the tendencies of the different fuels are diverging.

EU consumption of crude oil peaked in 1998 and since 2005 it has been in a structural decline: between 2005 and 2014 it decreased by 19%. Energy efficiency improvements in the transport sector have contributed to this decline, as well as the gradual replacement of oil in other sectors (e.g. power generation, heating) with alternative fuels. Indigenous oil production has been also in decline, already since 1999, as the fields in the main producing region, the North Sea, are depleting. In the last 7-8 years, the fall in consumption exceeded the fall in production and, as a result, imports have been also decreasing. In 2014, net imports of crude oil were at the same level as in 2002.

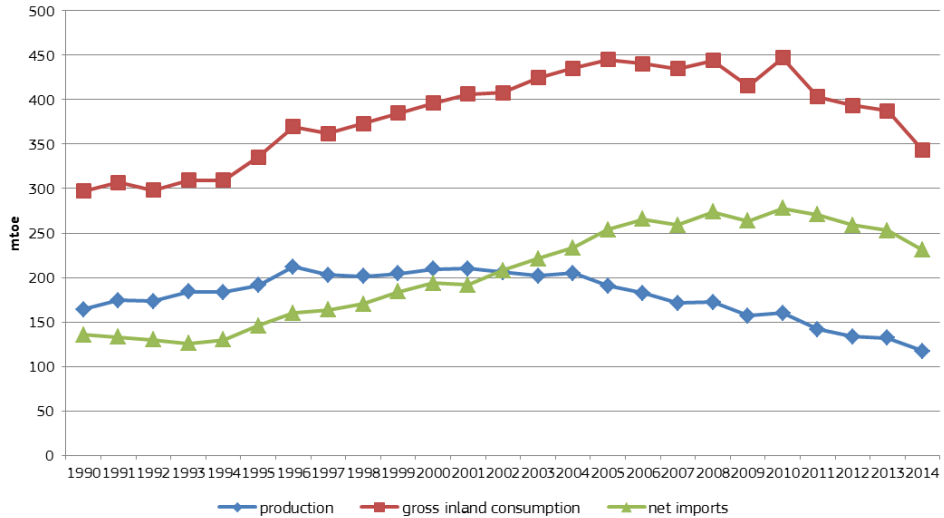
Figure 132 - Production, consumption and net imports of crude oil and NGL



Source: Eurostat

Gas consumption peaked later, in 2010. Since then, gas lost ground, especially in the electricity sector where it had to face increasing competition from renewables and coal. As gas is also used in space heating, its consumption is also driven by the weather: the strong decline in 2014 is can be largely explained by the relatively mild winter at the beginning of that year. Gas production plateaued in 1996-2004 and has been in decline since that, driven by depleting reserves. However, because of the strong decrease of consumption in the last few years, net imports decreased since 2010.

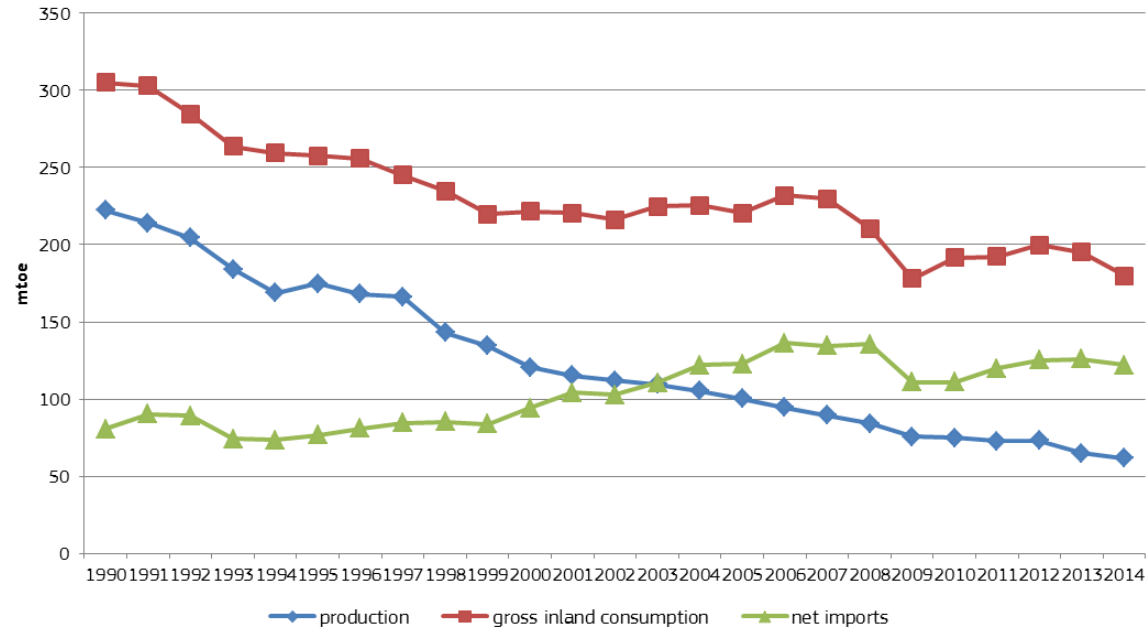
Figure 133 - Production, consumption and net imports of natural gas



Source: Eurostat

In case of hard coal, consumption was falling in the 1990 but stabilised in the 2000s. As indigenous production showed a relentless decline, imports were growing. After a steep drop in 2008-2009, consumption and net imports started to rise again. This was helped by increasing US coal exports as cheap shale gas squeezed out the fuel from the US power sector. Cheap imported coal, coupled with the low carbon prices, made the fuel competitive in the European power sector compared to other fuels, in particular gas. In 2013-2014, the trend reversed and coal consumption and imports started to fall again.

