



„Firewood usage in Bulgaria, Hungary and Romania“

online survey

conducted for WWF Hungary and its partner organisations

2022



Method:

- On-line quantitative survey in Bulgaria, Hungary, Romania.
- Fieldwork was conducted by NRC (Hungary) and JTN Group (Bulgaria and Romania).
- Interviewing:
 - Hungary:
February 10 – 21, 2022
 - Bulgaria and Romania:
February 29 – March 14, 2022
- Target group:
 - Inhabitants of the given country aged 18-70 years
 - Using firewood for heating
- Sample size: 500 per country
- Sampling: Random selection of respondents from on-line panels of the respective countries, who qualified the above screening criteria. Since there was no official statistics on demographics of qualified households, we did not apply any quota or weighting.
- Questionnaire: cca. 10-12 minutes

All conclusions in this report refers to those households that are using firewood (at least partly) for heating.

Executive summary:

Houses and heating solutions



- Majority of people who runs heating at least partly by firewood are living in brick houses, 25 years or older. Regionwide, 82% of houses that are built for 10 years or more made some energy saving investment, including insulation of walls (52%), installing insulated windows (54%) or entrance doors (34%). However there are high differences between countries, with Romania as more proactive, and Hungary as the least active in these kind of investments. Furthermore people in Romania (48% vs. 28% of Hungary) are the most willing to make (further) energy saving investments in near future. The highest rate of mention „can't afford it” appears in Hungary.
- Sole firewood usage is the most typical for Romania, however if we consider all heating solutions, regionwide 69% of total heating is run by firewood. Among alternatives, gas heating is the most popular for Hungary and Romania, while in Bulgaria it is electricity.
- Central heating with firewood is the most typical in Hungary, while in Bulgaria air heater is the most popular besides tile stoves with firewood. Roughly half of households plan to change / improve the current heating system, with Romania showing the highest (61%), and Hungary the lowest (33%) intent. The same tendencies appear when speaking about changing the current fuel, Romania shows the highest intent. The main direction for changes are changing firewood to gas or solar power or electricity, while changing to firewood completely is less typical.

Executive summary:

Firewood usage

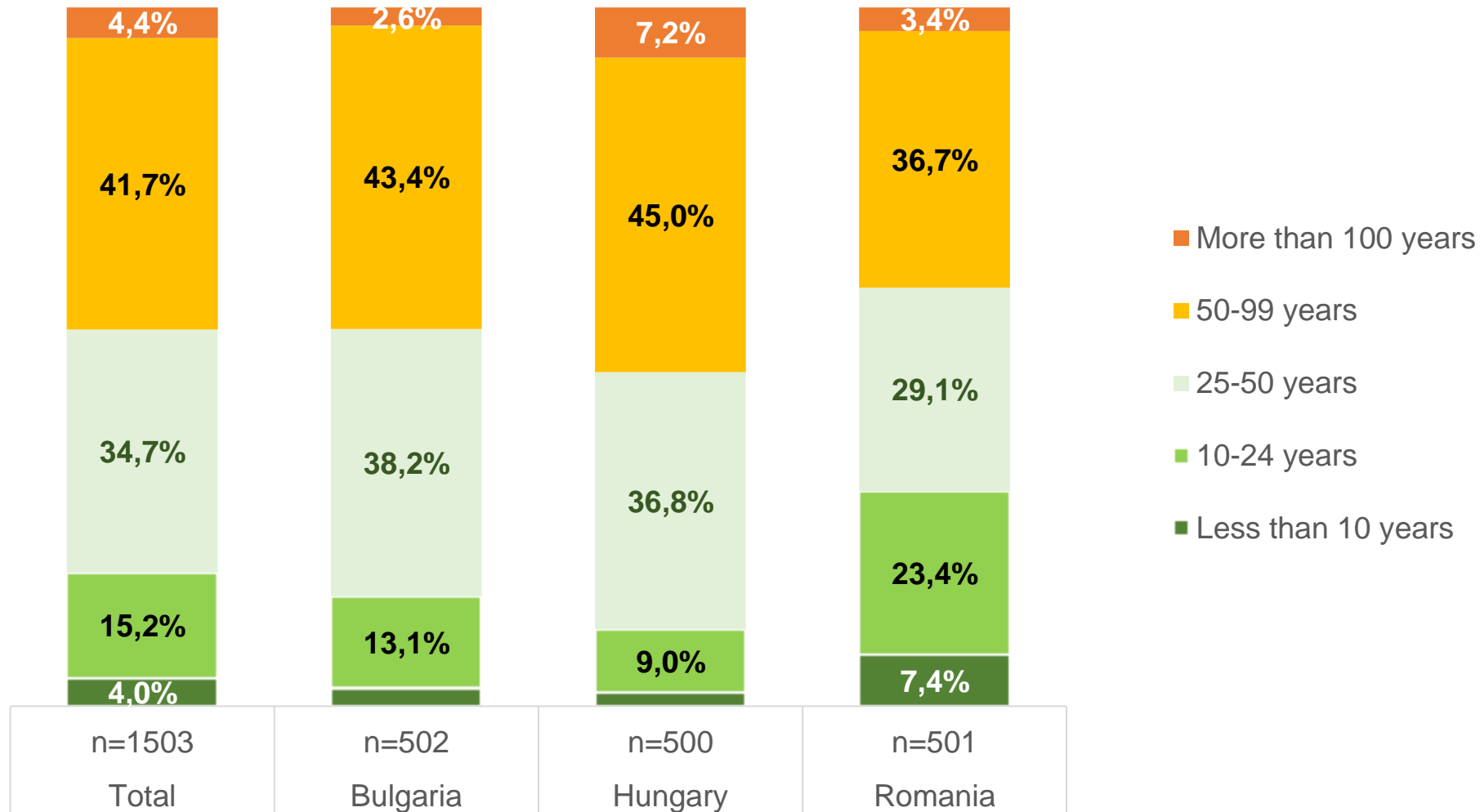


- Regionwide, firewood is mainly bought from local entrepreneurs (47%) or from woodyard, while own forest / friends' or relatives' forest takes roughly 20%. Almost half (45%) of respondents take / buy firewood all at once prior to heating season, and another one-third (31%) do it in several instalments prior to season, while buying only during the heating season is less typical.
- Majority buy (starts buying) firewood at least 6 months prior to heating season (57%). There is a significant correlation between the way and the time of purchase prior to heating season: the highest rate of people, taking firewood at least 12 months before, cut it from own forest, while the highest rate of people buying firewood less than 6 months prior to heating season are buying firewood from local entrepreneurs. The average spending on firewood is between 445-550 EUR according to the most recent full heating season (winter of 2020-2021). Interestingly, 23% of people in Hungary did not wish to tell the amount being spent.
- Regionwide the average time for drying the firewood is 4 months, while the ideal time is set to 5 months. In this question Hungary estimates the ideal time for drying the firewood the closest to necessary. It gives certain tonality to the answers for drying time that majority (59%) are using a mix of dry and wet firewood for heating.
- Concerning the air pollution caused by firewood usage, regionwide 40% find it a significant impact, with Hungary being the least worried about it.



