

Firewood usage in Bulgaria, Hungary and Romania

Online survey conducted for WWF Hungary and its partner organisations
Changes from 2022 to 2024

An on-line quantitative survey was carried out in Bulgaria, Hungary and Romania at the households that use firewood - at least partly - for heating in February-March 2022, with 500 respondents per country. The surveying was repeated in **February 2024** in all the three countries. The objective of this second survey was **to study the changes in firewood usage habits and firewood-user household stock** in the past two years in the three countries. The target group included **300 respondents per each country between the ages of 18 and 70**, who qualified the above screening criteria.

There are **not so many changes** that can be observed in the past two years, which is partly reasonable, since basic habits do not

change dramatically, unless a strong impact enforces it.

In general, the reported firewood usage showed mixed-up changes. While on average 13%-32% - depending on the country - claimed that they either started using firewood within the past two years or increased their firewood usage (with Romania showing the highest increase by claim), 28%-40% of the respondents decreased their firewood usage. This means that in spite of the global changes there are plenty of ways a given household can react to them.

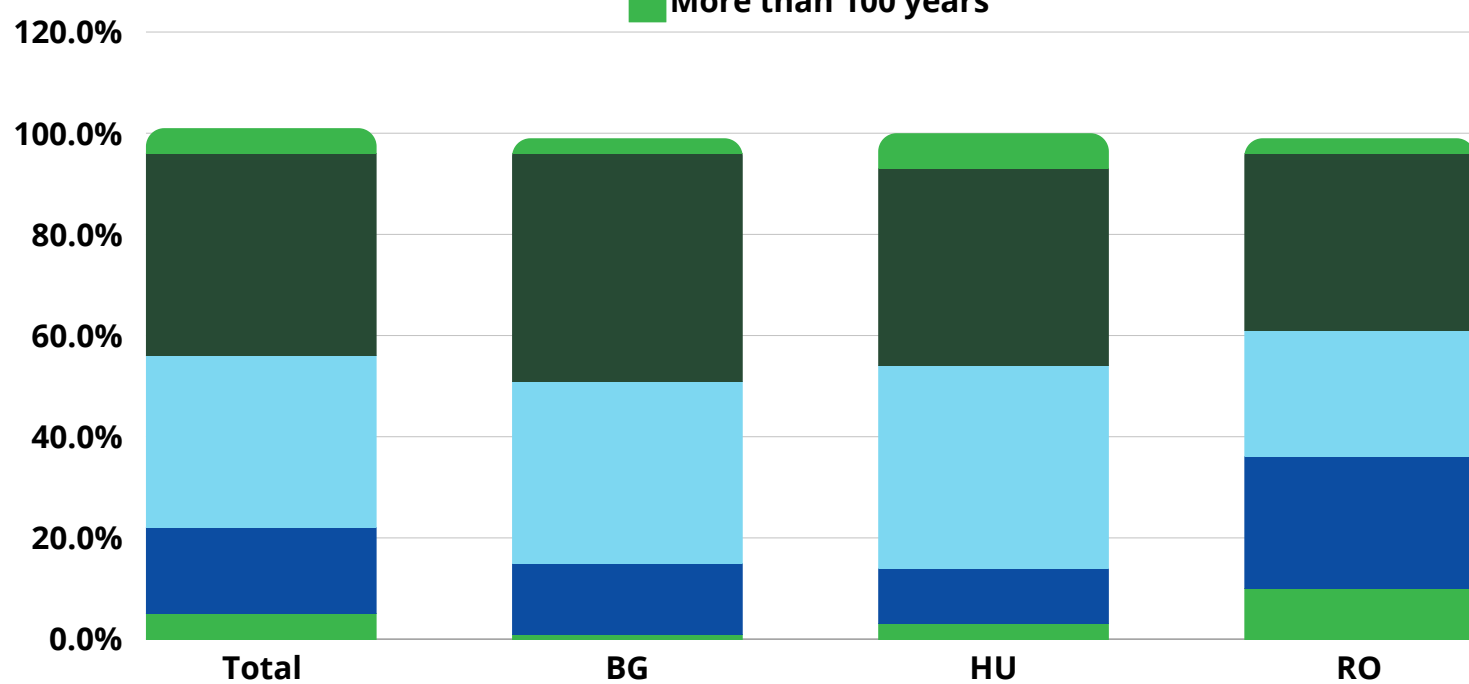
The key differences between the countries that were experienced in 2022 remained mainly the same, also reflecting that the **given characteristics of the countries and the long-term habits of the inhabitants remained similar**.

