

Electricity and gas in 2022: the impact of energy bills on Spanish households

The energy crisis has had a major impact on how much of their income Spanish households have to allocate to paying their energy bills.¹ In order to quantify this, we have examined fully anonymised employment-related income data (i.e. payrolls and unemployment benefits) and direct debits for electricity and gas bills charged to bank accounts held with CaixaBank. By having access to both pieces of information for the same household, we can estimate what percentage of their income was allocated to paying for electricity and gas.² Furthermore, we can estimate how this percentage changed depending on households' income level.

Clearly, in 2022 all households had to allocate a greater percentage of their income to paying their electricity and gas bills compared to the previous year, as shown in the first chart. A middle-income household dedicated 4.7% of their employment-related income to paying their electricity and gas bills, a 0.4-pp increase over the previous year.³

However, the additional effort required to pay for energy consumption was not the same for all households: those with lower incomes had to allocate a greater proportion of their income to paying their electricity and gas bills compared to those with higher incomes. Specifically, low-income households (20th percentile) allocated 8.1% of their income to this purpose (+0.7 pps more than in 2021), while high-income households (80th percentile) allocated 3.2% (+0.3 pps more than in 2021). This

1. In previous articles we analysed the evolution of household electricity bills in these turbulent times following the outbreak of the war in Ukraine. See the Focus «[The evolution of Spanish households' electricity bills in 2022](#)» in the MR12/2022 and «[Electricity prices are sky high, but what about household bills?](#)» in the MR01/2022.

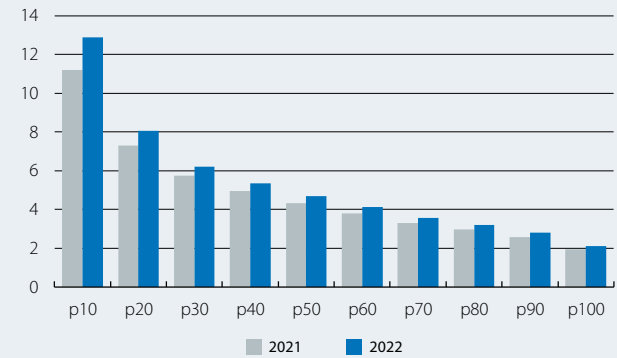
2. To do this, we add together the monthly expenditure on electricity and gas of each customer aged between 16 and 65 who pays these bills by direct debit. In addition, we calculate the total annual employment-related income – whether wages or unemployment subsidies or benefits – paid into bank accounts that are in the same individual's name. This encompasses the income of all holders of these accounts in order to approximate household income. However, a household's employment income could be underestimated if some wages or unemployment benefits are paid into accounts held with other banks. Moreover, we do not include the income of other members of the same household who are not named as account holders in the account taken into consideration. We then calculate the equivalent monthly income in order to determine the proportion that is allocated to paying these bills.

3. For reference, Spanish households allocated 4.1% of their total expenditure in 2021 to household energy bills (primarily electricity and gas, which is expenditure subgroup 4.5) according to the Household Budget Survey (National Statistics Institute).

4. For further details on the measures taken and their impact on income distribution, see E. García Miralles (2023), «[Support measures in the face of the energy crisis and the rise in inflation: an analysis of the cost and distributional effects of some of the measures rolled out based on their degree of targeting](#)». Economic Bulletin, 2023/Q1, Bank of Spain.

Spain: decile distribution of electricity and gas expenditure

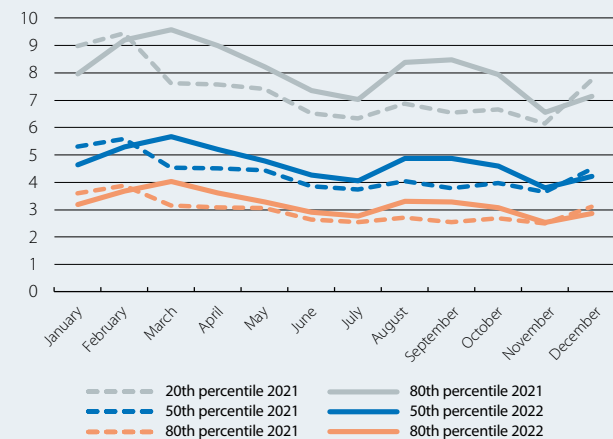
(% of income)



Notes: (p) Percentile. Median monthly expenditure on electricity and gas in each decile, calculated as a percentage of total annual income converted into monthly income (including wages paid through payrolls and unemployment subsidies or benefits). Source: CaixaBank Research, based on internal CaixaBank data.

Spain: monthly evolution of energy expenditure

(% of income)



Note: Median monthly expenditure on electricity and gas in each decile, calculated as a percentage of total annual income converted into monthly income (including wages paid through payrolls and unemployment subsidies or benefits). Source: CaixaBank Research, based on internal CaixaBank data.

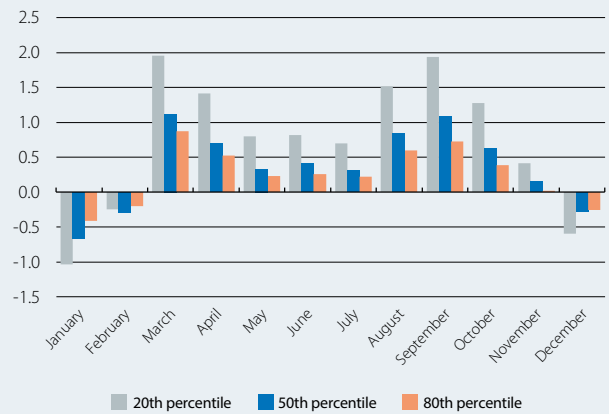
additional effort would have been even greater without the support measures introduced to tackle the energy crisis, which have benefited all households, but especially those on the lowest incomes.⁴

Energy expenditure was substantially higher in 2022 than in 2021 at two specific times of the year: in March and April, just after the outbreak of the war in Ukraine, and between August and October (see third chart). This was an anomaly in the usual pattern of household spending, as bills tend to be highest in January and February (the coldest months) and lowest in October and November (see second chart).

The more positive news, however, came at the end of the year. The situation was turned on its head and households across all income deciles allocated a smaller proportion of their income to paying for electricity and gas than they had 12 months earlier. This reduction was particularly pronounced among lower-income households. Moreover, this situation looks set to continue in 2023, given the easing of energy prices observed since the beginning of the year.

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Spain: difference in energy expenditure as a percentage of income in 2022 *
(pps)



Notes: * Difference versus 2021. Median monthly expenditure on electricity and gas in each decile, calculated as a percentage of total annual income converted into monthly income (including wages paid through payrolls and unemployment subsidies or benefits).
Source: CaixaBank Research, based on internal CaixaBank data.