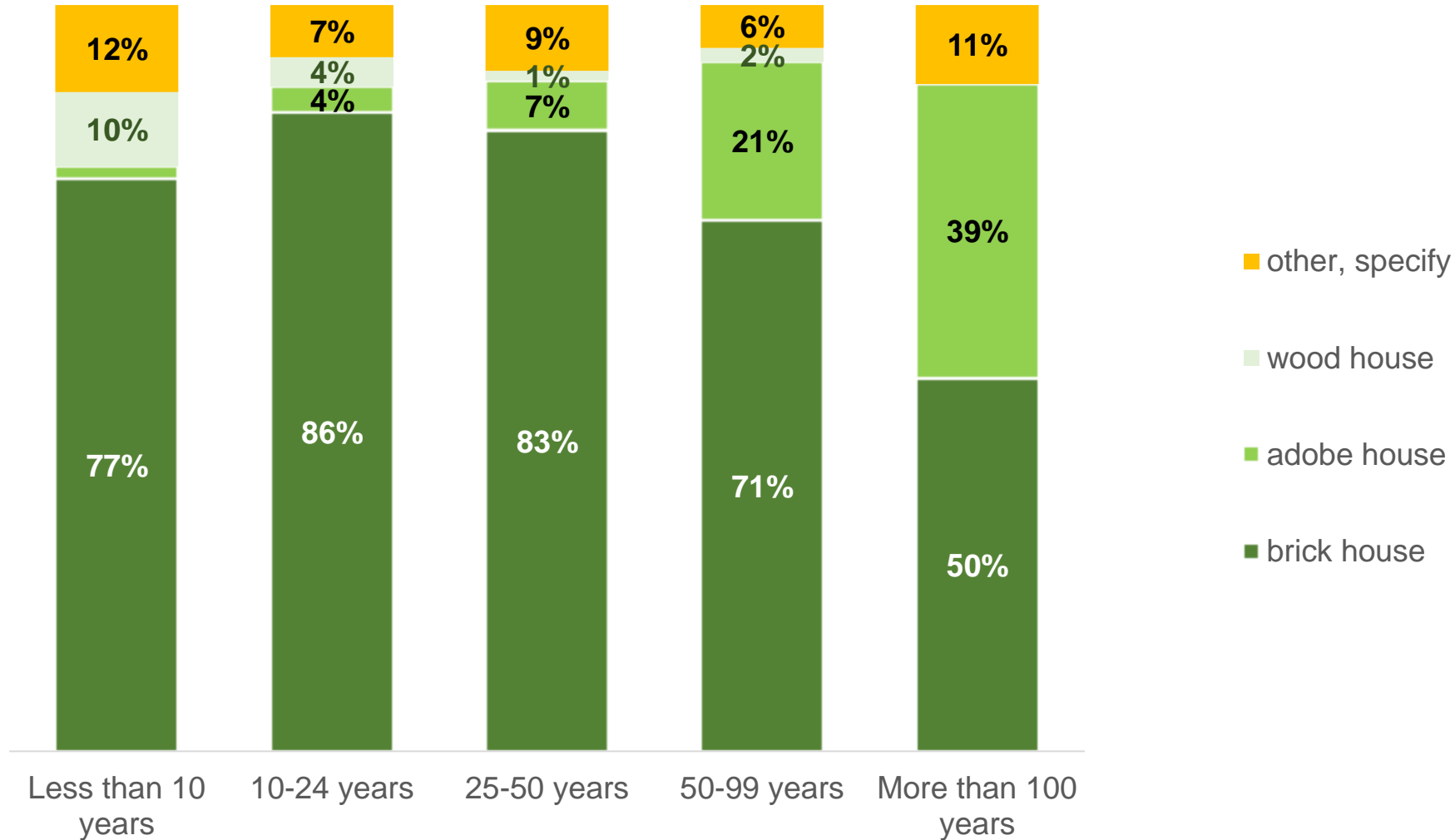
**House they are
living in**

Age of house



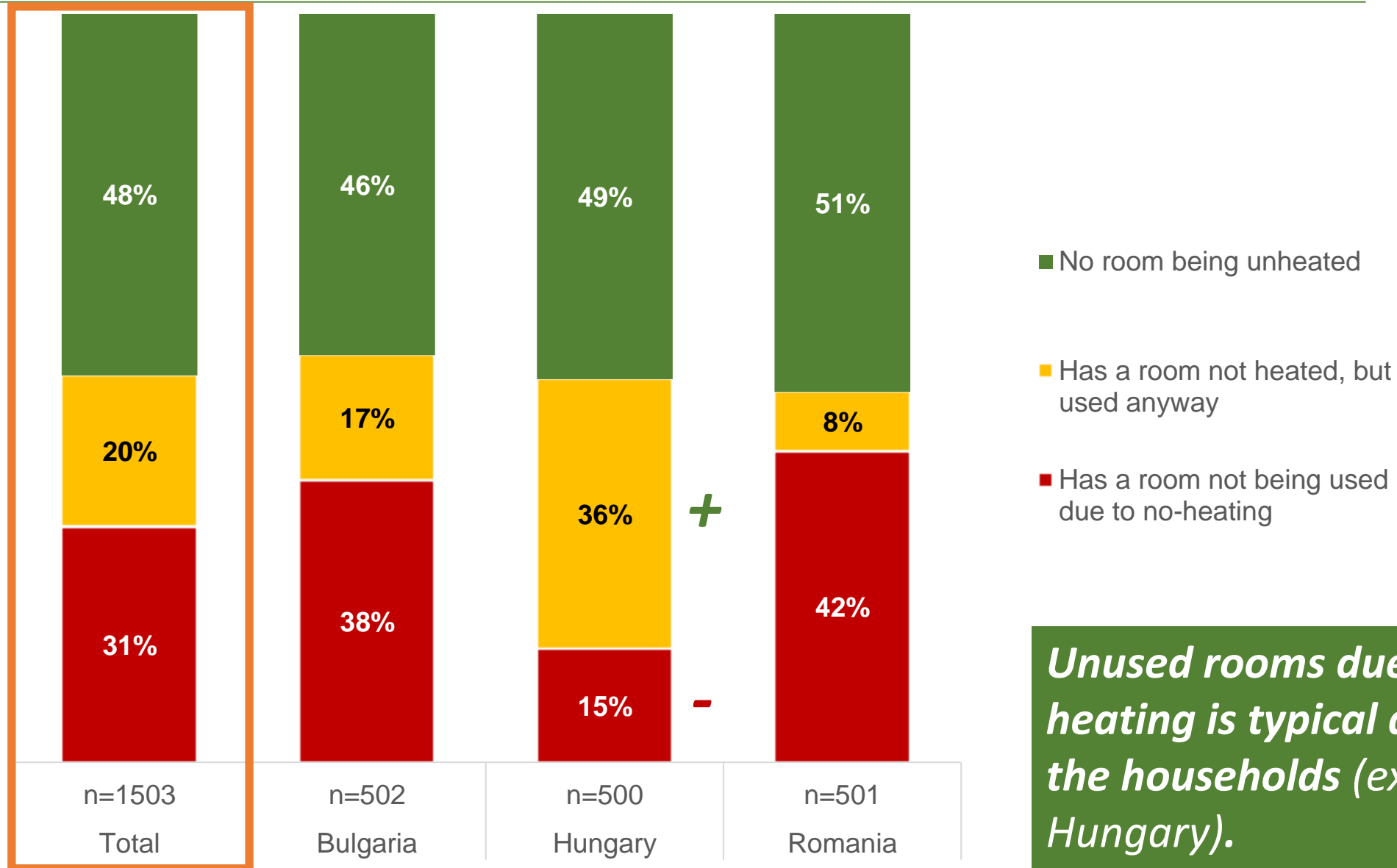
***Majority lives in houses that are more than 25 yrs old.
Average age of houses is the youngest in Romania.***

Type and age of house

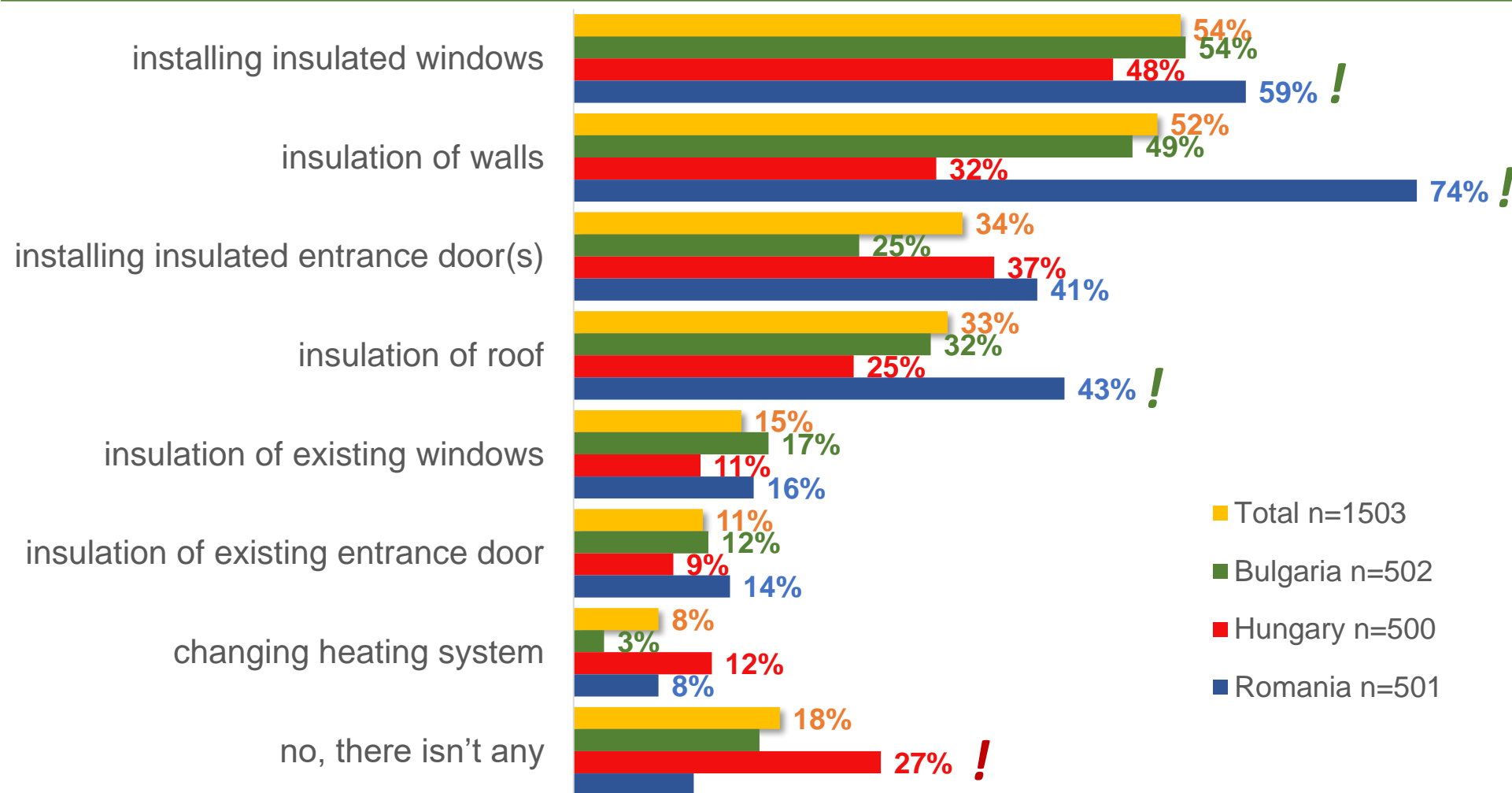


Majority lives in brick houses, adobe houses are of more than 50 years old.

Unused rooms in the household due to missing heating

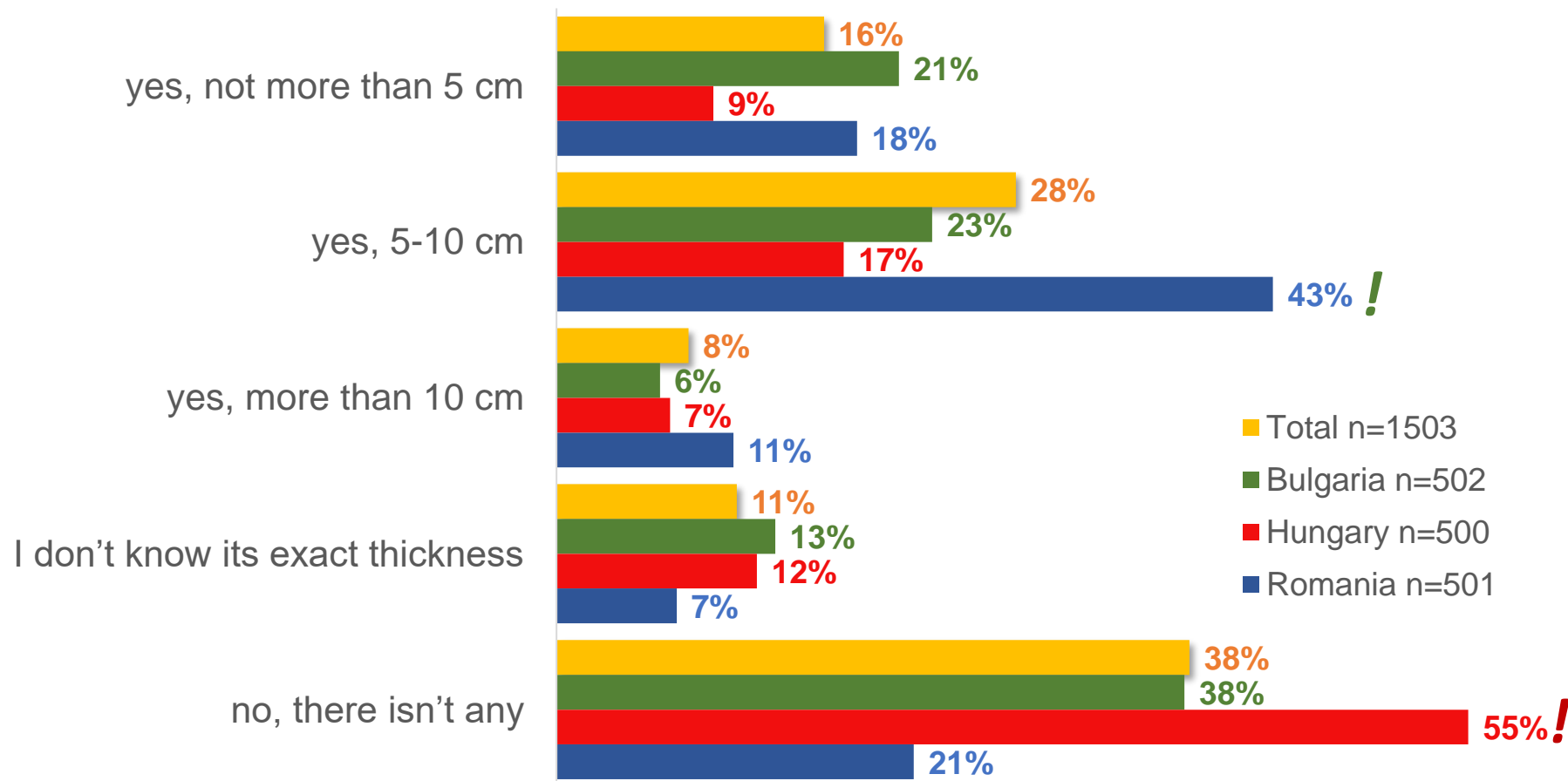


Energy saving investments on the house



Insulation of windows and walls are the most common investments.

