Uncover the underlying motivations and barriers for energy efficient renovations

Report for European Climate Foundation

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Uncover the underlying motivations and barriers for energy efficient renovations

Table of contents

Introduction

1 All countries

Main motivations and barriers for energy efficient renovations are equal among countries





2 Germany

Saving money is the greatest motivation but investment costs is a key barrier

3 France

The French are motivated by saving money and thermal comfort, but held back by the investments needed and the hassle





4 Spain

In Spain there are three big motivators, but only one barrier: money

5 Bulgaria

Almost all Bulgarians are willing to renovate if it improves their thermal comfort and save money, but are held back by costs





6 Poland Most are motivated by improving thermal comfort and saving money, but can't or won't make the investment

Appendix:

Research set-up

Additional interesting insights

Local translations



Back to table of contents

Introduction



Introduction

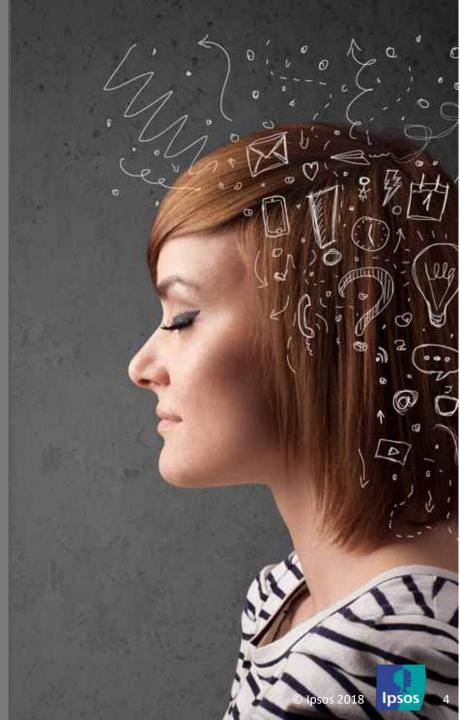
Uncover citizens' motivations and barriers to engage and support energy efficient renovations

This study was commissioned by the European Climate Foundation to better understand the motivations and barriers among citizens in five European countries to carry out energy renovation in their homes.

More than 97% of Europe's building stock must be upgraded to achieve the 2050 decarbonization vision. This calls for not only EU and national policies to accelerate investments in energy efficiency but also minimum energy efficiency requirements for existing buildings.

To build political support for the latter and to mainstream the demand for net zero energy buildings, European citizens' concerns around health and social equity related to the renovation of their homes need to be understood and heard.

The five countries in this study represent diverse socio-economic, geographical and cultural characteristics and have been selected to demonstrate the differences across various European contexts.



Introduction

Who we spoke with

	Home owners	45%	68%	82%	89%	87%
СНС	Tenants	55%	32%	18%	11%	13%
	Single detached home	28%	50%	15%	31%	34%
	Single attached home	11%	15%	24%	12%	6%
\sim	Apartment	60%	35%	59%	57%	60%
$\left(\begin{array}{c} \\ \\ \end{array} \right)$	Left politically oriented	55%	43%	57%	31%	43%
	Right politically oriented	31%	35%	29%	37%	35%
	No children	69%	55%	56%	62%	54%
	Children in household	31%	45%	44%	38%	46%





