

The rise in energy prices weighing on household budgets

Consumer prices of gas, vehicle fuel and, to a lesser extent, electricity increased sharply between December 2020 and October 2021, by about 41%, 21% and 3% respectively. Fuel prices came close to the levels they had reached in autumn 2018, while those of gas exceeded them. These rises are already resulting in slightly tighter budgets for all households, as the share of their spending dedicated to energy was half a point higher in Q3 than its average over the past 15 years. In October 2021, the rise in prices since the start of the year resulted in additional monthly energy expenditure of a little over €40 on average per household, of which €20 for fuel. However, fuel prices were relatively low at the end of 2020 due to the health crisis. If the comparison is made with November 2019, which is to say prior to the crisis, the additional cost is less: about €30 in October 2021, of which €8 for the price of vehicle fuel.

Energy prices have soared since the start of the year, mainly for gas and fuel

Since the start of the year, worldwide tensions on energy markets have driven a rise of about 21% in fuel prices in France (+21.9% for diesel and +20.5% for petrol between December 2020 and October 2021). Gas saw a more pronounced rise of 40.9% over the same period, although it is consumed to a lesser extent by households. The increase in electricity prices, meanwhile, remained similar to that in previous years, at 2.6% (► **Figure 1**).

The last time such price levels were reached was autumn 2018, when the price of oil went slightly over €70 in October 2018. The current situation is on a par with the tensions at that time, with diesel prices exceeding €1.50 per litre since mid-October, for example. Although world markets have been showing signs of easing in Q4, uncertainties still remain as to whether prices are likely to stay at high levels in H1 2022.

The weight of energy expenditure in overall consumption of households is about half a point higher than its fifteen-year average and exceeds that in autumn 2018

A portion of the household expenditure devoted to housing (heating, lighting, cooking, etc.) and to transport is particularly sensitive to any variations in energy prices, as the volumes of such spending are generally imposed by the requirements of the home and of everyday travel.¹

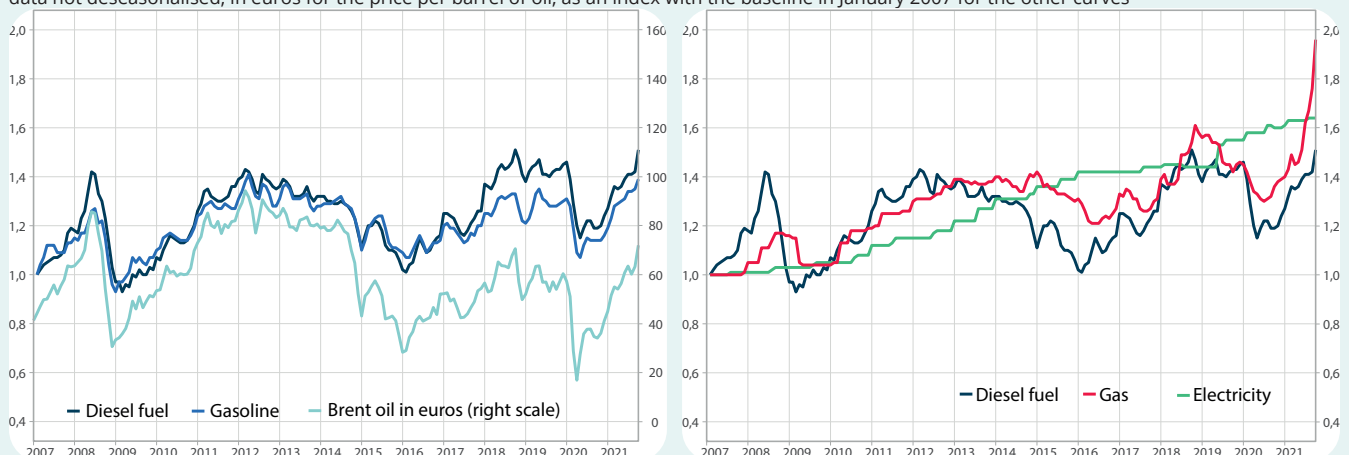
This portion hit a low in 2020, at just below 8%,² due to the context of travel restrictions imposed by the health rules. It has been rising again continuously since then and reached 8.9% in Q3 2021 (► **Figure 2**). Although the rise is driven both by energy inflation and by a return to normal of consumption and travel habits, the level reached this summer is still above the average for the past fifteen years (about 8.5%) and is higher than that for autumn 2018 on account of the rise in fuel spending. The