Insulation on wall

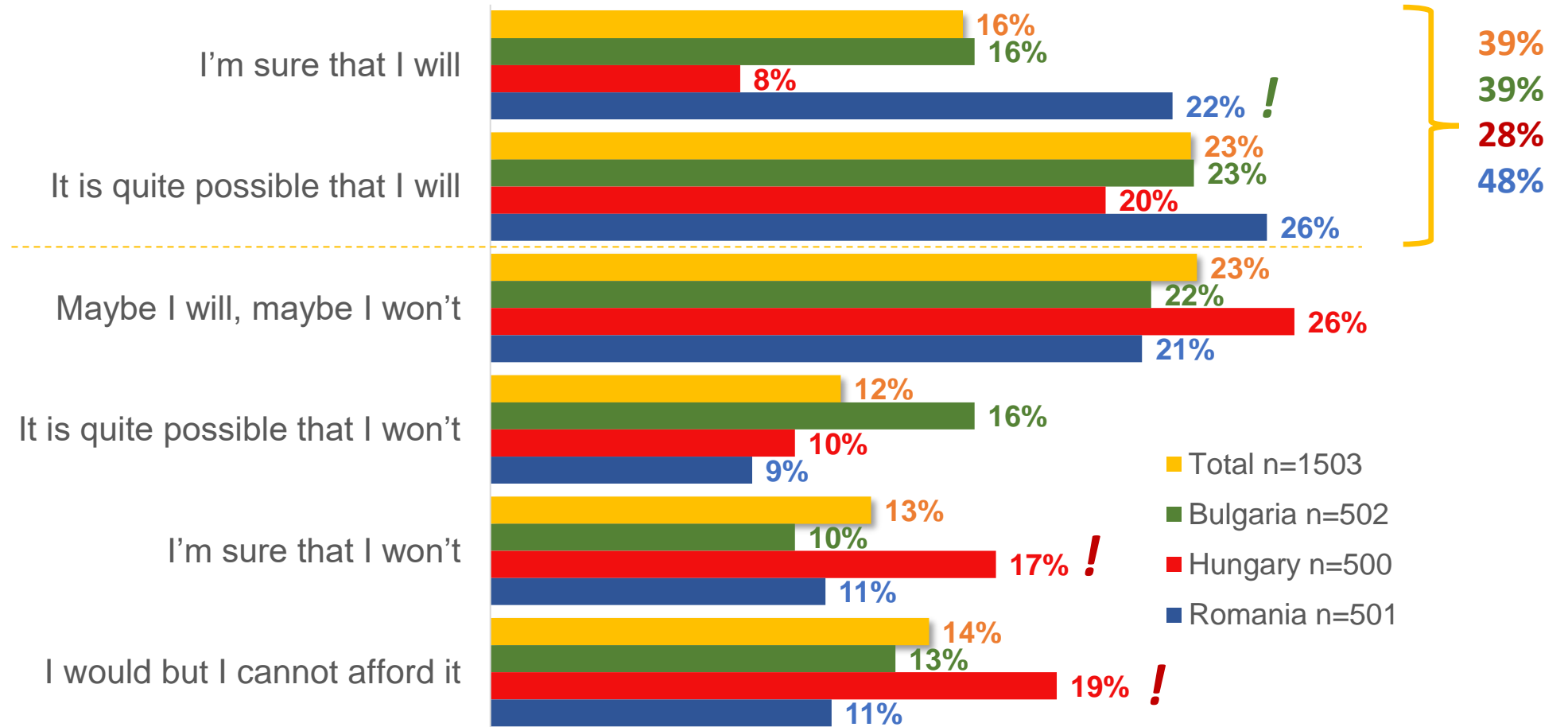


The insulation on walls is the lowest in Hungary*.

K16 Base: All respondents.

*Among households heating at least partly by firewood!

Intention to make any insulation



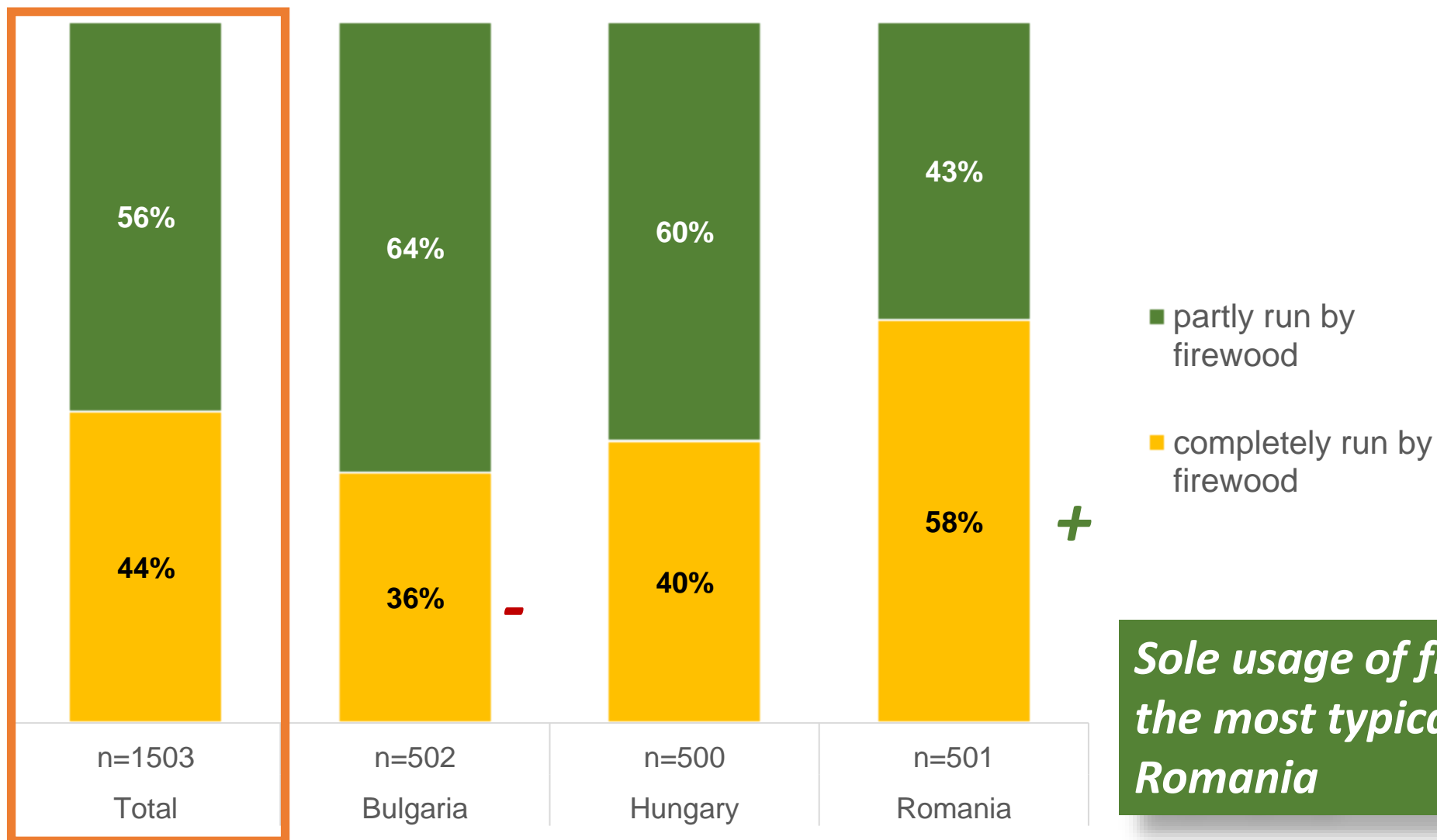
Romania shows the highest intent to investments into insulation.



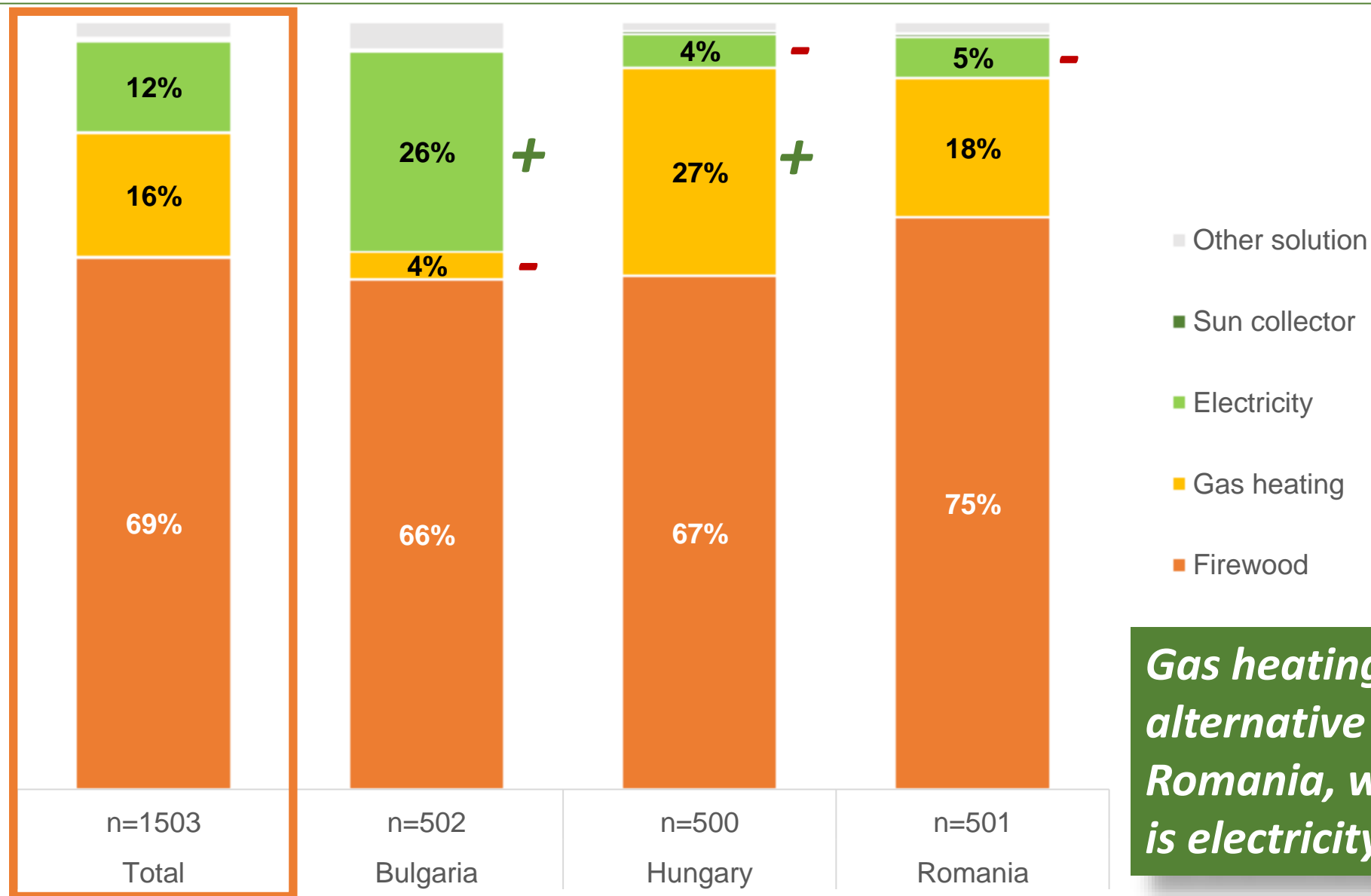
Heating solutions

Use of firewood vs. other fuels

Heating in the household ...