Figure 134 - Production, consumption and net imports of hard coal



Source: Eurostat

Prices

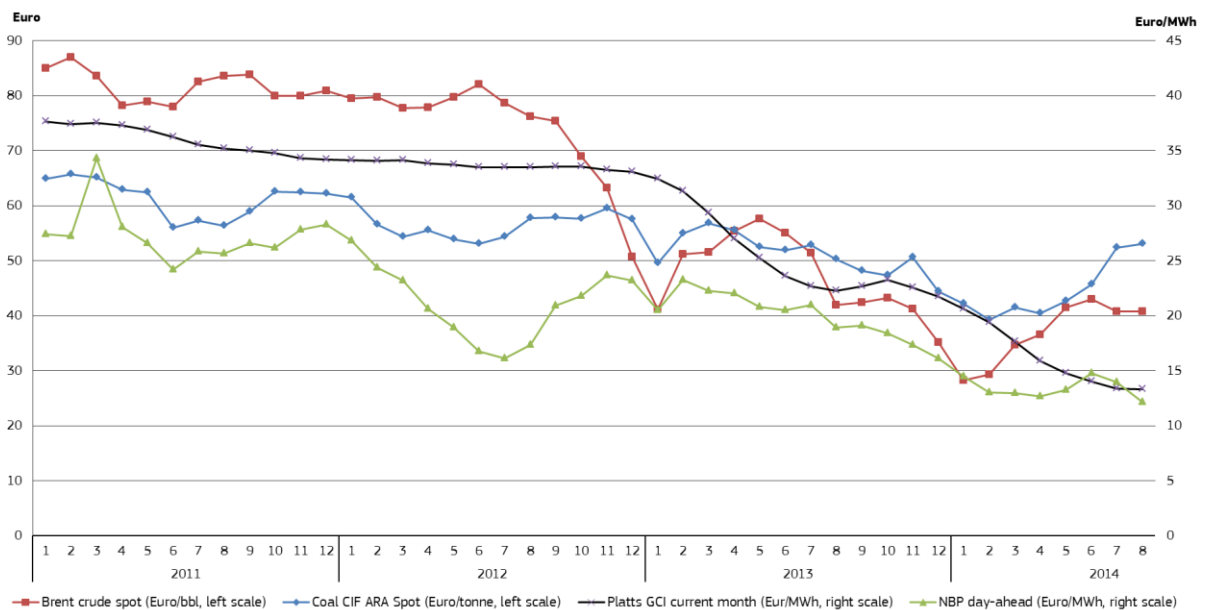
Oil is traded in the global market, hence its price is driven by global demand and supply conditions. Other factors including exchange trade developments and geopolitical risks can influence the price as well. As oil is easy to transport and transport costs are relatively low, price differences across the different regions of the world are limited. Crude oil comes in different qualities (grades), the price of which is typically pegged to a benchmark, e.g. Brent, West Texas Intermediate or Dubai, taking the characteristics (density, sulphur content, etc.) into account. Brent is the main benchmark used in Europe.

Gas is more difficult and expensive to transport and, as a result, markets are more regional in nature than in the case of oil and there are no globally used and accepted price benchmarks. That said, the progressive development of LNG markets means that regional markets are better and better connected and in recent years, particularly from 2015, one can see an increasing convergence of regional prices. Nevertheless, even within Europe there can be significant price differences between different markets, depending on – inter alia – the type of contracts (spot or long-term), the way of pricing (hub-based or oil-indexed) and, crucially, the level of competition. In general, markets with higher levels of competition show a lower price level than markets with only one supply source.

Like oil, coal is also traded in the global market. Price differences are basically explained by the (relatively low) transportation costs. China has a dominant role in the market: it is the biggest producer, the biggest consumer and the biggest importer of coal in the world although both consumption and imports decreased recently.

In the short run, changes in the import volumes are usually moderate but prices can be rather volatile. For example, the price of oil fell by more than 70% between mid-2014 and early 2016, whereas the price of gas and coal has also decreased significantly in recent years.

Figure 135 - Comparison of European oil, gas and coal prices



Source: Platts; GCI is the North West Europe Gas Contract Indicator, a theoretical index showing what a gas price linked 100% to oil would be

Exchange rates

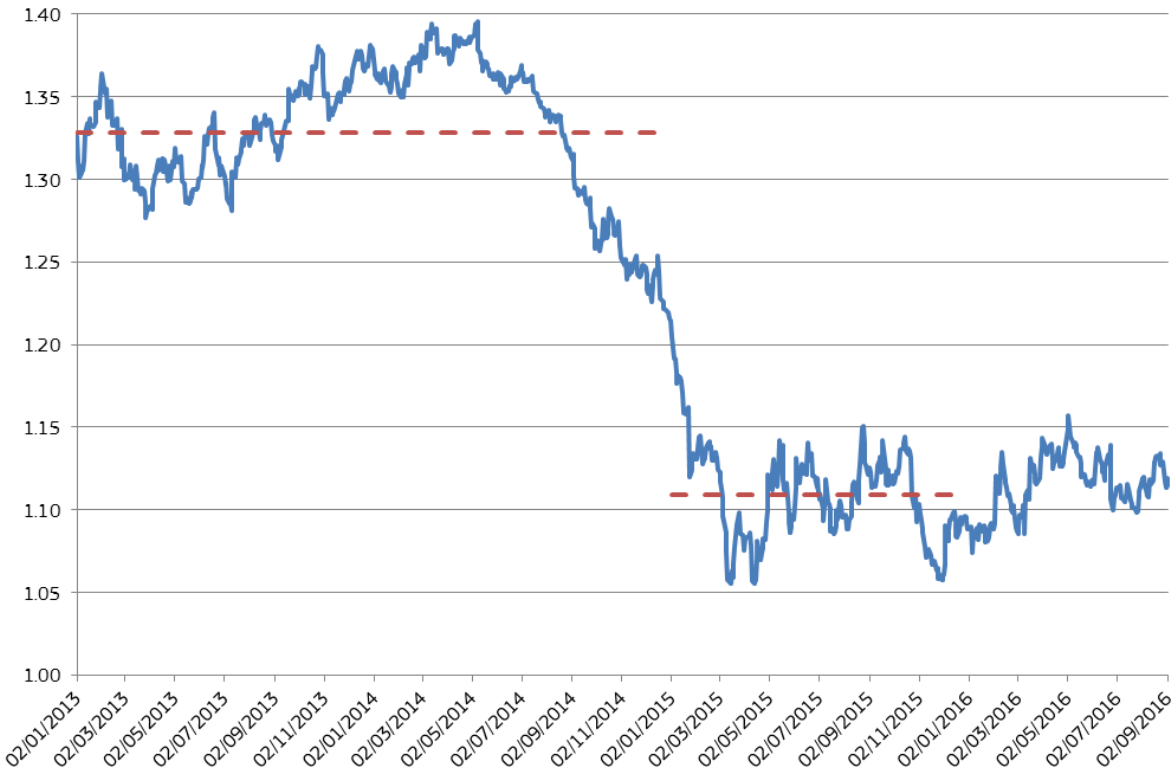
Most energy is traded in US dollars. Accordingly, the fluctuations of the USD/EUR exchange rate can directly affect the prices and the import bill when these are measured in euros.