Summary of all countries

Main motivations and barriers for energy efficient renovations





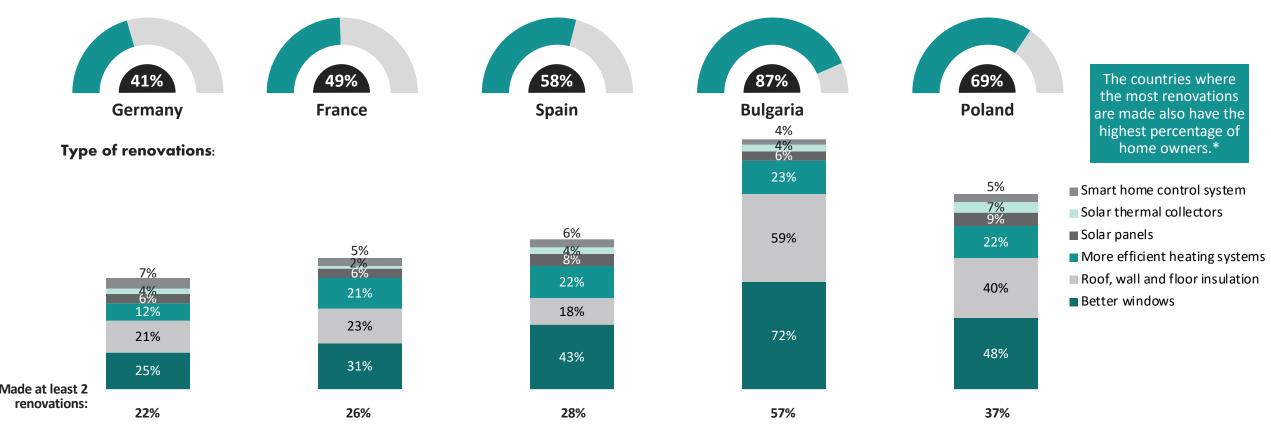
Awareness and knowledge of 'highly energy efficient homes', 'energy neutral homes' or 'passive homes' differ per country

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A popular topic, but	Low awareness	Perception of	Positive attitude	A monetary benefit
mainly in daily life		inaccessible		A monetary benefit
 In Germany energy efficiency is a popular and present topic. Energy efficient solutions are often used in daily life but less in the form of energy efficient renovations because of a lack of knowledge and time (e.g. using eco- friendly devices). 	 In France, the awareness of the terms "zero emission" or "neutral house" is still low. Associations with this are linked to sustainability: recyclable or natural materials, solar panels, green spaces, sustainable development, ecological houses, connected houses. The French recognize a growing trend towards zero emission buildings, perceived as modern and in line with the current ecological challenges facing our planet. 	 In Spain energy efficient renovations are hardly considered, due to barriers for renovation in general. Although 'Energy efficient homes' are seen as easily understandable and perceived as accessible (anyone can do it), 'Energy neutral homes' are more difficult to understand. This is perceived as a bit inaccessible (only for the wealthy people). 	 In Bulgaria people are not very familiar with energy efficiency, but have a certain understanding. They relate it to making use of alternative energy sources like solar panels, and to limit energy waste. Bulgarians have a positive attitude towards energy efficiency: they relate it to a certain sense of responsibility, to forward thinking and an up-to-date attitude. On top of that, energy efficiency will result in improved living conditions. 	 In Poland "net zero energy buildings" is an unknown term. More familiar terms are cost saving / ecological and sometimes passive houses/flat. It is mainly related to the possibilities of reducing the flat/house energy consumption cost (solar panels, insulation).

Summary of all countries

Number of respondents who made energy efficient renovations differs per country. Insulation and window glazing are most often carried out

Made a renovation in their current home (at any given point in time):



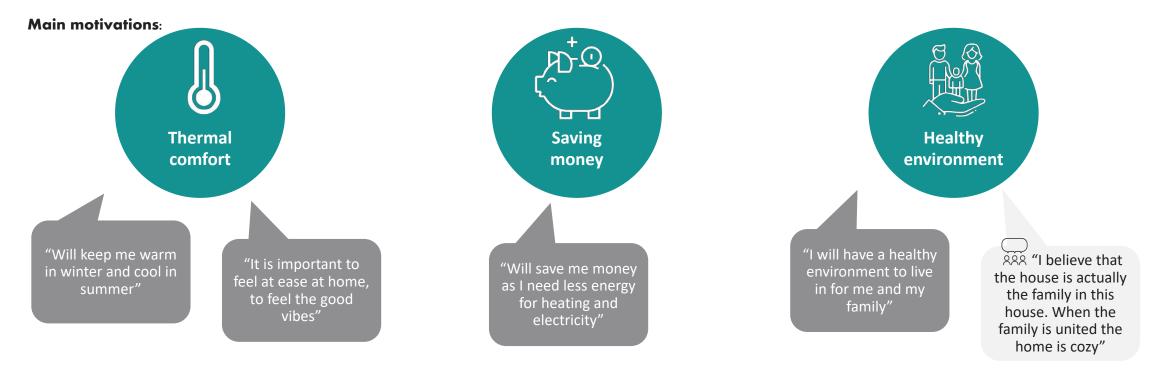
*Differences between home owners and tenants can be found on the first slide of each country specific chapter

Question: Have you made, or had influence in making one of the following energy efficient renovations around your house?