DWELLING & ENERGY EFFICIENCY

Age of the dwelling

The majority lives in brick houses that are more than 25 years old. The average age of the houses is the lowest in Romania.

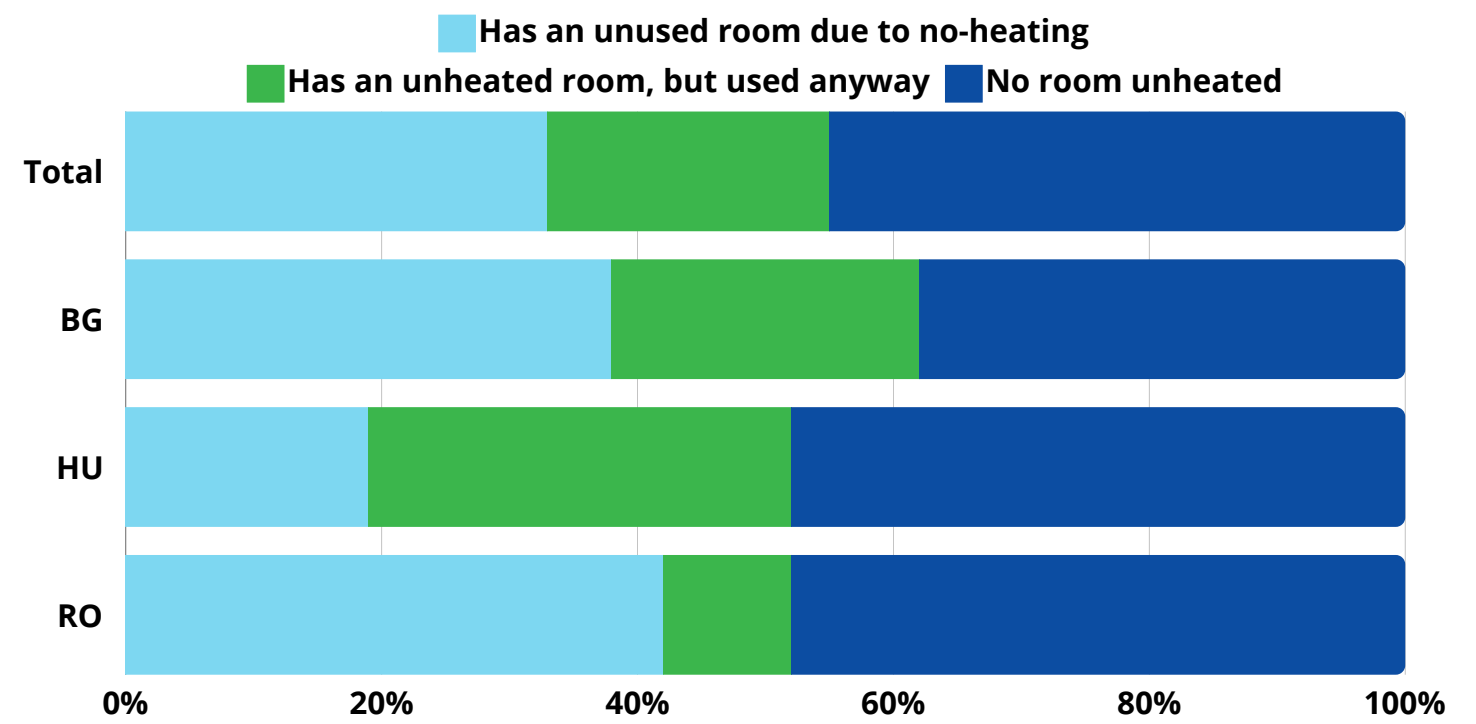
■ Less than 10 years ■ 10-24 years ■ 25-50 years ■ 50-99 years
■ More than 100 years



Unused rooms in the household due to missing heating

The share of unheated rooms increased in the region in the past two years. In Bulgaria and in Romania these rooms are typically unused, except for Hungary, where usually the room is used without heating anyway.