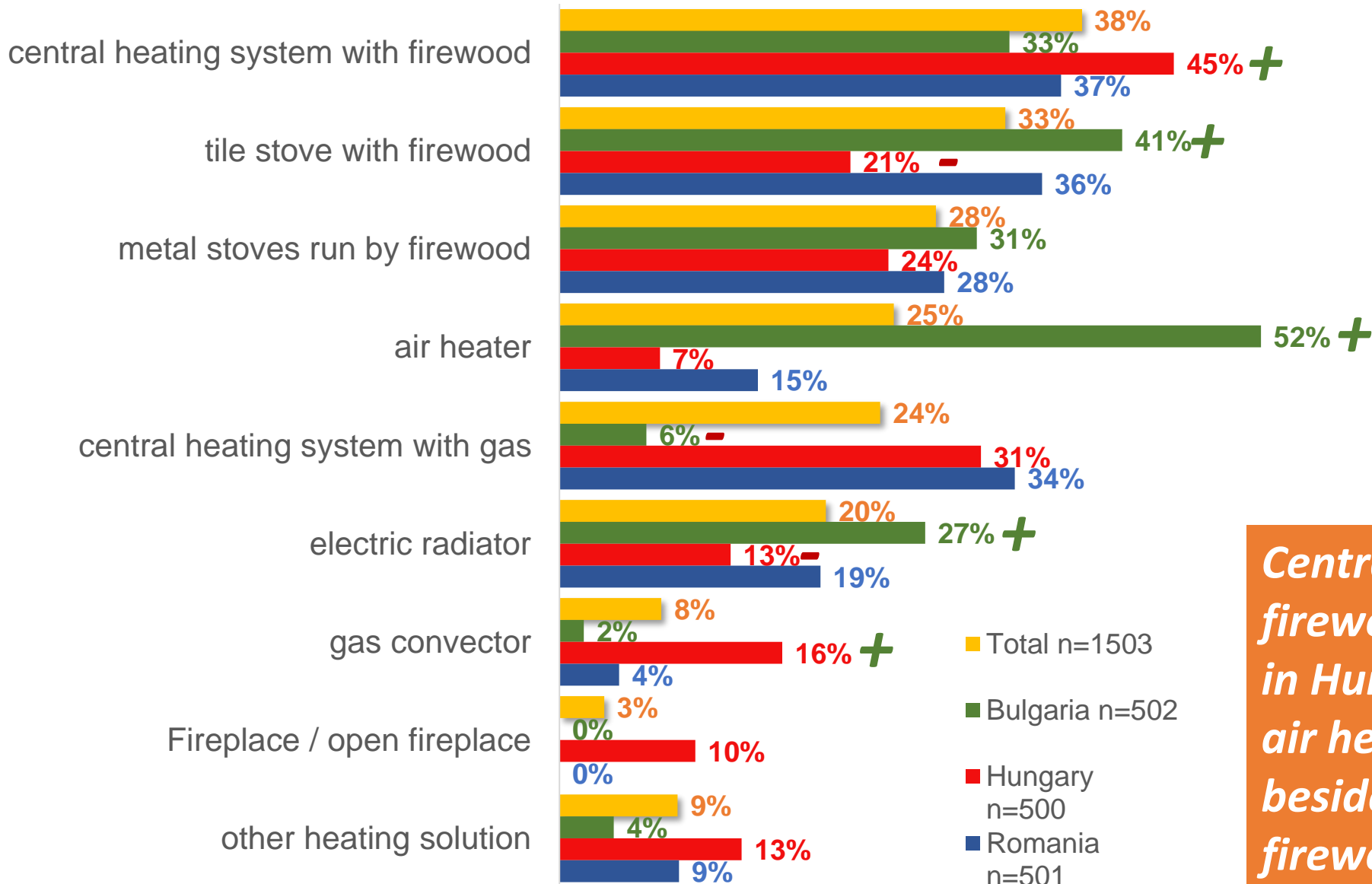


Share of different fuels being used for heating



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

Heating solutions available in the household

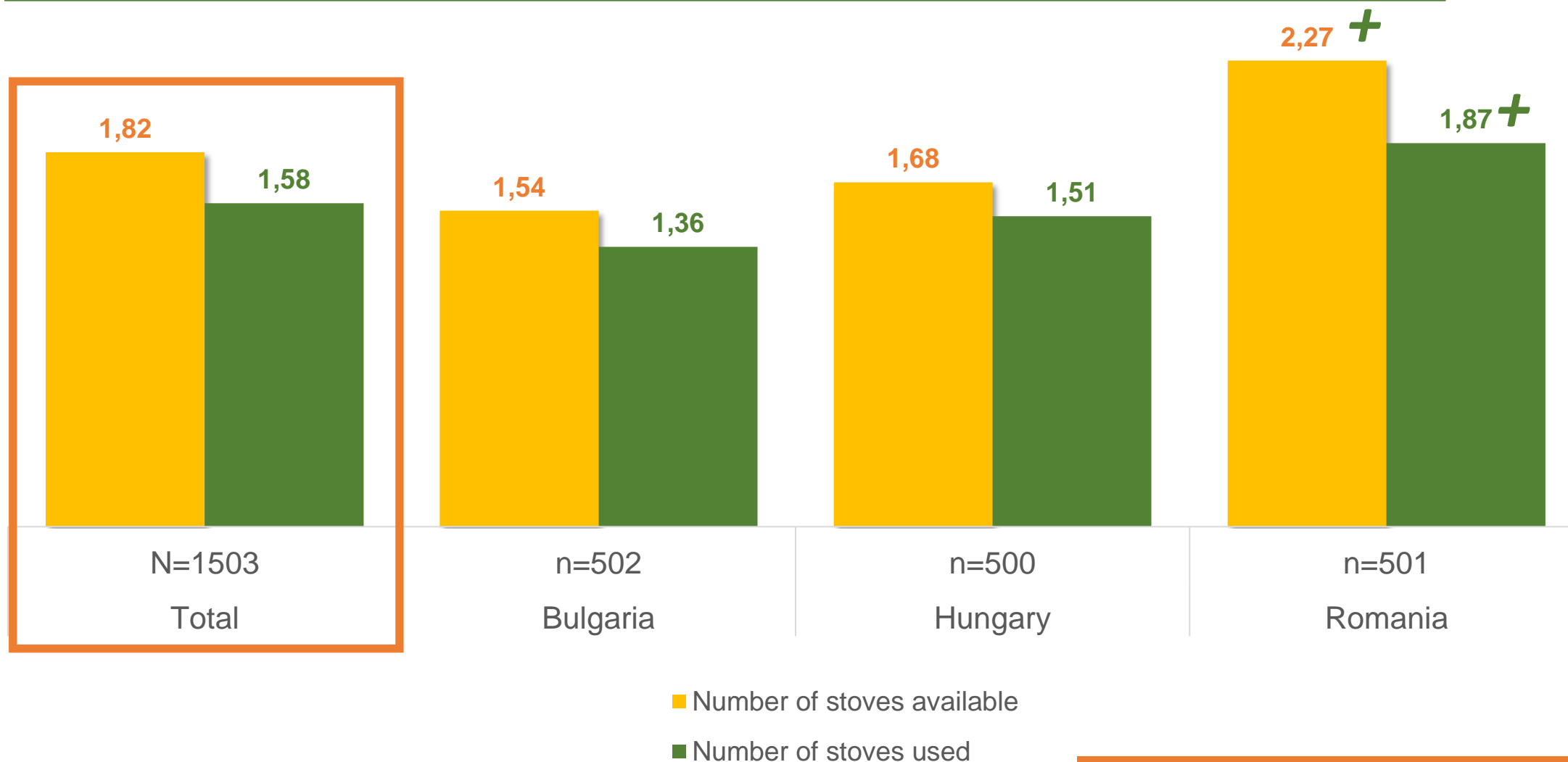


Other heating solutions include:

- fireplace
- terracotta
- Infra panel

Central heating with firewood is the most typical in Hungary, while in Bulgaria air heater is the most popular besides tile stoves with firewood.

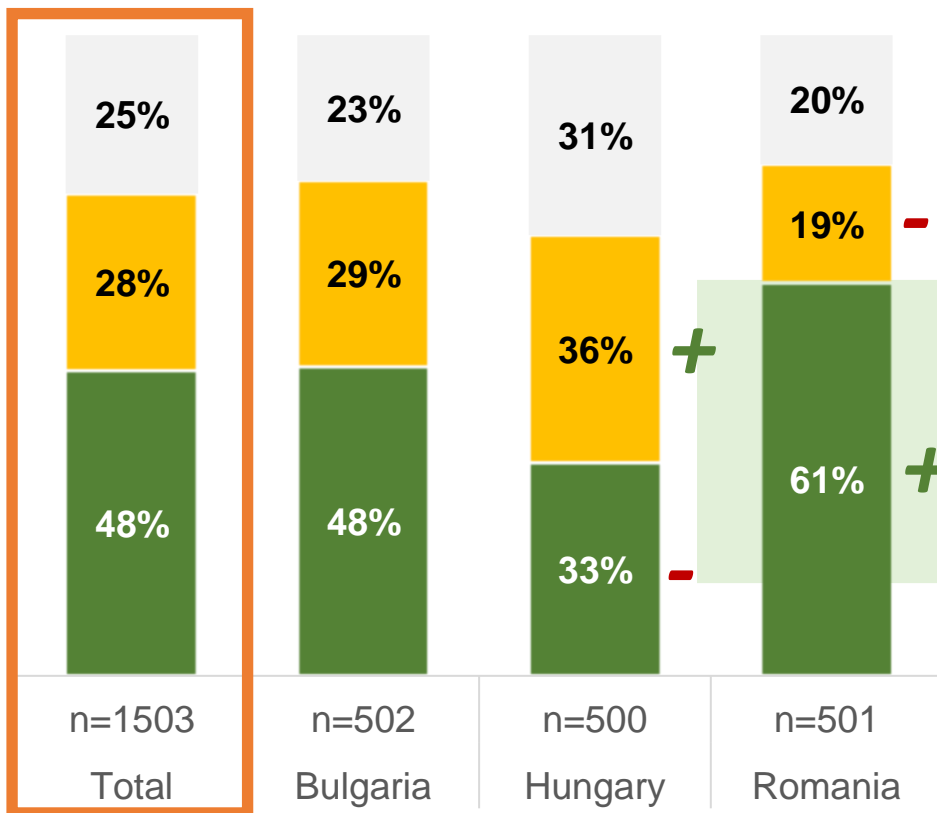
Number of stoves run with firewood



The average number of stoves is the highest in Romania.

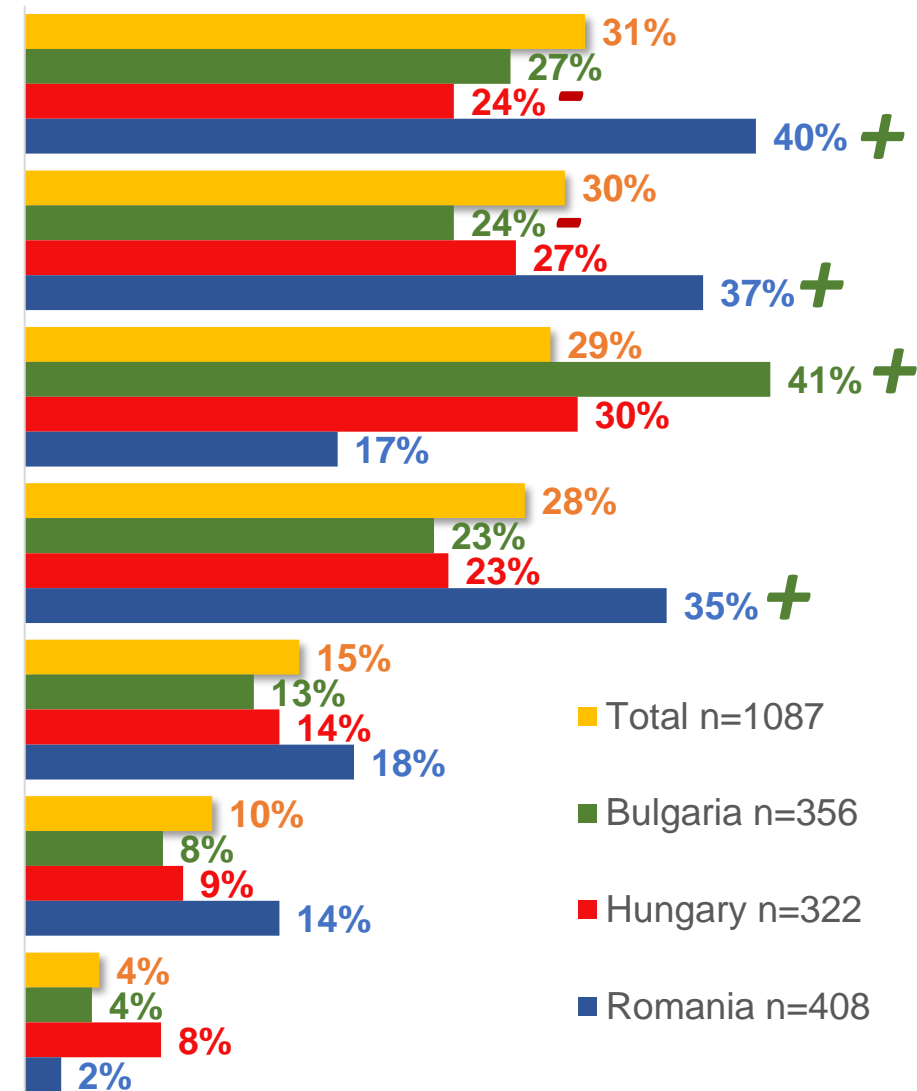
Plans for changing / improving current heating system

Do you plan to change / improve ...?