Base: All respondents (n=6004)

Summary of all countries

But despite the differences, there are three main motivations for all countries:





From protection and comfort....

A house should offer protection and shelter against all possible influences (noise, weather conditions) from the outside world. A house is perceived as a place (a nest, a cocoon) for retreat: to take some rest from a (hectic) daily (city) life and to recharge.



... to social connection

If the basic need for protection and comfort is fulfilled, the house can serve as a base for good relations.



Thermal comfort, saving money and healthy environment are the main motivations across all countries

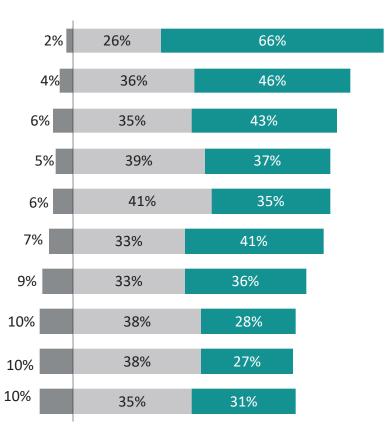
Top 10 motivations:

Only asked for BG, PL Will keep me warm in winter Will save me money as I need less energy for heating and electricity Only asked for BG, PL Will keep me cool in summer I will have a healthy environment to live in for me and my family Only asked for DE, FR, ES Will improve thermal comfort in my house Only asked for BG, PL I want to reduce (outdoor) air pollution I want my house to meet modern standards for quality of housing Only asked for home owners increases value of my property, so it will provide more financial security in the future

I feel personally responsible for preserving the environment

Will improve air quality in my house

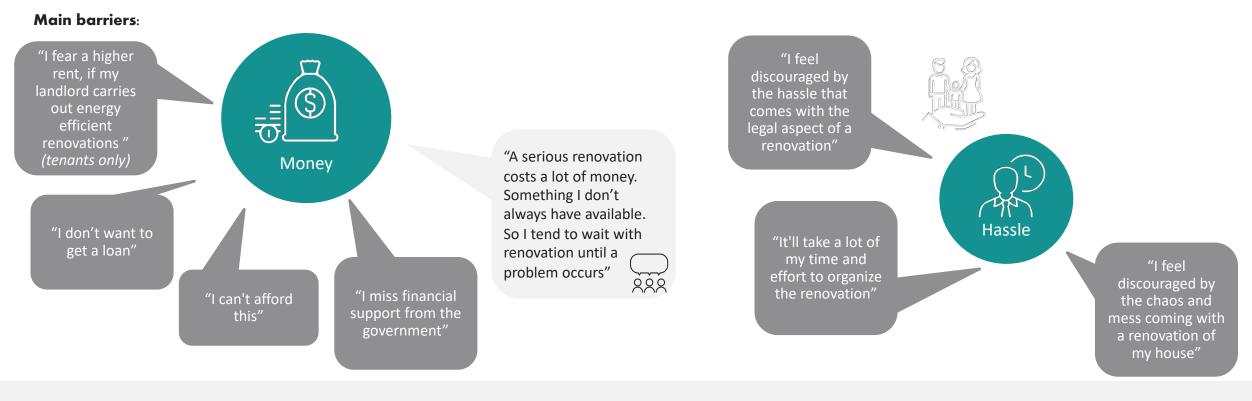
Scale 1-5: Not (at all) a motivation (1+2) A motivation (4) Completely a motivation (5)



Question: Please indicate to what extent each of the following would be/has been a motivation for you to make energy efficient renovations around your house. Base: All respondents (n=6004)

Summary of all countries

For all countries there is one main barrier: Money. Too much hassle is also holding citizens back, but to a lesser extent



Costs

Qualitative conversations

Renovation requires substantial investment. Not everyone can fund any renovation at any time: money has to be lent, or set aside to make a renovation happen.