Historically, there has been a consistently negative correlation between oil prices and the US dollar, although recently, with the decline of US oil imports, the relationship has weakened. In other words, it can be observed that the price of oil and the value of the US dollar generally move in an opposite direction: a strengthening dollar typically coincides with decreasing oil prices and vice versa.¹⁰ This means that changes in the oil price, whether upwards or downwards, are mitigated by the exchange rate and the volatility of the oil price expressed in euros is smaller than the volatility of the price expressed in dollar. In view of the correlation between oil, gas and coal prices, to a certain extent this is true for coal and gas prices, too.

The euro has considerably weakened compared to the US dollar in the second half of 2014: the exchange rate went down from nearly 1.40 USD/EUR in early May 2014 to 1.06 in March 2015, a depreciation of 24% in 10 months. The depreciation of the euro occurred against the background of increasingly diverging monetary policy stances and a continuously declining outlook for growth and inflation in the euro area. Since early 2015, the exchange rate has been fluctuating between 1.06 and 1.16.

In spite of the weakening of the euro in the second half of 2014, the 2014 average exchange rate was practically the same as in 2013, 1.33, but in 2015 it decreased to 1.11.

Figure 136 - The USD/EUR exchange rate since 2013



¹⁰ One explanation is that a stronger dollar makes oil and other commodities priced in dollars more expensive for buyers using other currencies, which can dampen demand and thereby contribute to decreasing prices.

Source: ECB

The red dotted lines represent the annual average in 2013, 2014 and 2015

Methodology

In case of oil, we are in comfortable position as Member States report on a monthly basis the volume and the average CIF price¹¹ of imported oil under Regulation (EC) No 2964/95 of 20 December 1995 introducing registration for crude oil imports and deliveries in the Community.¹² Every year, the collected and aggregated information is published on the website of DG Energy.¹³

For gas, the import volumes used are from the Transparency Platform of the European Network of Transmission System Operators for Gas (ENTSO-G) which is based on the gas flows reported by gas transmission system operators. Gas imports arrive to the EU from Russia, Norway, Algeria and Libya through several pipelines while, in 2015, LNG was arriving from 7 supplying countries to 20 terminals in 10 Member States.¹⁴ Volumes were calculated by adding the gas flows at the relevant entry points to the EU gas network.

Gas import prices can vary across Member States depending on the supplier, the supply route, the type of contracts (spot or long-term), the way of pricing (hub-based or oil-indexed) and the level of competition. Based on available sources, including customs data, national agencies (e.g. BAFA in Germany) and commercial data providers, for each supplier (Russia, Norway, Algeria, Libya and LNG) and for each year an estimated average €/MWh price was established.

Table 9. Estimated average gas import prices by supplier (€/MWh)

Year	Russia	Norway	Algeria	Libya	LNG
2013	30.0	25.0	30.0	31.0	28.5
2014	25.5	20.0	27.5	29.5	25.5
2015	22.0	19.5	23.5	23.5	20.5

In case of LNG, the estimation is based on the price reported by ThomsonReuters (covering Belgium, France, Spain and the UK). While in 2012-2013 prices in the Mediterranean have been markedly higher than those in Northwest Europe, in 2015 this premium has largely disappeared.

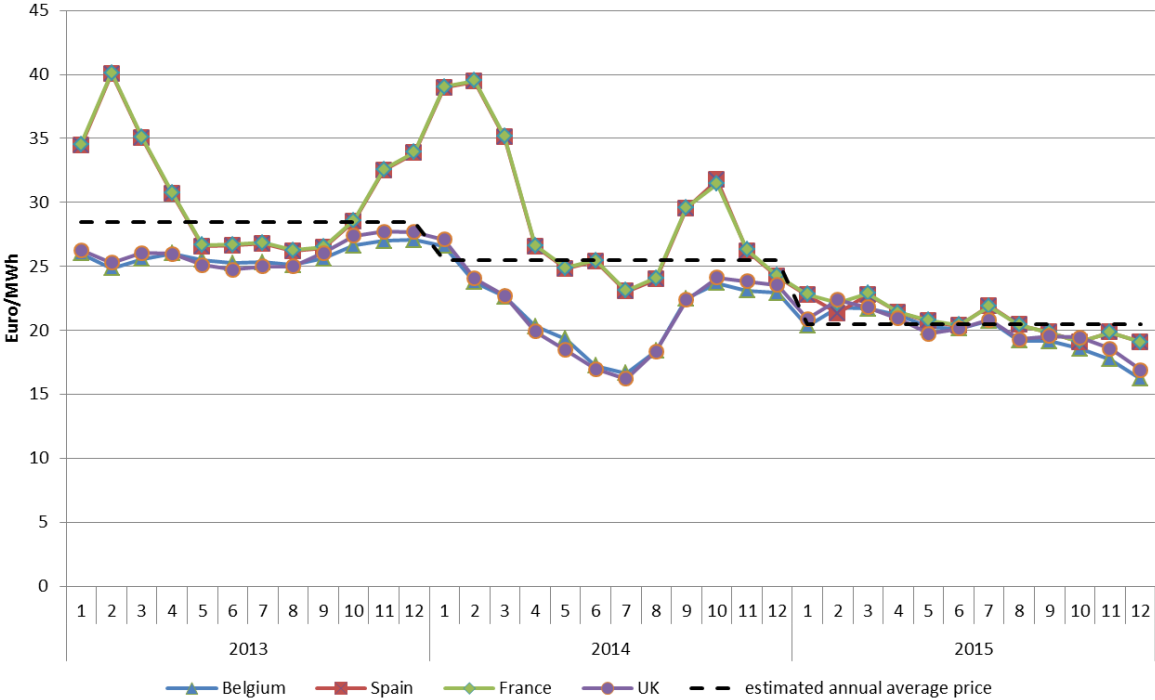
¹¹ The CIF price includes the FOB price (the price actually invoiced at the port of loading), the cost of transport, insurance and certain charges linked to crude oil transfer operations.