■ Has an unused room due to no-heating ■ Has an unheated room, but used anyway ■ No room unheated

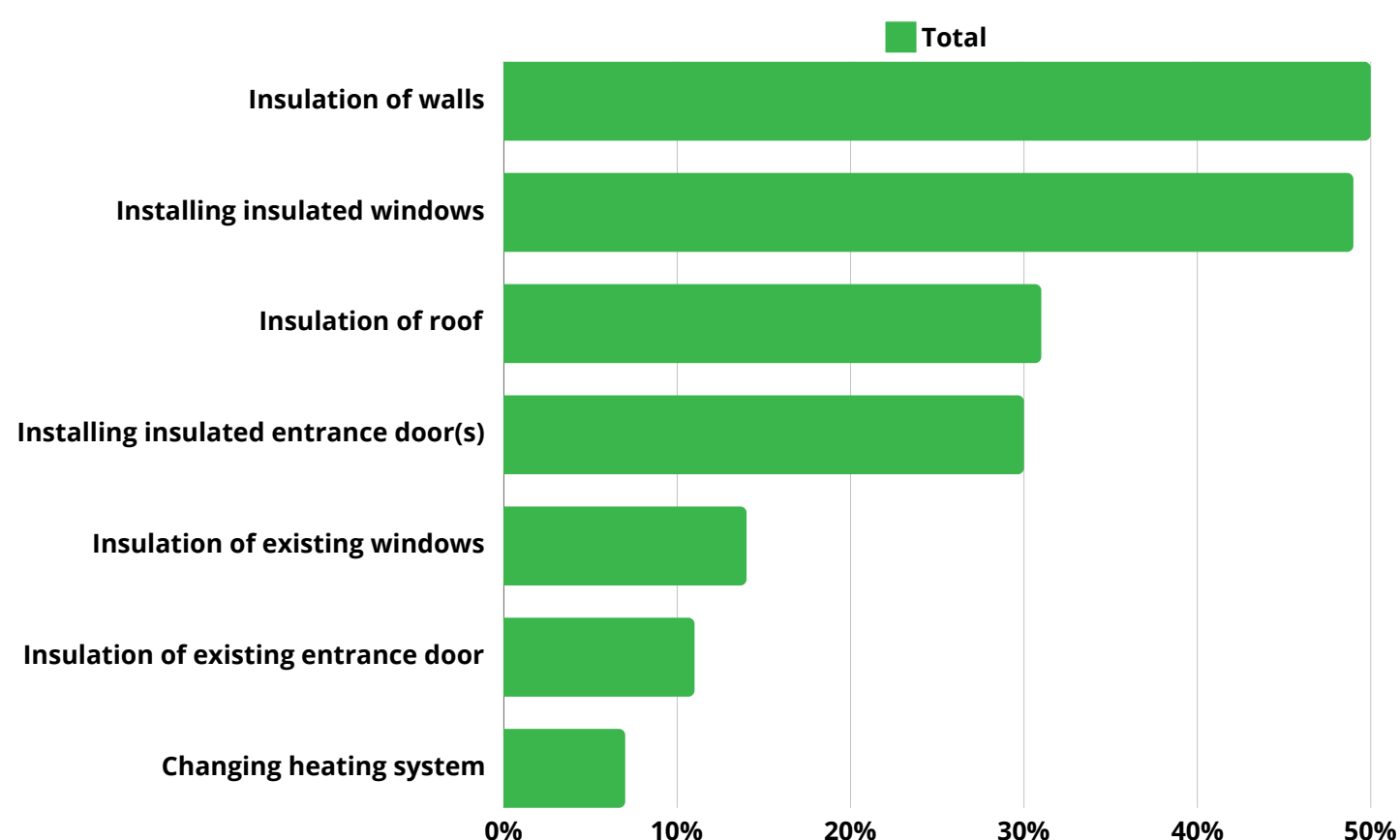


The majority of people who run heating at least partly by firewood live in **brick houses, built at least 25 years ago or older**. Regionwide, 78% of houses that were built 10 or more years ago have made some energy saving investments, including **insulation of walls (50%), installing insulated windows (49%) or entrance doors (30%)**. However, there are high differences between countries, with Romania remaining the most proactive, and Hungary the least active in these investments. People in Romania (42% vs. 28% of Hungary) are still most willing to make (further) energy saving investments in the near future. The highest rate of mention of „can't afford it” appears in Hungary.