■ Yes
■ No
■ Do not know yet

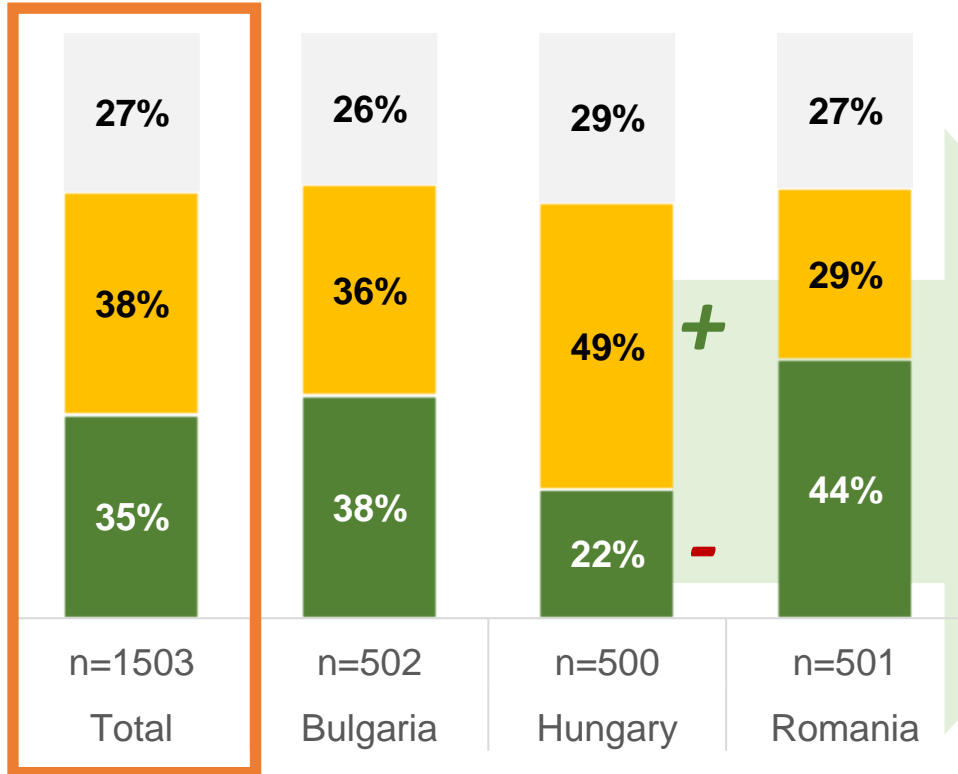
Installing central heating system
 Improving a more modern central heating system
 Changing the heating appliances into more modern ones
 Installing sun collector
 Improvement of chimney
 Installing heat pump
 Other, specify



Intention to change is the highest in Romania.

Plans for changing the fuel being used for heating

Do you plan to change ...?



■ Yes
■ No
■ Do not know yet

Changing firewood to gas completely

Changing to solar power

Changing firewood to electricity completely

Using more electricity

Using (more) gas

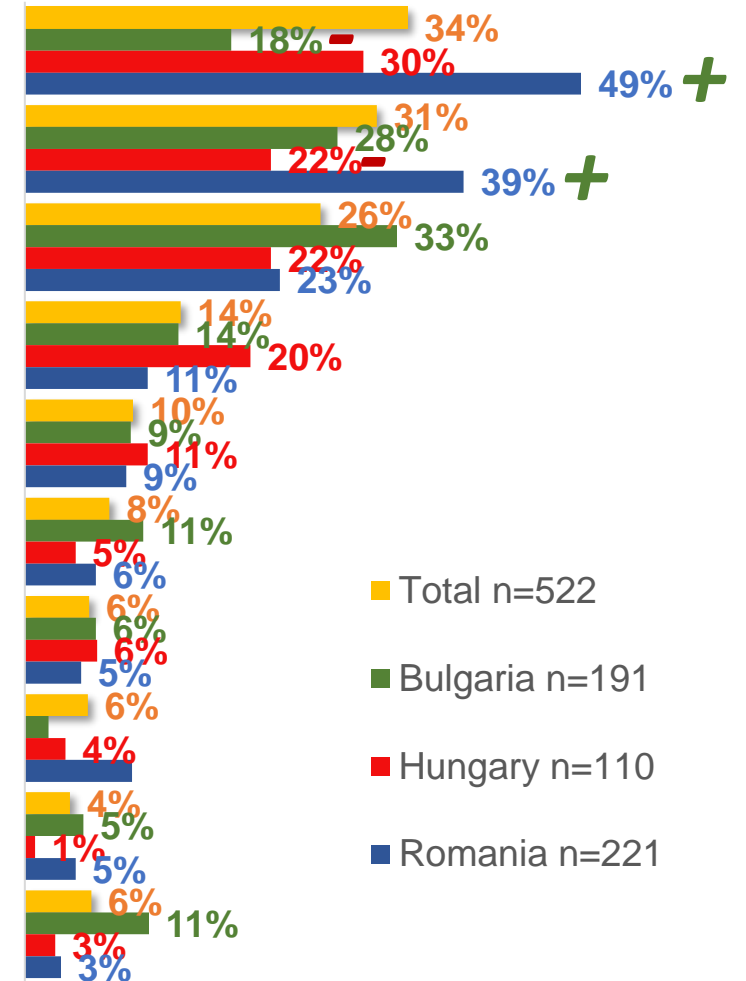
Changing to firewood completely

Using more firewood

Changing firewood to coal completely

Using more coal

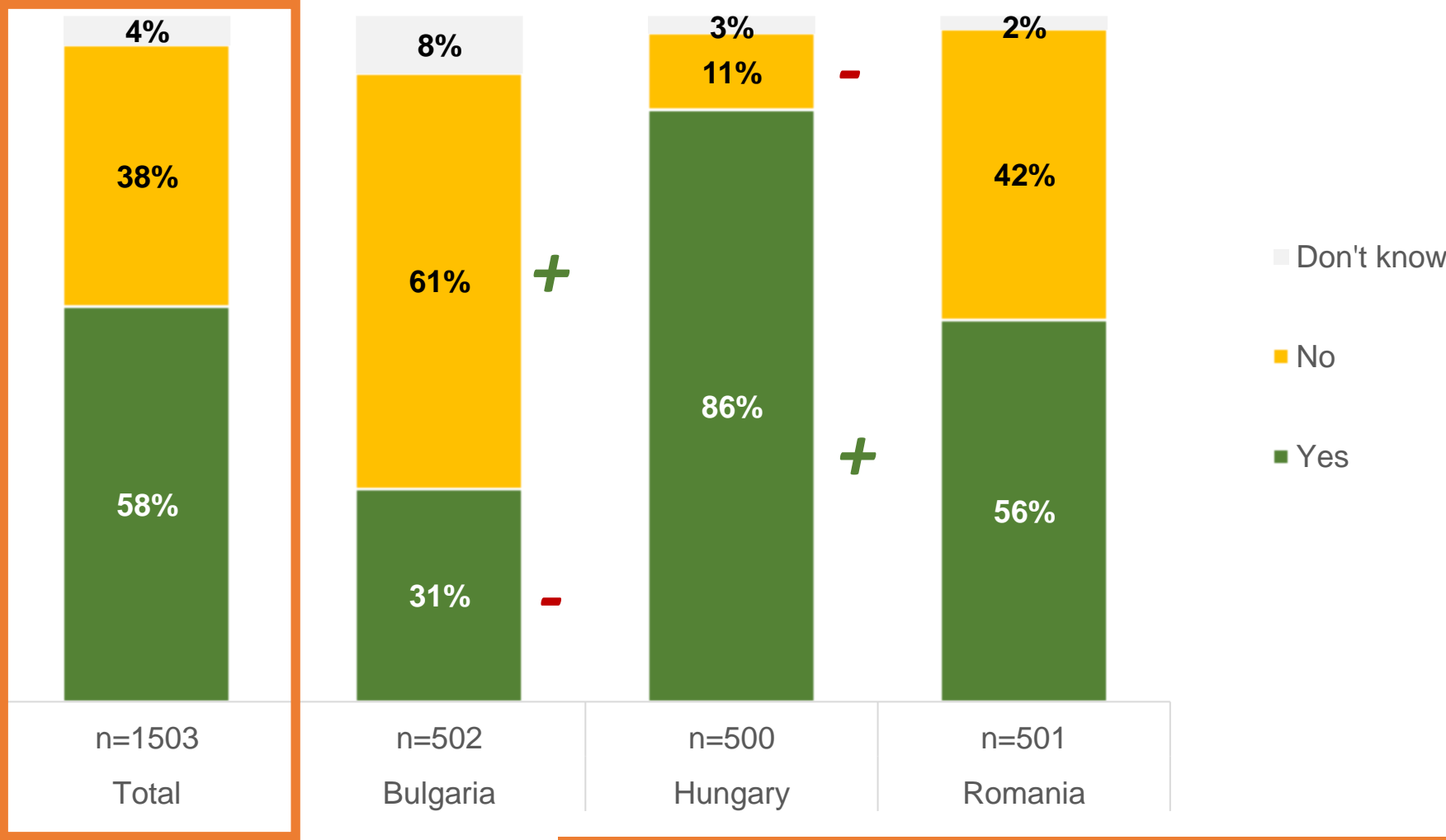
Other, specify



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

Availability of pipeline gas as an alternative

Do you have pipeline gas available in your street...?