¹² <http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:31995R2964>

¹³ <https://ec.europa.eu/energy/en/statistics/eu-crude-oil-imports>

¹⁴ Including Poland (the Świnoujście terminal received its first cargo in December) but without small-scale, off-grid terminals

Figure 137 - Spot LNG prices in Europe



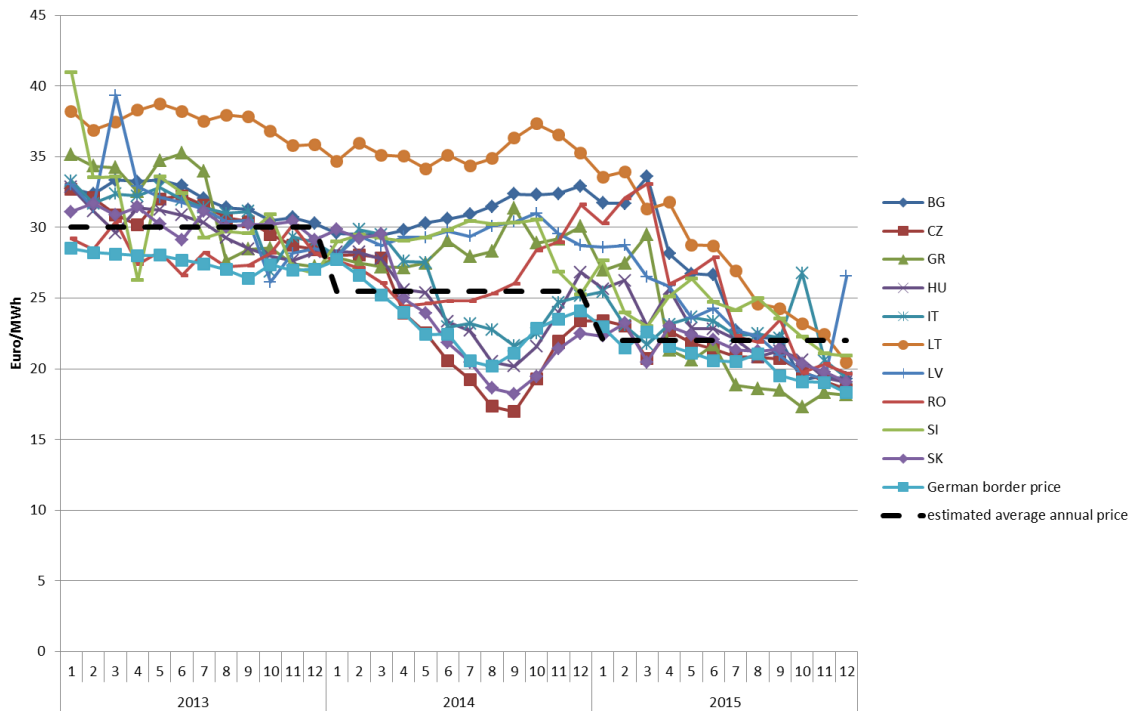
Source: ThomsonReuters

In case of pipeline imports the estimation is mostly based on customs data¹⁵ and the border prices reported by the German Federal Office for Economic Affairs and Export Control (BAFA)¹⁶.

¹⁵ Eurostat COMEXT database

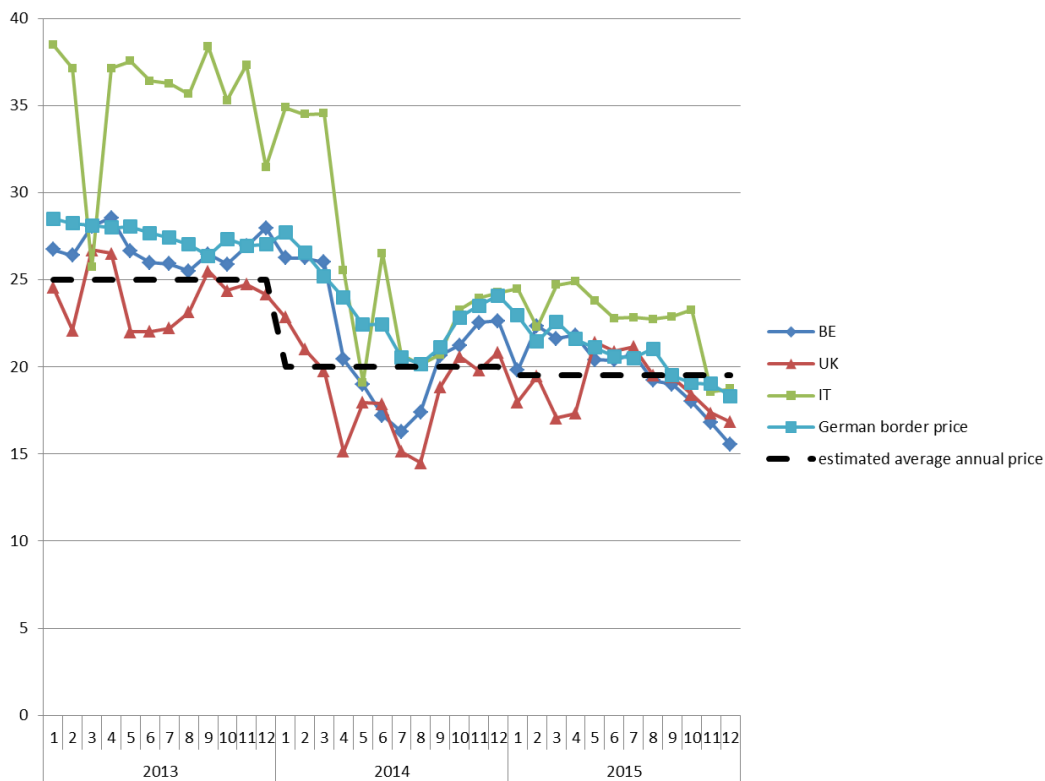
¹⁶ http://www.bafa.de/bafa/de/energie/erdgas/ausgewaehlte_statistiken/egasmon_xls.xls