Already implemented energy saving investments

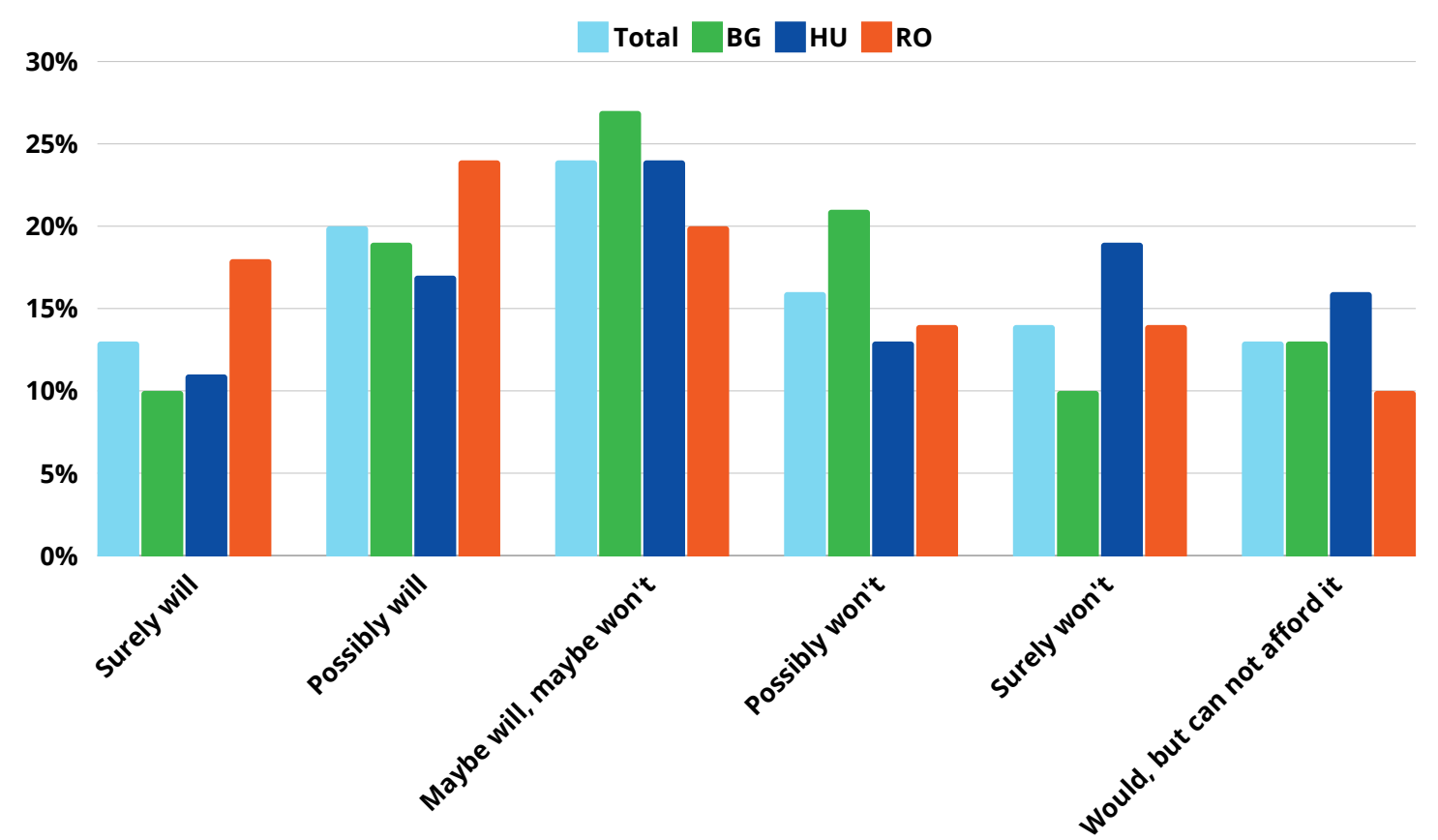
Insulation of walls and windows are still the most common investments.