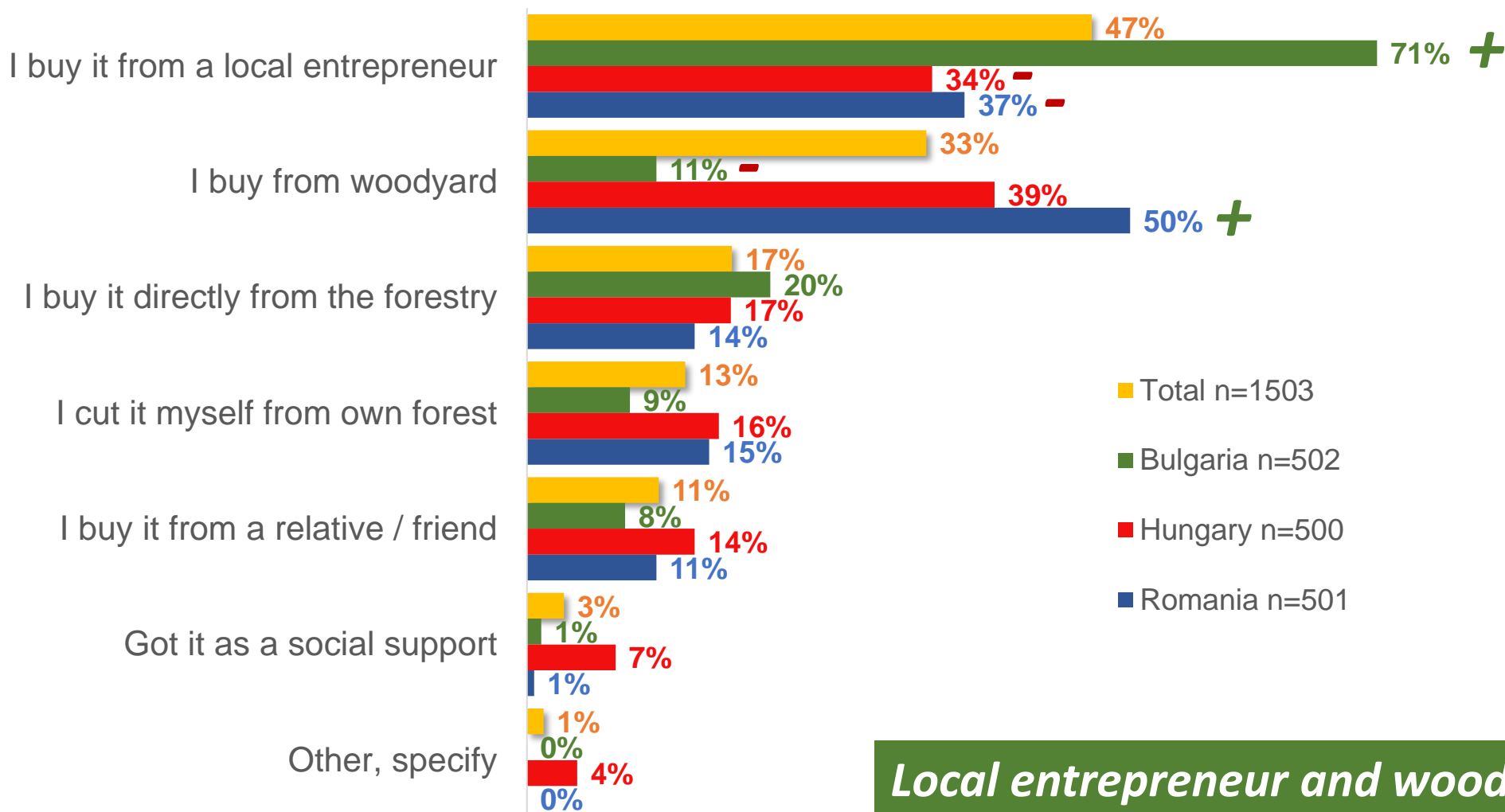


Availability of pipeline gas is far the best in Hungary.



Firewood usage

Source of firewood for heating

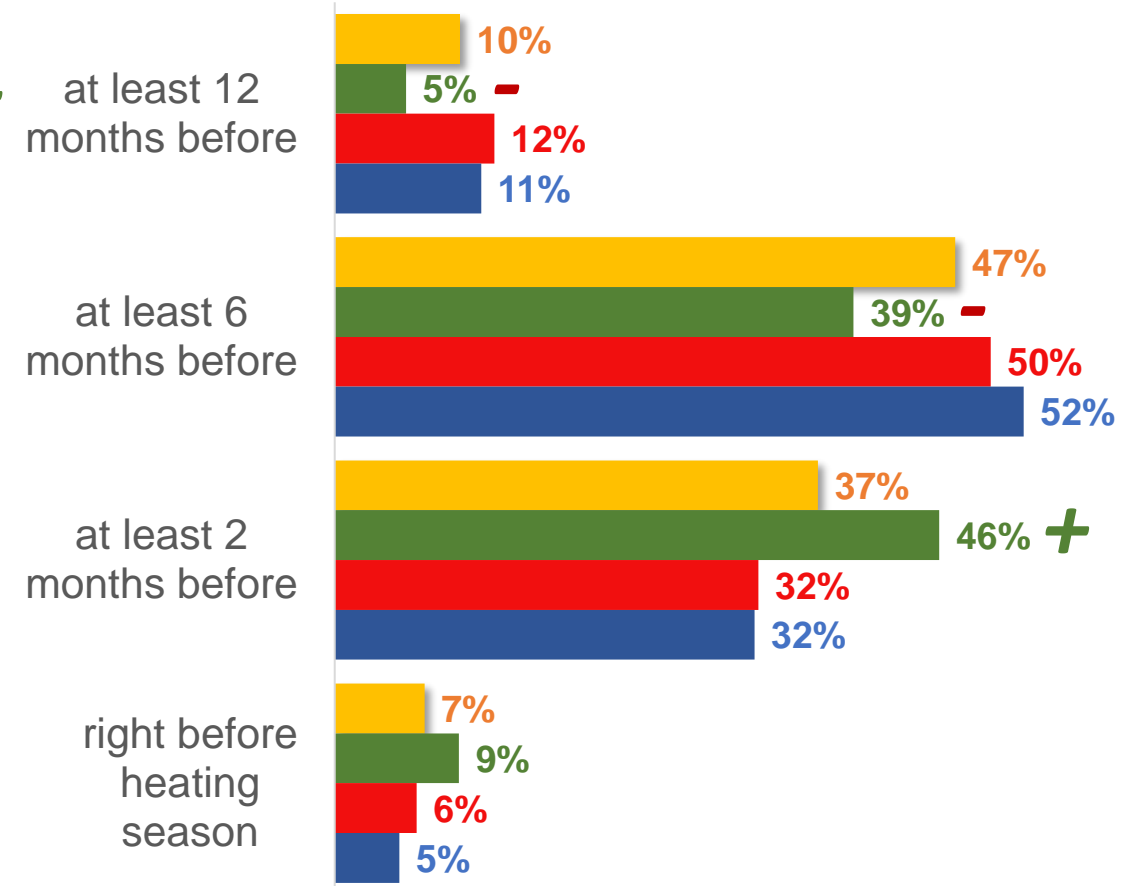
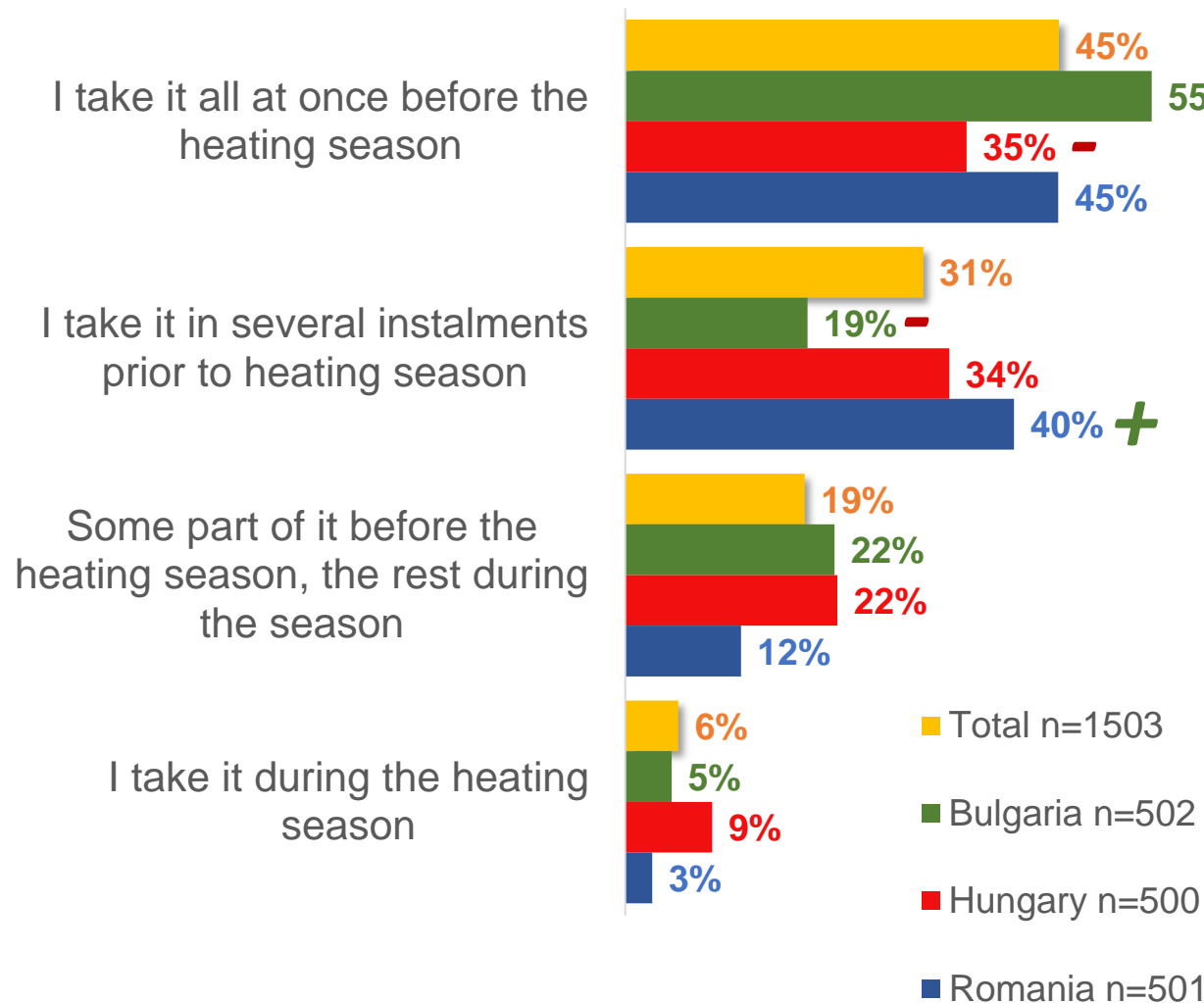


Local entrepreneur and woodyard are the two most typical place of purchase.

Way of taking / purchasing firewood for heating season

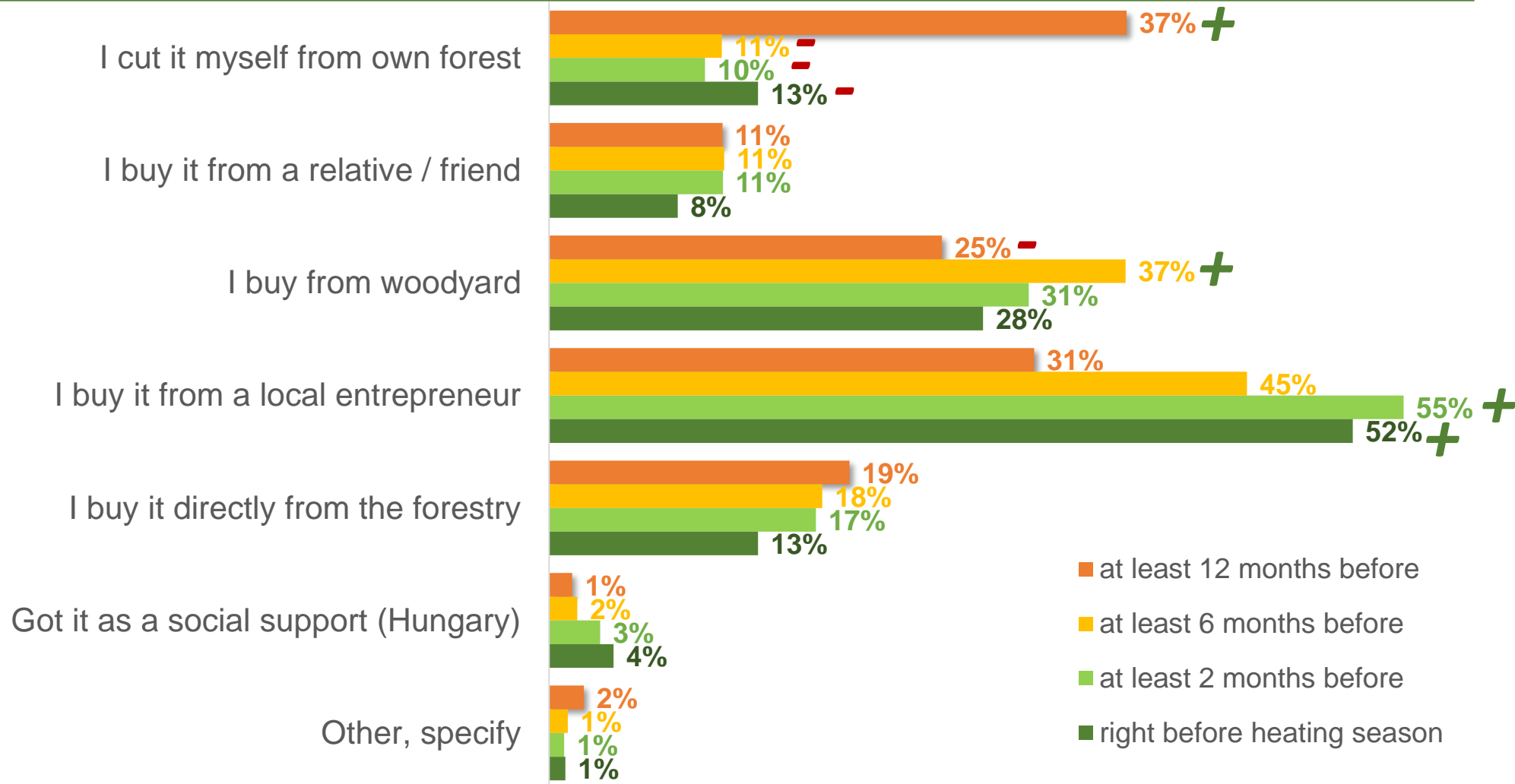
When do you take / buy firewood for the heating season?