¹ See the book in the collection Insee Références “Economic players and the environment” or INSEE Première “In 2017, households spent 11% of their disposable income on cars”.

² The expenditure considered here is in current euros and includes that on the “Energy, water, waste” and “Manufacture of coke and refined petroleum products” items in the classification for the quarterly accounts. Some spending other than on energy is therefore taken into account, too (expenditure on water consumption and waste management, in particular). This spending is in moderate proportions, however, and therefore is unlikely to vary significantly under the effect of energy prices.

► 1. Oil price in euros and consumer price indices for vehicle fuels (left) and consumer price indices for gas, diesel and electricity (right)

data not deseasonalised, in euros for the price per barrel of oil, as an index with the baseline in January 2007 for the other curves



Note: the price indices are taken from the breakdown of the CPI according to the consumption items in the COICOP classification. They are directly consistent with the spending data from the Family Budget survey used below.

Source: INSEE

highest point over the 2007-2021 period is still the peak of 9.6% reached in 2013, when oil prices remained above 75 dollars a barrel for a long period of time.

This measurement of the pressure on the current expenditure of households does also depend on the general level of their consumption, which has been affected by the periods of lockdown and had not yet returned to its pre-crisis (Q4 2019) level in Q3 2021. An alternative measurement consisting in calculating the same expenditure not in relation to household expenditure but in relation to their gross disposable income, produces a similar outcome, which is to say a marked increase in the ratio in Q3, close to the levels reached in 2018 but still below that 2013 high.

In October 2021, the rise in prices resulted in additional monthly energy expenditure of a little over €30 on average per household compared to the end of 2019, of which €8 for fuel prices

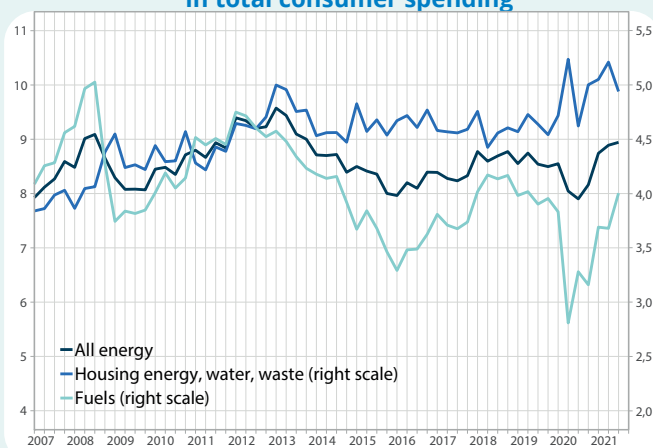
At a more micro-economic level, energy expenditure per household last October was €36 higher than in November 2019, a period when energy prices had not yet been affected by the crisis. With this additional expenditure, €30 comes solely from the variation in prices since then, of which €8 in particular for vehicle fuels, €14 for gas and €2 for heating fuel (► **Figure 3**, contributions in orange). €6 comes from greater energy consumption over the period, meanwhile (► **Figure 3**, contributions in blue).

If the situation in October 2021 is compared not with November 2019 but with December 2020, the month from which prices and consumption began to rise again significantly from their low point, the additional energy expenditure is greater, at €64 per household. This additional amount partly reflects the particular situation in 2020: with the health restrictions in place at the end of 2020, energy consumption volumes were well below their pre-crisis levels, and €21 of that €64 therefore comes from the rise in energy consumption, and in particular of vehicle fuel, between December 2020 and October 2021. Energy prices were relatively low at the end of 2020 and €43 of the €64 comes solely from the variation in energy prices between December 2020 and October 2021 (of which €20 for vehicle fuel, €15 for gas and €6 for heating fuel).