Figure 138 - Estimated border prices of gas imports from Russia



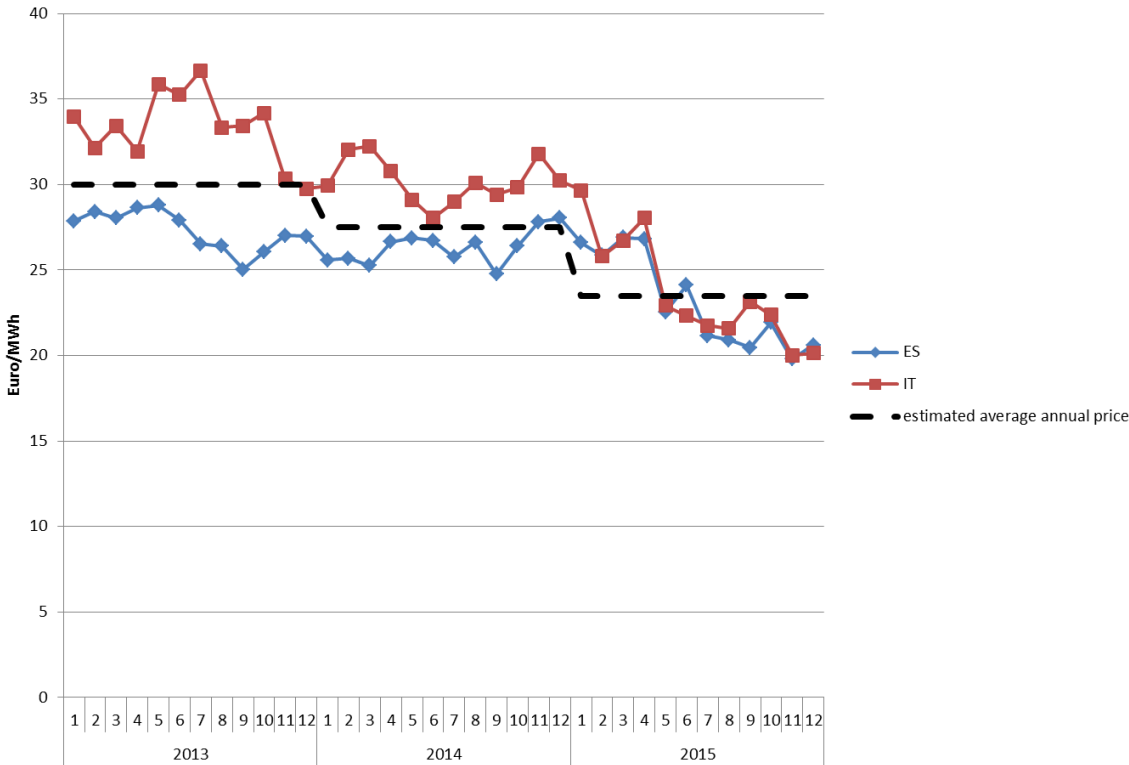
Source: Eurostat COMEXT, BAFA; the German border price reported by BAFA relates to all imports, not only Russian

Figure 139 - Estimated border prices of gas imports from Norway



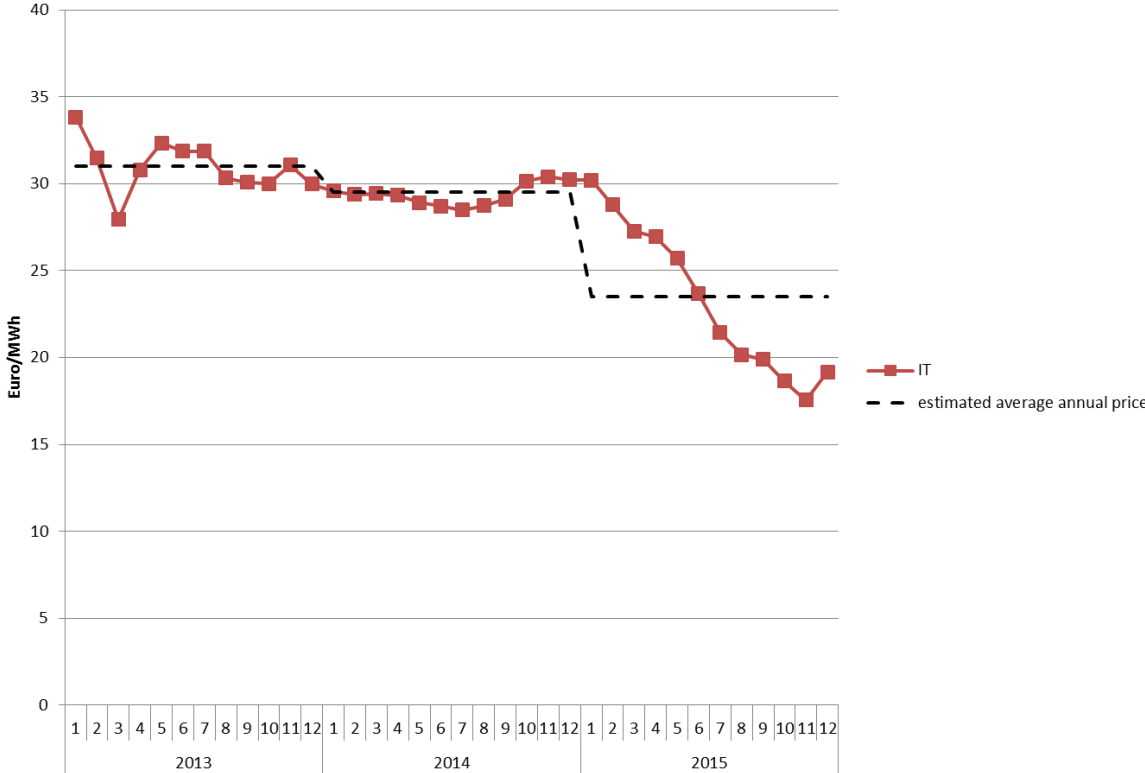
Source: Eurostat COMEXT, BAFA; the German border price reported by BAFA relates to all imports, not only Norwegian