How long do you buy firewood prior to heating season?



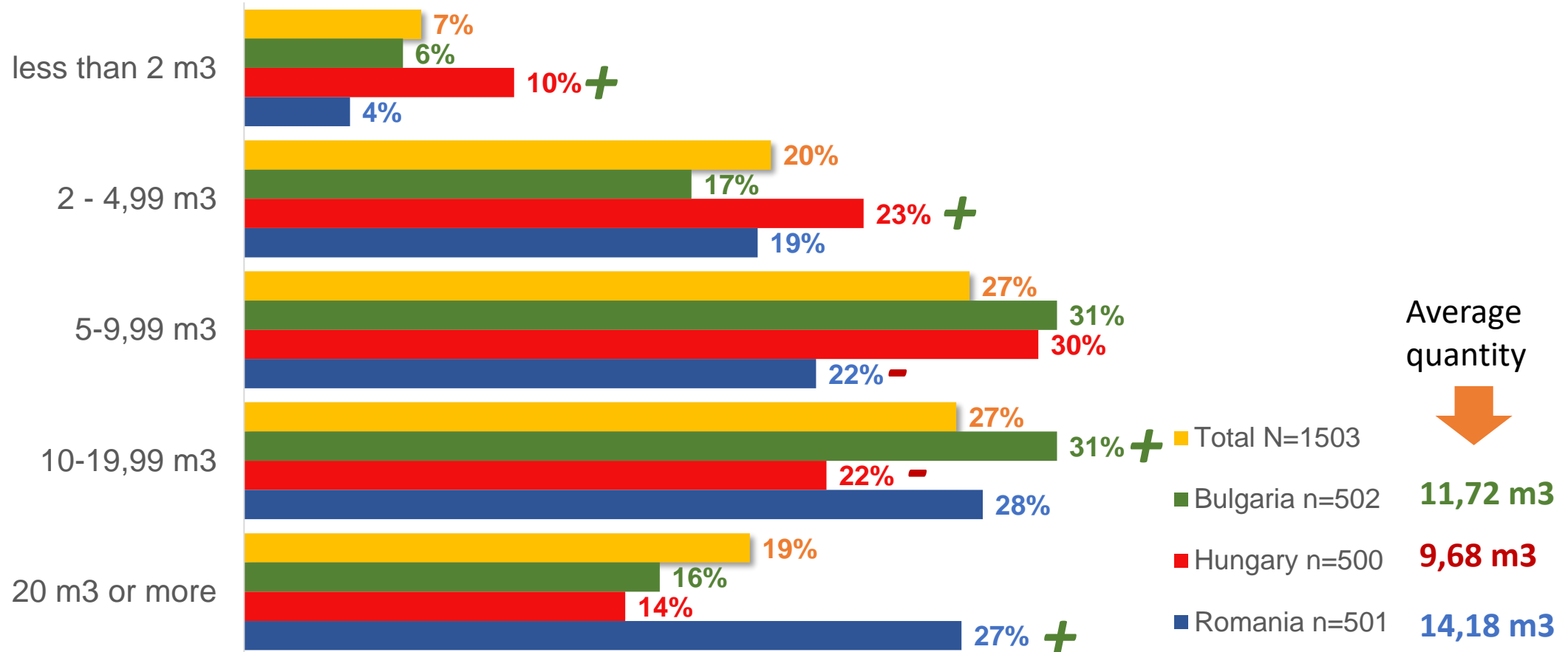
Majority take / buy firewood at least 6 months prior heating season.

Way of purchase / purchasing time prior to heating season



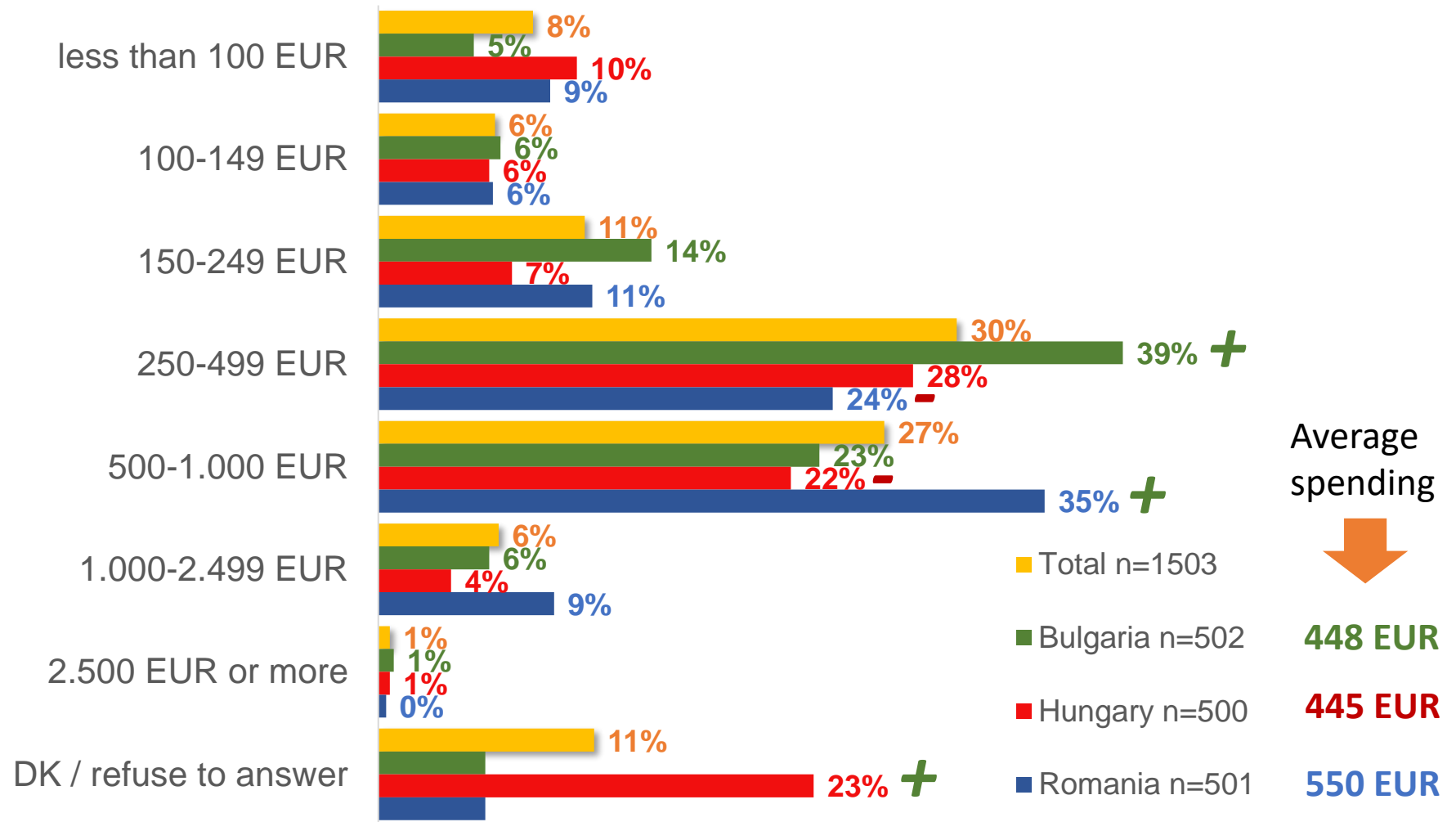
There is a significant correlation between the way and the time of purchase prior to heating season.

Quantity of firewood bought (based on last full heating season)



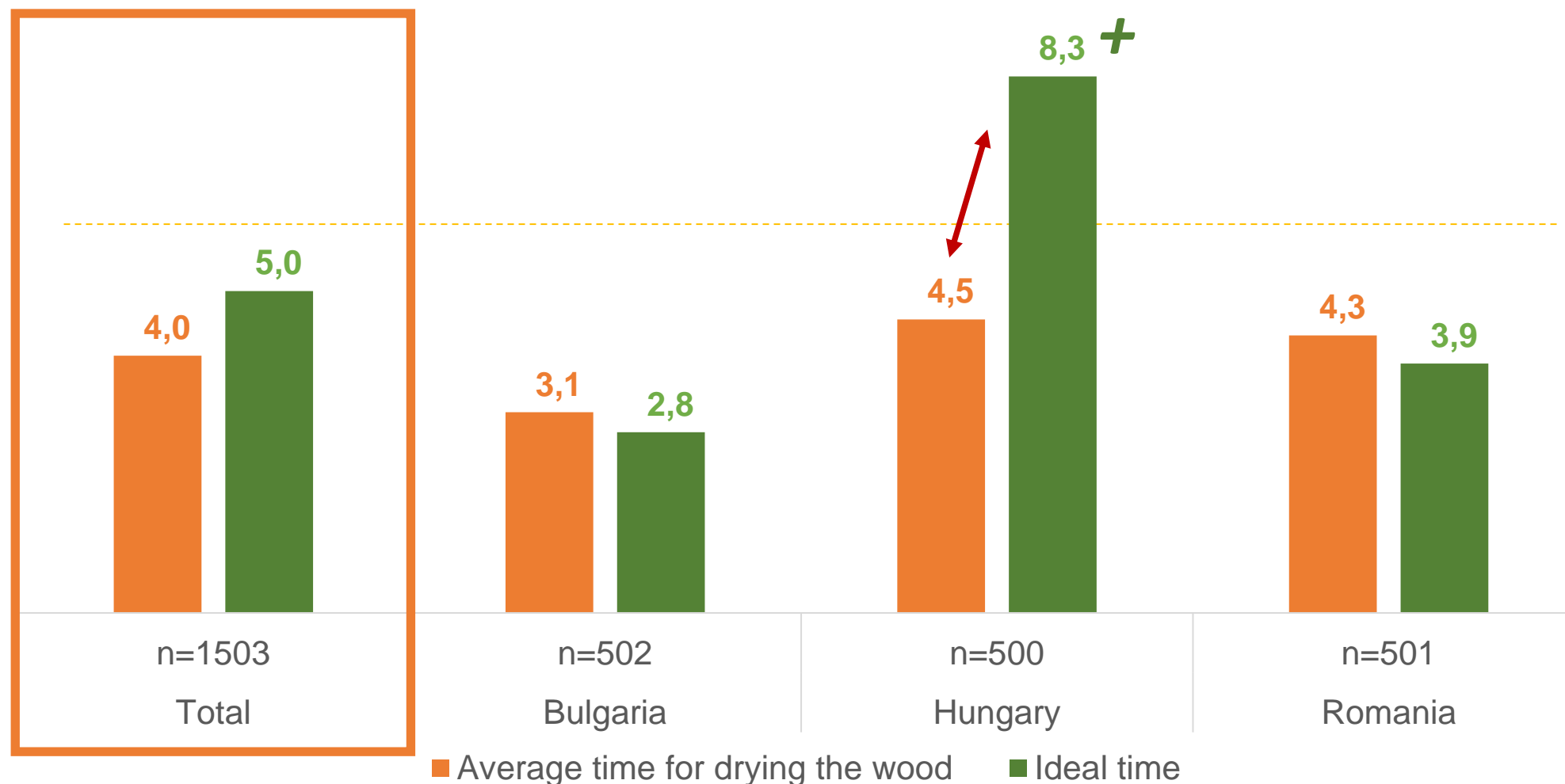
Quantity varies according to dominance of firewood.