The insulation on walls remained the lowest in Hungary. Insulation itself is not enough: its average thickness is very low. Among the respondents where there is any existing wall insulation, 55% of them marked the thickness 10 cm or thinner.



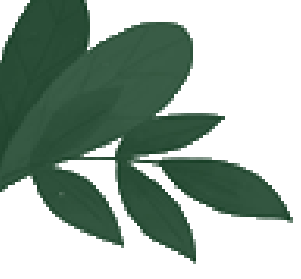
Intention to energy saving investments

Romania shows the highest intent to invest in insulation, and the situation is the worst in Hungary. The share of respondents who claimed they wouldn't invest in any renovation increased.



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HEATING SOLUTIONS

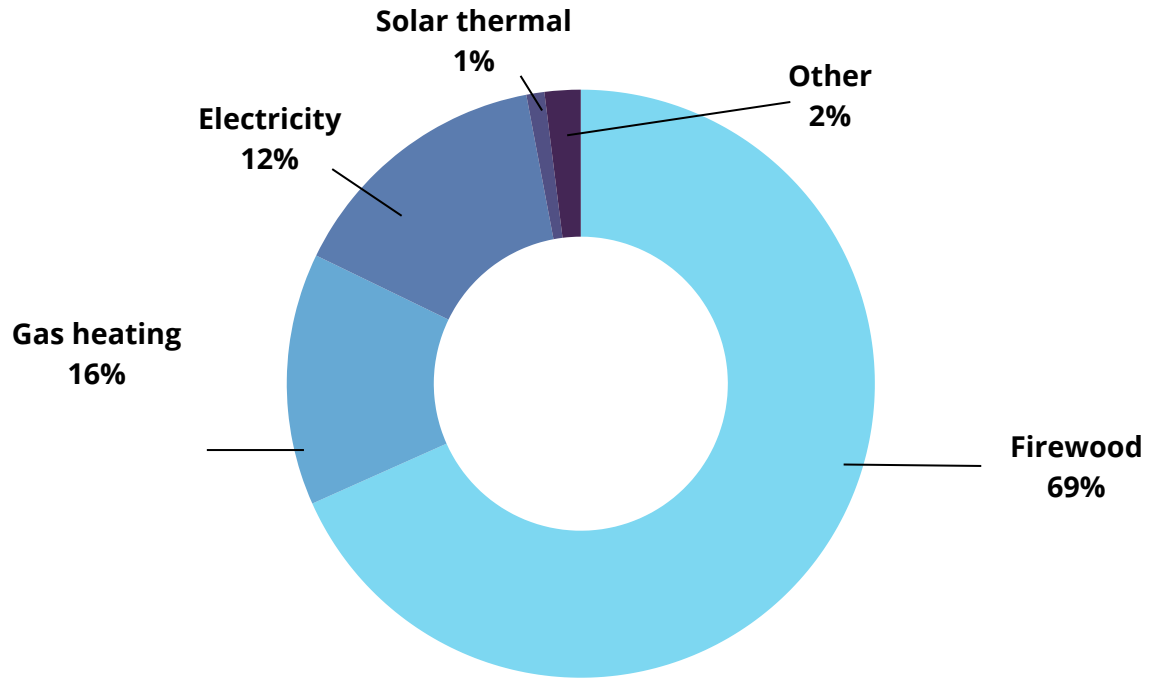
If we consider all heating solutions, **regionwide 69%** - almost exactly the same percent as 2 years ago - **of total heat demand is covered by firewood**. Sole firewood usage is still the most typical in Romania, where 59% of the respondent households use only firewood for heating, while in Hungary it is 43% and in Bulgaria 32%. Among alternatives, gas heating is the most popular in Hungary and in Romania, while in Bulgaria it is electricity.

The share of plans to improve the current heating system remained the same: Romania shows the highest intention (62%), and Hungary does the lowest (29%), even lower than 2 years ago. The same tendencies appear when speaking about changing the current fuel, Romania shows the highest intent. Regionwide, the main directions are **changing firewood to gas, solar power or electricity**, while changing to firewood completely from partial use is still less typical.