Figure 140 - Estimated border prices of gas imports from Algeria



Source: Eurostat COMEXT

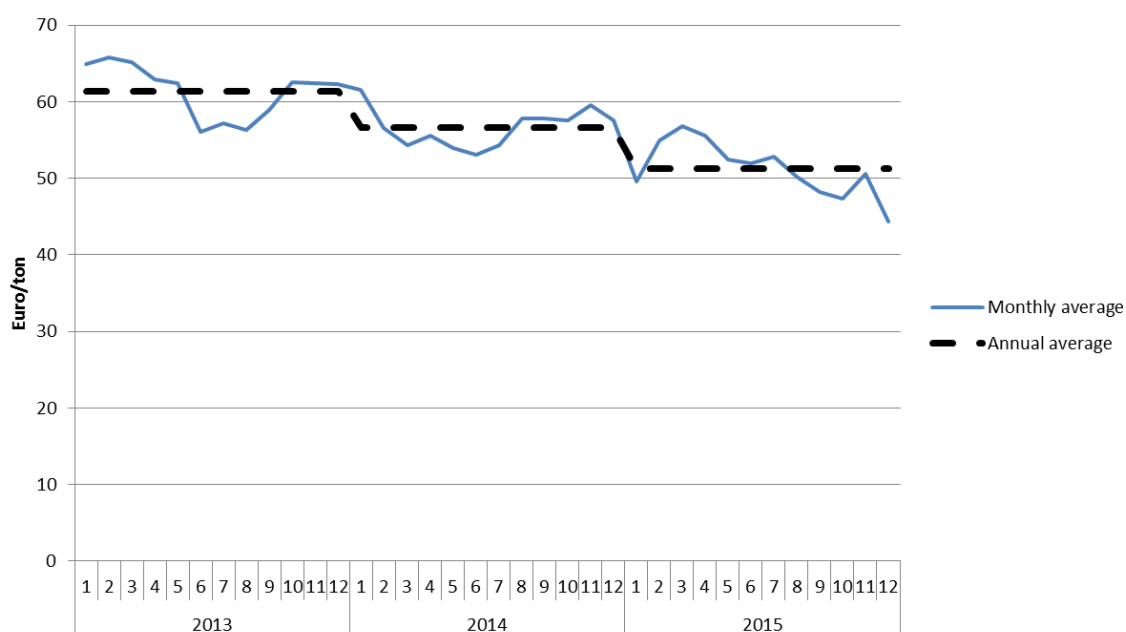
Figure 141 - Estimated border prices of gas imports from Libya



Source: Eurostat COMEXT

In case of coal, volumes are the imports of hard coal¹⁷, reported in Eurostat annual (2013 and 2014) and monthly (2015) statistics. For price, the CIF ARA spot price reported by Platts was used; this is deemed to be representative for most of the hard coal imports arriving to the EU.

Figure 142 - CIF ARA spot coal price



Source: Platts

For the conversion from US dollars to euros, we use the annual average of the daily official exchange rates published by the European Central Bank¹⁸: 1.3281 in 2013, 1.3285 in 2014 and 1.1095 in 2015.

4.2 Import bill calculation

The price of all three fuels decreased significantly in 2014-2015, resulting in a decreasing import bill.

Oil

Table 10. EU crude oil import bill in 2013-2015

	2013	2014	2015*
Volume (million bbl/day)	9.83	10.01	10.48
Average Brent price (USD/bbl)	108.66	98.95	52.39
Average CIF import price (USD/bbl)	108.83	98.65	51.72
EUR/USD exchange rate	1.3281	1.3285	1.1095
Import bill (bn USD)	390.6	360.4	197.8
Import bill (bn EUR)	294.1	271.3	178.3

Source: DG Energy, based on Member State reports under Regulation (EC) No 2964/95, Platts, ECB

¹⁷ This includes anthracite, coking coal, other bituminous coal and sub-bituminous coal

¹⁸ <http://www.ecb.europa.eu/stats/exchange/eurofxref/html/index.en.html>

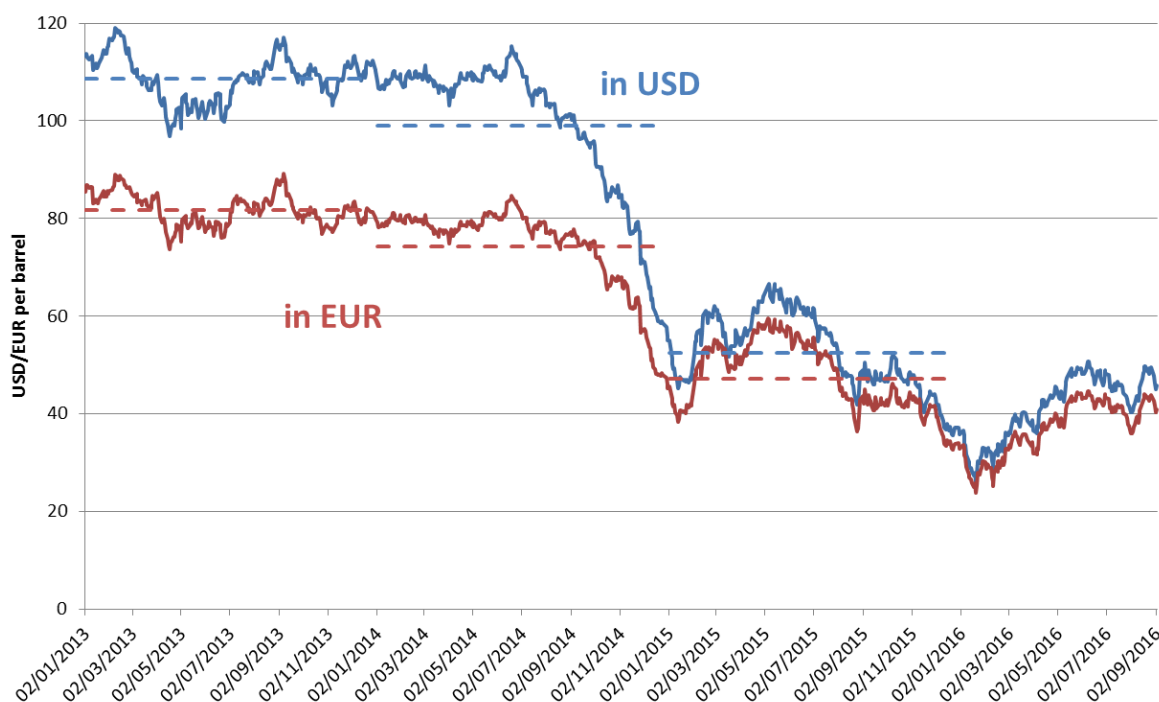
*for confidentiality reason, the 2015 figures do not include the Czech Republic (in 2014, imports by the Czech Republic made up around 1.5% of total EU imports, implying an estimated import bill of 2.5-3 billion euros in 2015)