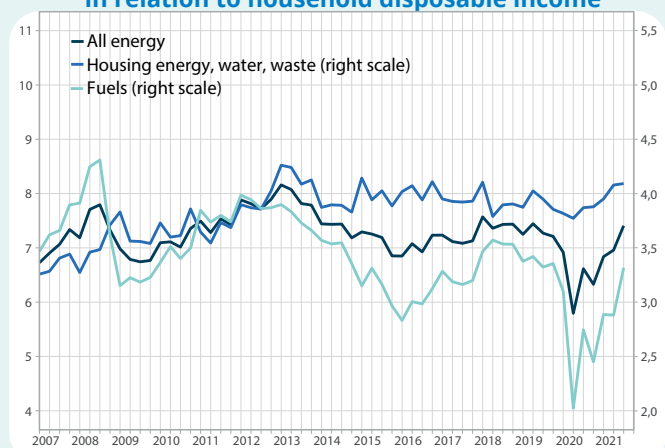
This rise in energy prices this year affects households in different proportions, due to substantial disparities in their consumption, depending on their standard of living or on whether they live in an urban or rural area. For example, the budget dedicated to vehicle fuels by a household on average over a year can range from €650 in the Paris conurbation to €1,550 in a rural area (according to the Family Budget Survey conducted in 2017). For instance, if energy prices had remained at their November 2019 level, a low-income household (first decile) would have spent almost €19 less in October 2021, against almost €45 for a household in the last income decile, and approximately €27 in the Paris conurbation (of which €5 for vehicle fuel), against €33 in a rural municipality (of which €12 for vehicle fuels), on the basis of usual household consumption behaviour (► **Figure 4 and box**). ●

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► 2. Share of energy expenditure including water consumption and waste management, as a % in total consumer spending



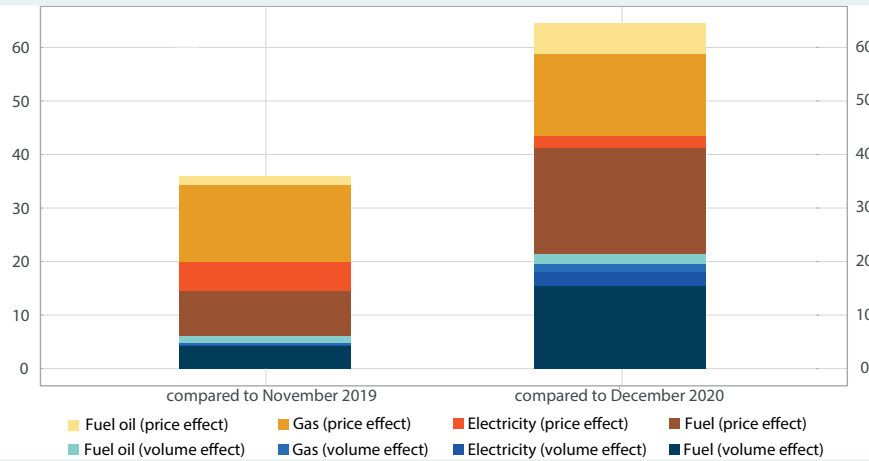
in relation to household disposable income



Note: the consumer spending considered here is in current euros and includes that on the “Energy, water, waste” and “Manufacture of coke and refined petroleum products” items in the classification for the quarterly accounts. Source: quarterly accounts, 2014 base, INSEE

► 3. Increase in the energy bill for an average household in October 2021, according to the month taken for comparison

in euros



Note: the price effect (contributions in orange) represents the additional energy expenditure in October 2021, in relation to the reference month, resulting solely from variations in energy prices. The volume effect (contributions in blue) represents the additional energy expenditure resulting solely from variations in energy consumption volumes.