Share of different fuels used for heating

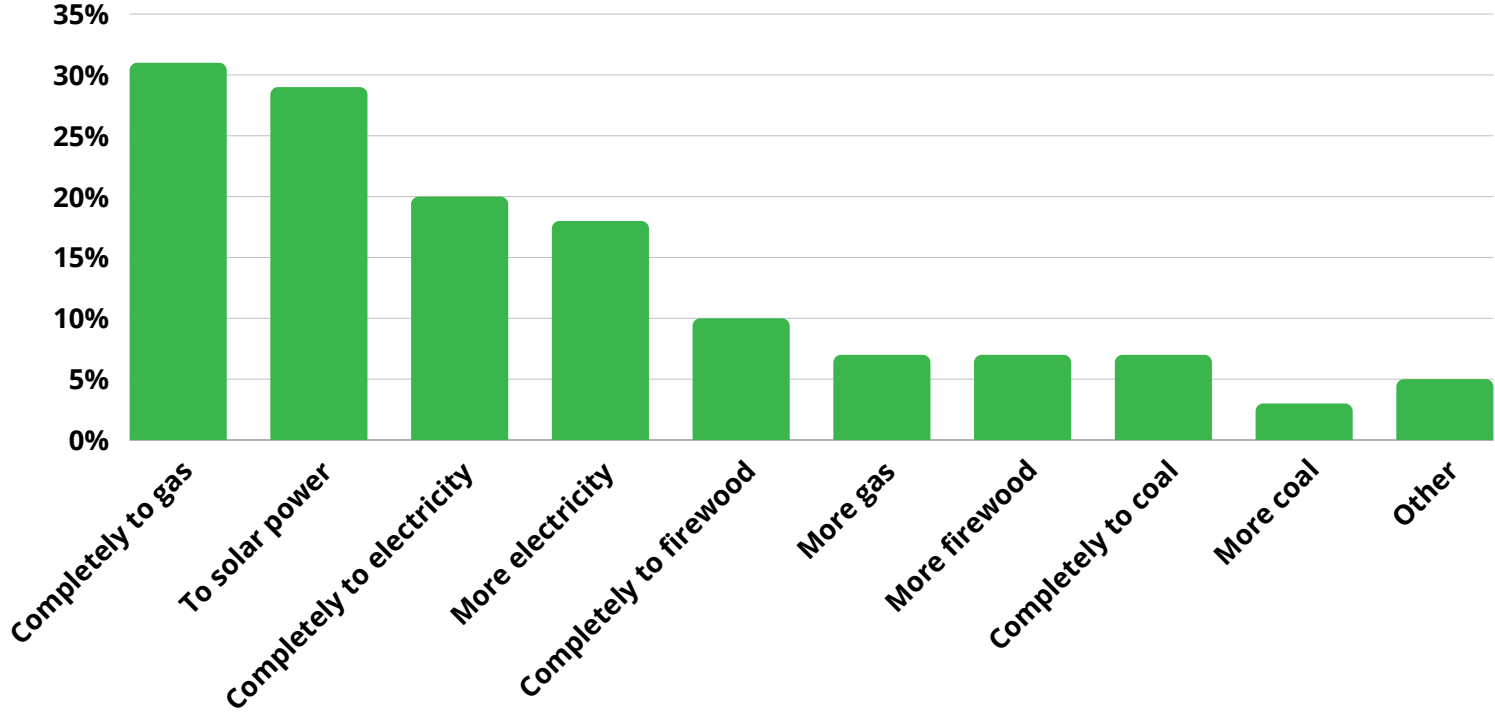
There may be national differences compared to the average.

Beyond firewood, gas heating is the main alternative for Hungary and Romania, while in Bulgaria it is electricity.



Plans for changing the heating fuel

Changing to gas or solar power are the most popular plans.