While crude oil imports show a decreasing trend since 2008, imports bounced back in 2014 and especially in 2015, driven by a combination of factors. After years of gradual decline, the consumption of oil products increased in 2015, helped by low oil prices, the economic recovery and weather impacts (relatively cold 2014-2015 winter after a mild winter in the previous year). Better refinery margins also allowed refiners to increase throughput, leading to higher crude oil imports (and an increasing net export of products). Furthermore, low oil prices provided an incentive for operators to raise stock levels which also contributed to the increase of crude oil imports.

As a result of the oversupply in the global market, oil prices decreased by more than 70% between mid-2014 and the beginning of 2016. In January 2016, the price of Brent dropped below 30 USD/bbl for the first time since 2004. In spite of the price drop, the average Brent price was almost 100 USD/bbl in 2014 (only 10 USD/bbl below the 2013 average) but it decreased to about 52 USD/bbl in 2015. Section 3.1 contains detailed information on the causes of the oil price drop.

While the annual average Brent price decreased by 52% between 2013 and 2015, when measured in euro, the decrease was "only" 42%.

Figure 143 - The Brent spot oil price since 2013

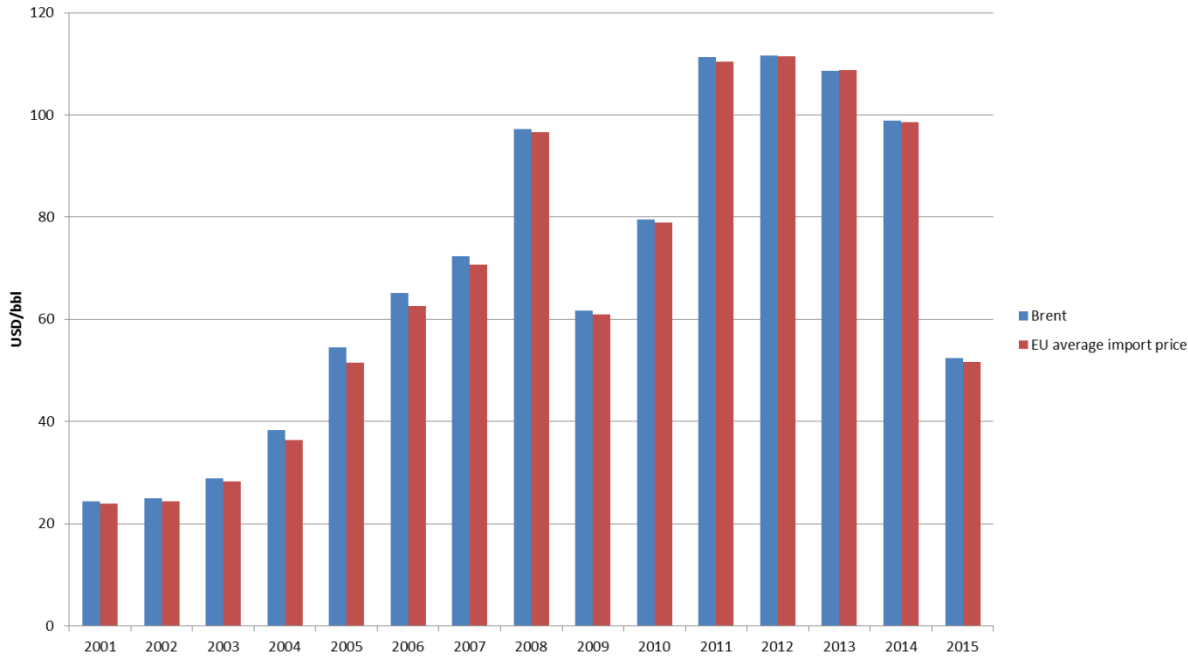


Source: Platts

The dotted lines represent the annual average in 2013, 2014 and 2015

Brent is a very good proxy for the average EU oil import price, the difference between the two is usually less than 1 USD/bbl. The average EU import price is usually slightly lower, reflecting the fact that a large part of imports is made up by heavy and/or sour crudes which are typically cheaper than the light and sweet crudes like Brent.

Figure 144 - The Brent price and the average EU import price



Source: Platts (Brent), DG Energy (average EU import price)

In spite of the growing import volumes, the EU oil import bill significantly decreased in 2014 and 2015 as a result of the oil price fall. While in 2013 the oil import bill was close to USD 400 billion, in 2015 it dropped below USD 200 billion, a decrease of 49% within two years. The depreciation of the euro in the same period mitigated this trend: measured in euro, the import bill decreased from EUR 294 billion in 2013 to EUR 178 billion euros in 2015, a decrease of 39%.

Gas

Table 11. EU gas import bill in 2013-2015

	2013	2014	2015
Volume (TWh)	3 390	3 115	3 449
Estimated average import price (€/MWh)	28.1	23.6	21.0
Import bill (bn EUR)	95.4	73.5	72.5

Source: ENTSO-G, DG Energy estimations

Gas import volumes have been rather volatile in the last few years, mainly driven by the weather. In 2014, higher-than-average winter temperatures reduced gas consumption but in 2015, a colder winter, coupled with the significant decrease of Dutch production, meant that imports bounced back.

During this period, gas prices have shown a decreasing trend as falling oil prices and steady LNG supplies put downward pressure on import prices. The price of an important, but diminishing part of supply contracts is linked to the price of oil products (typically gasoil and/or fuel oil) and therefore falling oil prices directly affect such "oil-indexed" gas prices, albeit with a 6-9 month lag. In 2014-2015, growing supply and limited demand growth led to a sharp fall of global LNG prices, thereby also contributing to the decreasing import price in the EU.

In spite of the fluctuation of the import volumes, the estimated import bill decreased in both 2014 and 2015 as a result of the falling prices. Between 2013 and 2015, the estimated gas import bill decreased by 24%, from EUR 95.4 billion to EUR 71.6 billion.