Average spending on firewood (based on last full heating season)



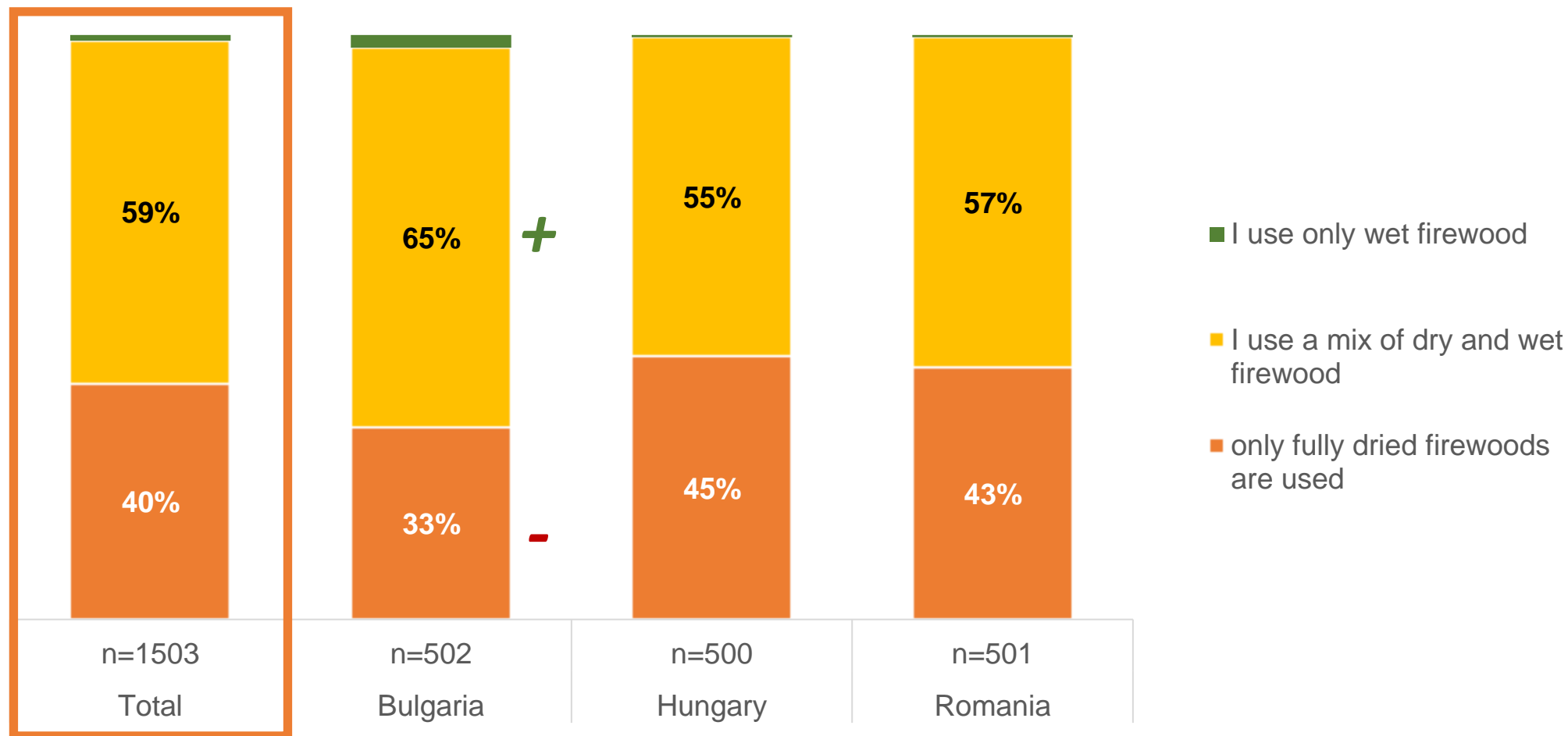
Typical spending is between 250-1.000 EUR. Refusal rate to this questions is the highest in Hungary.

Drying the firewood



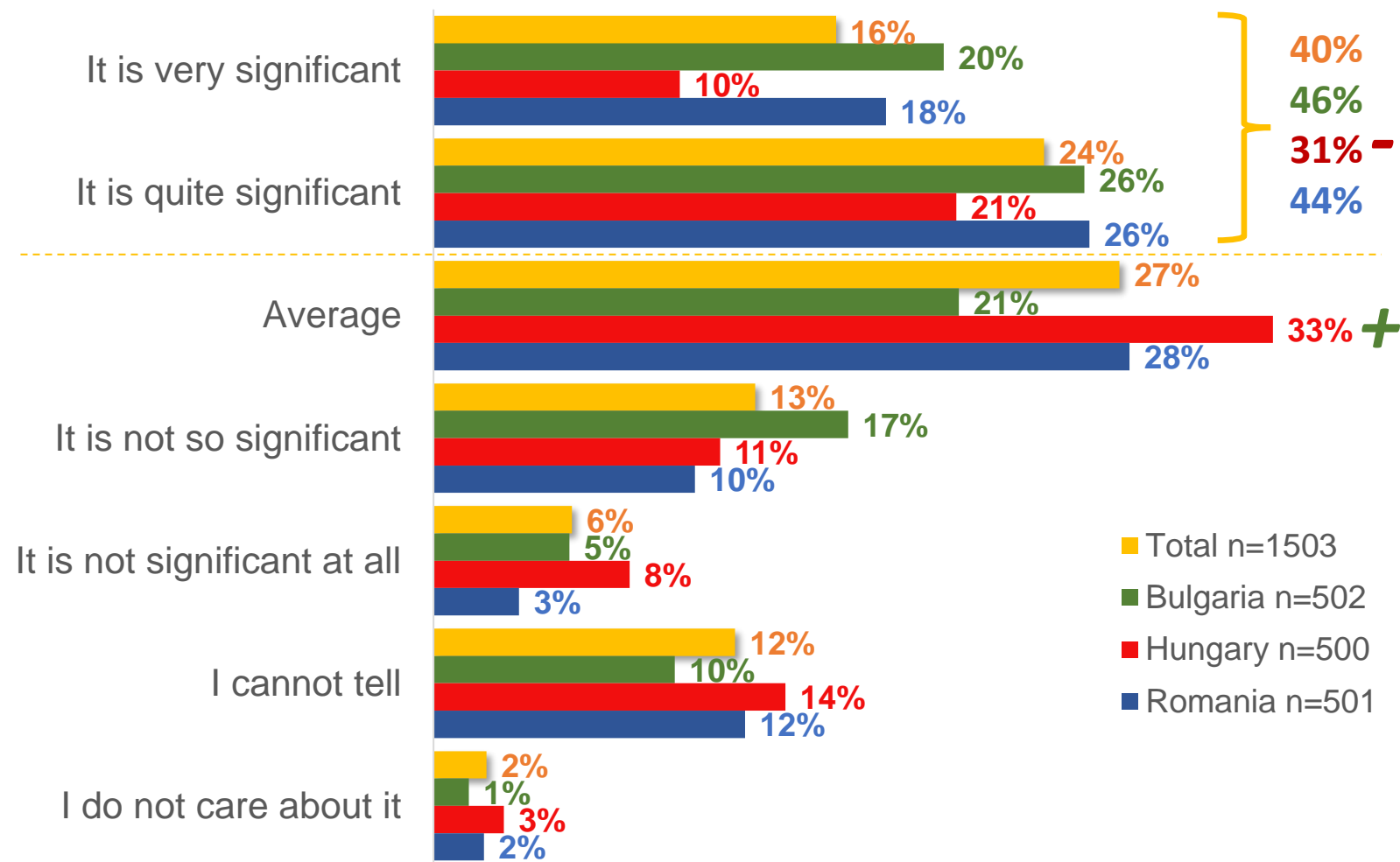
Ideal drying time is the most realistically estimated in Hungary, though the actual still remains far below that.

Way of firewood is being used



People rather prefer the mix of dry and wet firewood.

Opinion on air pollution of firewood usage



Hungarians found the air pollution less significant.

Appendices

Sample: Basic demographics

	Bulgaria n=502	Hungary n=500	Romania n=501
S1 Do you use firewood in your household for heating purposes?			
completely run by firewood	36%	40%	58%
partly run by firewood	64%	60%	43%
no, we do not use firewood at all	0%	0%	0%
S4 What is the type of settlement you are living in?			
Capital	14%	6%	8%
County center	43%	14%	20%
City / town	27%	36%	35%
Village	16%	45%	37%
K12 Age of house (years)			
Less than 10 years	3%	2%	7%
10-24 years	13%	9%	23%
25-50 years	38%	37%	29%
50-99 years	43%	45%	37%
More than 100 years	3%	7%	3%

	Bulgaria n=502	Hungary n=500	Romania n=501
S3 Age of respondent			
18-29	15%	18%	17%
30-44	42%	36%	42%
45-59	37%	32%	33%
60-70	6%	14%	8%
S2 Gender:			
male	35%	39%	46%
female	65%	61%	54%
D6r Size of household			
1	3%	7%	4%
2	19%	33%	24%
3	36%	28%	33%
4	30%	20%	24%
5 or more	12%	12%	16%
D6br Number of children aged 15 or below			
No kids at all	54%	69%	57%
1	29%	18%	26%
2	15%	7%	14%
3 or more	2%	5%	3%
D10 How would you describe the income situation of your household?			
Our income is not enough even for buying basic stuff for living	6%	6%	10%
We can buy the most important things for living, but it is hard task to make ends meet	39%	38%	50%
It's not a problem for us to make ends meet, but we cannot save anything	46%	42%	31%
We can easily buy whatever we need, and we can even save	8%	14%	9%

Sample: NUTS Regions

BULGARIA	
NUTS1 EU NUTS1 region	
Northern and Eastern Bu	53%
South-Western and Sout	47%
Transdanubia	48%
NUTS2 EU NUTS2 region	
Northwestern	15%
Northern Central	13%
Northeastern	11%
Southeastern	14%
Southwestern	29%
Southern Central	18%

HUNGARY	
NUTS1 EU NUTS1 region	
Centra Hungary	14%
Great Plain and North	38%
Transdanubia	48%
NUTS2 EU NUTS2 region	
Central	14%
North	13%
Northern Great Plain	20%
Southern Great Plain	15%
Southern Transdanubia	13%
Central Transdanubia	14%
Western Transdanubia	12%

ROMANIA	
NUTS1 EU NUTS1 region	
Macro-region 1	24%
Macro-region 2	27%
Macro-region 3	30%
Macro-region 4	19%
NUTS2 EU NUTS2 region	
North-East	15%
South-East	12%
South-Muntenia	20%
South-West Oltenia	10%
West	9%
North-West	12%
Center	12%
Bucharest-Ilfov	11%