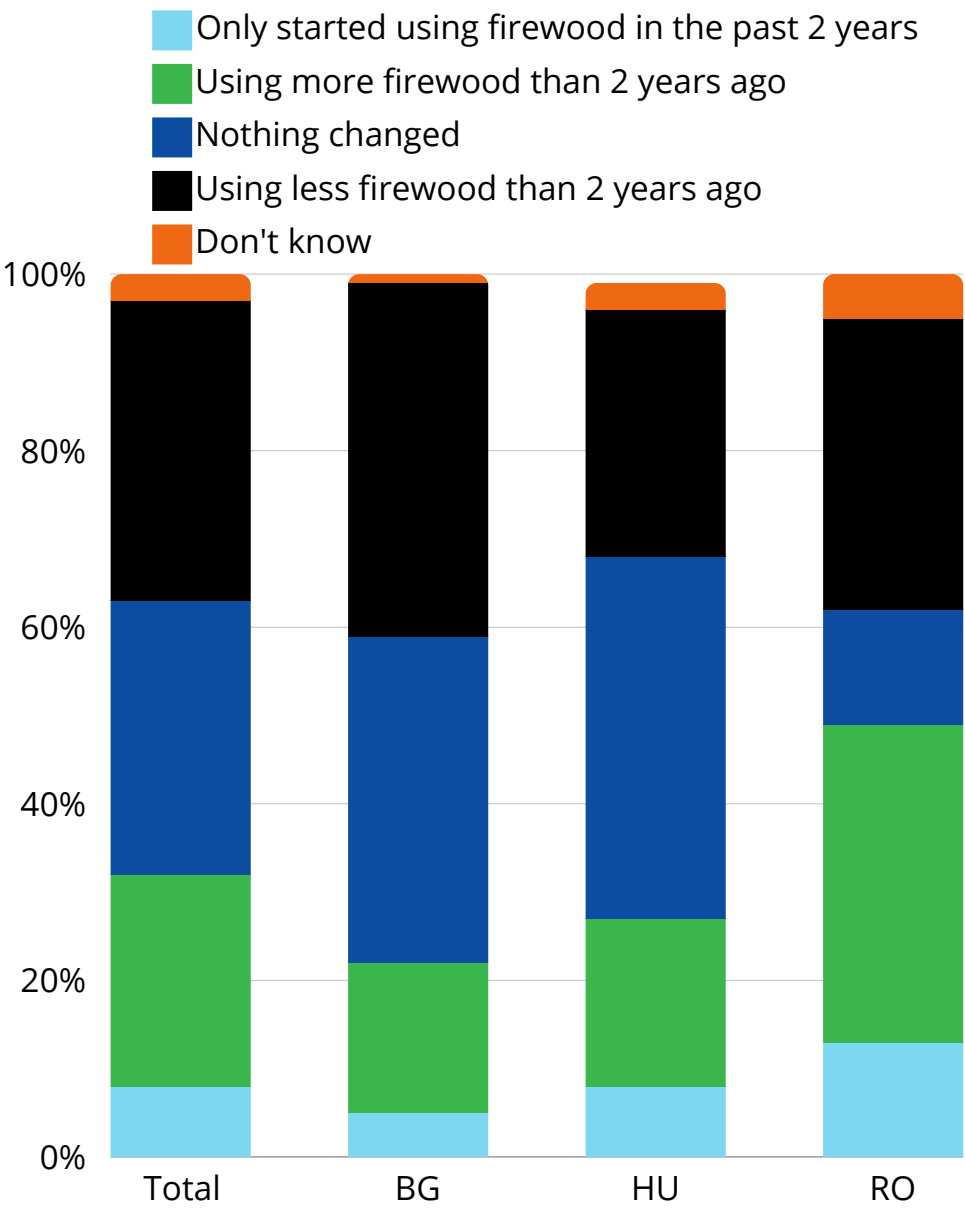
FIREWOOD USAGE

Regionwide, the source of firewood has not changed: it is mainly **bought from local entrepreneurs** (45%) or from woodyard, while own forest, friends' or relatives' forest takes 24%. The average **spending on firewood increased significantly** in the past 2 years: according to the heating season **2023/24 it was 469 EUR in Bulgaria, 706 EUR in Hungary and 671 EUR in Romania** on average, while **in 2021/22 it was around 440-480 EUR**, regionwide. Bulgaria shows the lowest increase.

Roughly 2/3 of the respondents in the region claimed that they would need social support for purchasing firewood, however only 9% of them got any on average in spite of the high needs. Concerning the air pollution caused by firewood usage, regionwide even less respondents, 38% find it a significant impact, with Hungary still being the least worried about it.