How to read it: an average household saw a rise in its energy bill of €14 due to the variation in the price of gas between November 2019 and October 2021.

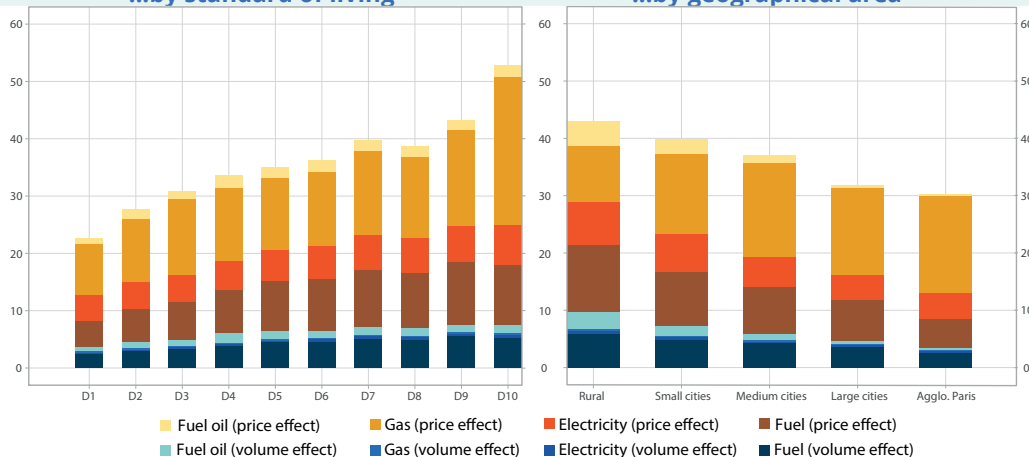
Source: INSEE calculations based on quarterly accounts

► 4. Increase in the energy bill for an average household in October 2021, in relation to November 2019...

in euros

...by standard of living

...by geographical area



Note: the price effect (contributions in orange) represents the additional energy expenditure in October 2021, in relation to the reference month, resulting solely from variations in energy prices. The volume effect (contributions in blue) represents the additional energy expenditure resulting solely from variations in energy consumption volumes. These figures are based on the structure of expenditure per consumption item taken from the Family Budget survey in 2017.

How to read it: a household whose standard of living is situated in the first decile saw an increase in its energy bill of €23, representing the sum of the additional costs for vehicle fuel, gas, electricity and heating fuel.

Source: INSEE calculations based on quarterly accounts, Family Budget 2017

Methodology for calculating energy bill increases for households resulting from the increase in energy prices

The figures are based on consumption estimates by value and by volume, made on the basis of the data in the quarterly accounts in 2021 for the "Electricity", "Gas, steam and air conditioning", "lead-free petrol", "Diesel" and "Heating fuel" (data corrected for seasonal variations and for working days). The volume effect corresponds to the difference in this data between the two months in question. The price effect takes the volumes for the reference month and applies the variation in prices for each of the items, using the corresponding consumer price index.

October 2021 was chosen in order to take the most recent data for household consumption of goods and the consumer price indices. The aim of the reference to November 2019 is to make a comparison with the pre-crisis period. The month of November was considered a more suitable choice than December 2019 as the latter was marked in particular by a context of transport strikes. Finally, the reference to December 2020 serves to illustrate the rise in household energy bills from a remarkable low point not only in energy consumption volumes (vehicle fuels in particular, due to the restrictions in force) and energy prices (oil price in particular).

These aggregate effects are then calculated for an average household and then per category of population using the ratios taken from the 2017 Family Budget ("Les dépenses des ménages en 2017", Insee Résultats, September 2019). For example, for a household in the first decile with average vehicle fuel consumption in 2017 that was about 56% of the level observed for an average household, an additional cost is applied in line with this proportion ●