Coal

Table 12. EU hard coal import bill in 2013-2015

	2013	2014	2015
Volume (million tons)	227.8	225.8	194.3
CIF ARA spot price (USD/ton)	81.57	75.20	56.84
EUR/USD exchange rate	1.3281	1.3285	1.1095
CIF ARA spot price (EUR/ton)	61.41	56.63	51.25
Import bill (bn USD)	18.6	17.0	11.0
Import bill (bn EUR)	14.0	12.8	10.0

Source: Eurostat, Platts, ECB

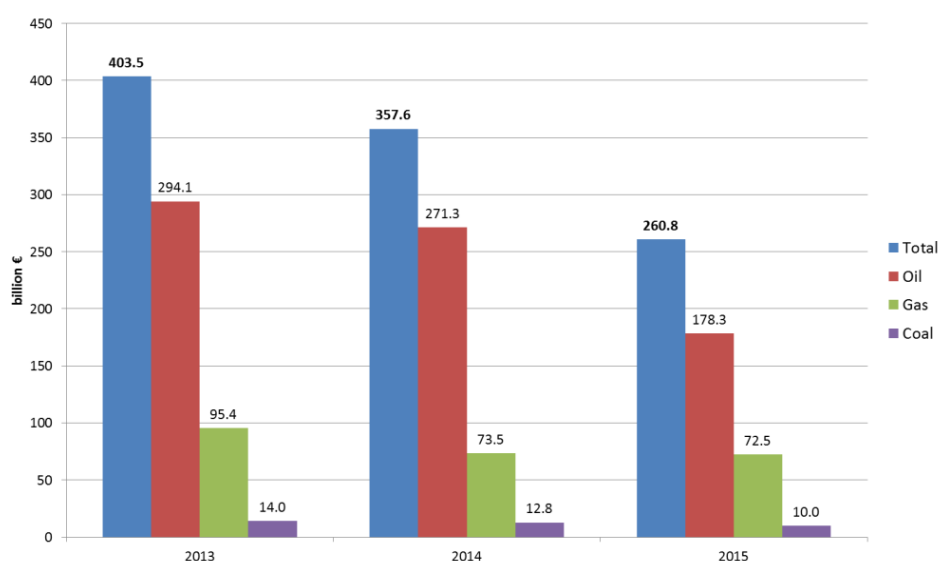
Hard coal imports increased in 2013 but decreased in 2014 and 2015. During the period, prices gradually decreased, driven by the oversupply in the global market.

Similarly to oil and gas, the import bill is also decreasing although the absolute values are significantly lower. Between 2013 and 2015, the estimated coal import bill decreased by 29%, from EUR 14.0 billion to EUR 10.0 billion.

Total

In 2013, the total import bill was about EUR 400 billion, more than EUR 1 billion per day. Falling prices allowed the EU to decrease its estimated import bill to EUR 358 billion in 2014 (-11%) and to EUR 261 billion in 2015 (-27%). The cumulative decrease between 2013 and 2015 was 35%. The decrease of the import bill is more than EUR 140 billion, equivalent to about 1% of EU GDP.

Figure 145 - The estimated EU import bill



Source: DG Energy calculation

These estimates were verified by looking at the value of imports reported in international trade statistics. While the value of imports of individual Member States is often confidential, Eurostat is able to calculate import values for the EU as a whole. The product coverage of Eurostat's import bill calculation is wider, it also includes NGLs, lignite, peat and coke but compared to the main products (oil, gas and coal), the quantity and the value of these are negligible. According to Eurostat's calculations, the EU energy import bill was EUR 406.1 billion in 2013, EUR 357.8 billion in 2014 and EUR 262.2 billion in 2015.¹⁹ Our estimates are well in line with these figures.

Looking at the import bill by supplying country, Russia is clearly the main energy supplier of the EU; in fact, it is the top supplier of all three fuels. In 2015, about 34% of the import bill went to Russia. Russia was followed by Norway (19%) and Nigeria (7%).

Table 13. Estimated import bill by fuel and supplier in 2015 (billion €)

Supplier	Oil	Gaseous gas	LNG	Coal	Total
Russia	55.6	30.5		3.0	89.1
Norway	24.0	24.9	0.6		49.5
Nigeria	17.6		1.2		18.8
Algeria	9.1	5.8	1.8		16.7
Saudi Arabia	16.1				16.1
Kazakhstan	12.9			0.1	13.0
Iraq	12.8				12.8
Azerbaijan	10.2				10.2
Angola	8.2				8.2
Libya	5.6	1.8			7.4
Qatar	0.0		5.2		5.2
Other	6.2		0.7	6.9	13.8
Total	178.3	63.0	9.5	10.0	260.8

Source: DG Energy calculation

4.3 Putting the import bill in context

The per capita import bill decreased from around 800 euros in 2013 to around 500 euros in 2015.

When expressed as a percentage of EU GDP (at current prices), the share of the estimated import bill decreased from 3.0% in 2013 to 1.8% in 2015. This saving gave a significant boost to GDP growth in 2015: lower energy prices meant more disposable income for households, lower energy costs for businesses and increasing activity of oil intensive sectors (e.g. transport, refining and chemicals).

¹⁹ http://ec.europa.eu/eurostat/statistics-explained/index.php/EU_imports_of_energy_products_%E2%80%94_recent_developments

Energy products constitute a significant part of total EU imports; it is the second most important product group after machinery and transport equipment. When compared to total extra-EU imports, the share of the energy imports was about 24% in 2013 but it decreased to 15% in 2015.

Table 14. The energy import bill as percentage of GDP and total imports

	2013	2014	2015
Energy import bill as %age of GDP	3.0%	2.6%	1.8%
Energy import bill as %age of total imports	23.9%	21.1%	15.1%

Source: DG Energy calculation

The estimated import bill in 2013 (EUR 403 billion) was more or less equivalent to the GDP of Belgium or Poland. The estimated import bill in 2015 (EUR 261 billion) was more or less equivalent to the GDP of Denmark.

The decrease of the import bill between 2013 and 2015 (EUR 142 billion) is more or less equivalent to the combined 2015 GDP of the six smallest economies of the EU: Slovenia, Lithuania, Latvia, Estonia, Cyprus and Malta.