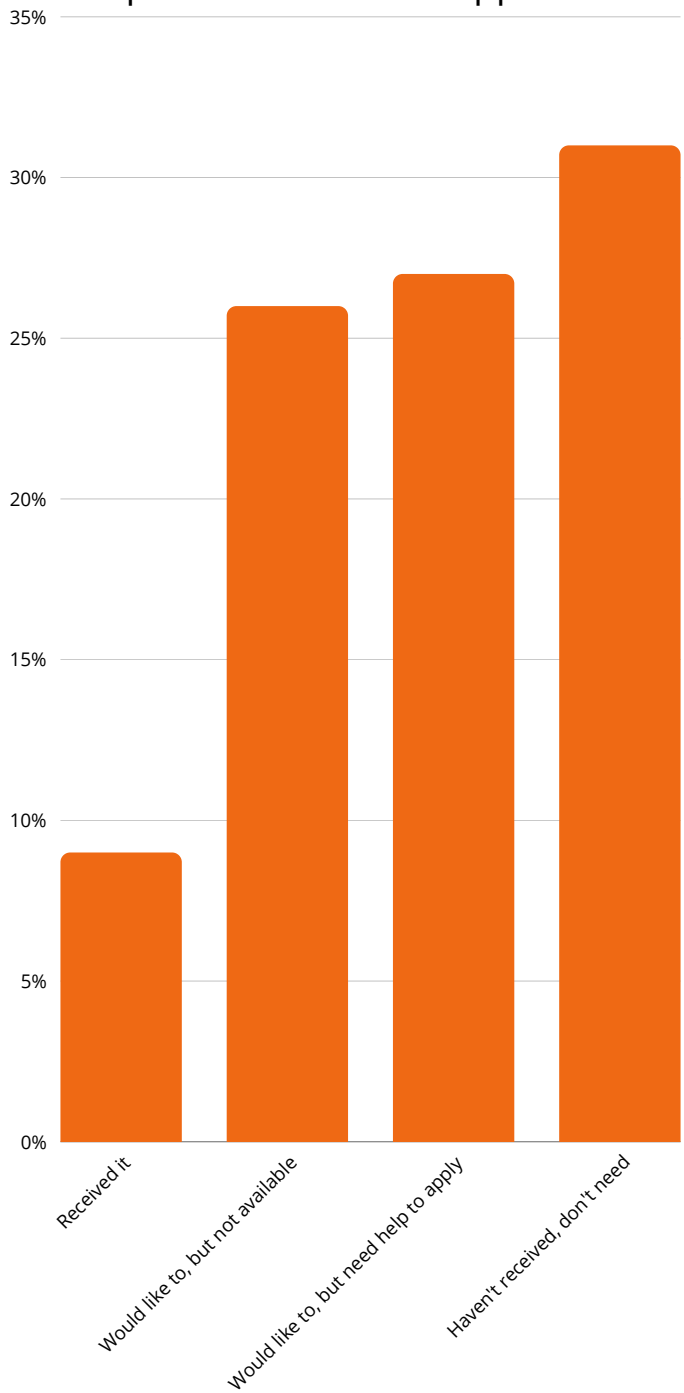
Changes in firewood usage in the past 2 years

Regionwide, 33% claimed that they either started using firewood within the past two years or increased their firewood usage, but there are also 34% of those who decreased their firewood usage. In Romania on average they use more, while in Bulgaria less firewood than in 2022.



Need for social support

Only 9% of the respondents received social support for purchasing firewood in the region, however two third of them claimed their need. They either can't apply, or they faced problems with the application.



ENERGY POVERTY

We also asked the income situation of the households. The results proved that there is a high risk that **low-income families can afford less energy efficiency investments**, therefore they are locked-in in a vicious cycle, where a significant part of their income is spent for heating, so they cannot afford energy efficiency in order to decrease their heating bills. There is a correlation between the income situation of the respondent households and the proportion of firewood in the heating fuels used. The respondents **who have insufficient income level or can afford only basic necessities are more likely to depend on firewood** as the primary (and often the only) heating source. There is another important connection between the income situation and the possible renovations in the future. The respondent **households with the lowest income usually cannot afford any energy efficiency actions or fuel change**, so they are locked in the current situation, however they show high interest in the improvements.

Connection between income situation and firewood usage

The respondents who have insufficient income level or can afford only basic necessities are more likely to depend on firewood as the primary (and often the only) heating source.