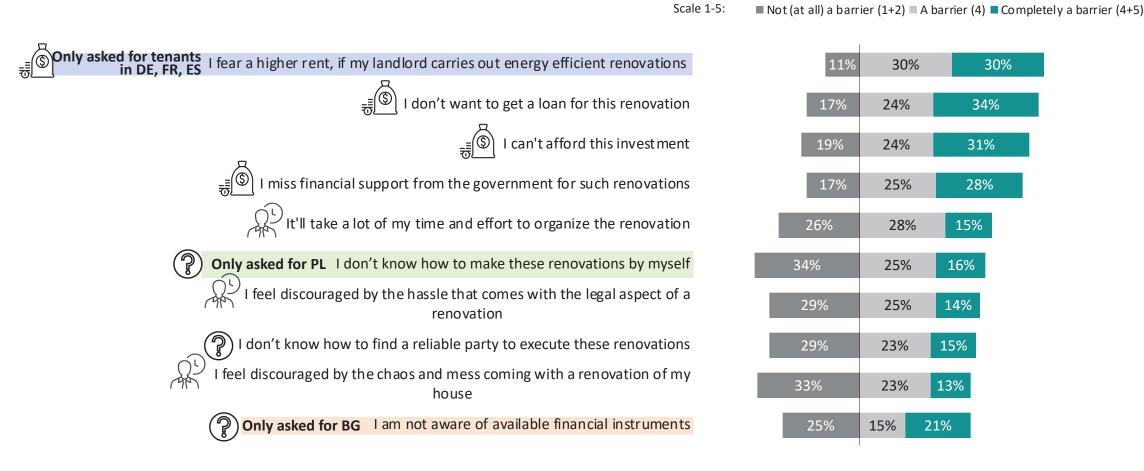
Hassle

Renovation always brings a lot of hassle: getting legal permission, coming to an agreement with other households living in the same building, finding a reliable contractor, possibly moving out of the home, dirt and mess are all barriers taken into account when considering home renovation.



Citizens are mainly held back by money, followed by (expected) hassle. A third factor is a lack of (procedural) awareness

Top 10 barriers:



Question: Now please indicate to what extent each of the following is/has been a barrier for you to make energy efficient renovations around your house. Base: All respondents (n=6004)



There are some overall group differences in motivations and **barriers**

Motivations

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Women score higher on environmental motivations. They more often fear consequences of climate change, feel more responsible for preserving the environment, want better outdoor air quality.

Women are also more triggered by improving their quality of living, by improving indoor air quality and a healthy environment.



Men on the other hand like their houses to be equipped with the latest technology and like to experiment with this.



Citizens who own a house are more motivated in general. The same applies for higher income households and households with children.

Politically left oriented citizens are more often triggered by environmental motivations.

Politically right oriented citizens are more likely to renovate because they like to have the latest technology and want to improve the looks of their house.

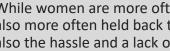


Those who live in rural areas seem to be more influenced by their peers. They are more often motivated to make renovations because others do it, to make their houses look better and because they want their houses to be equipped with the latest technology.



For people living in the city it is more often a motivation to renovate because it reduces noise.

Barriers



While women are more often triggered to make renovations, they are also more often held back to make them. Money is a big barrier, but also the hassle and a lack of knowledge hold them back.



Those within the age of 18-34 lack money to finance the investment. They are also more sceptical if it will actually result in energy saving or will protect the environment.

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Citizens living in the cities more often do not make renovations because of the hassle and a lack of awareness on options and state funding.

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Households with a below average income more often don't want to make renovations because they can't afford it, but also don't want to take a loan.



Politically right oriented citizens have the tendency of not being open to s making energy efficient renovations. They don't think it's worth it, think their efforts will have no or minimal environmental impact, don't want to change the look of their house and they are happy with how it is.



Back to table of contents





Most important insights



Most important insights - Germany

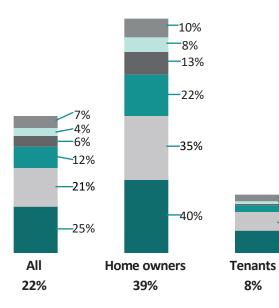
Who we spoke with

	Home owners	45%
	Tenants	55%
	Single detached home	28%
	Single attached home	11%
\sim	Apartment	60%
$\left(\leftarrow \right)$	Left politically oriented	55%
	Right politically oriented	31%
	No children	69%
	Children in household	31%

Made a renovation in their current home (at any given point in time):



Type of renovations:



Made at least 2 renovations:

Smart home control system

Solar thermal collectors

Solar panels

- More efficient heating systems
- Roof, wall and floor insulation
- Better windows

4%

1% -1%

4%

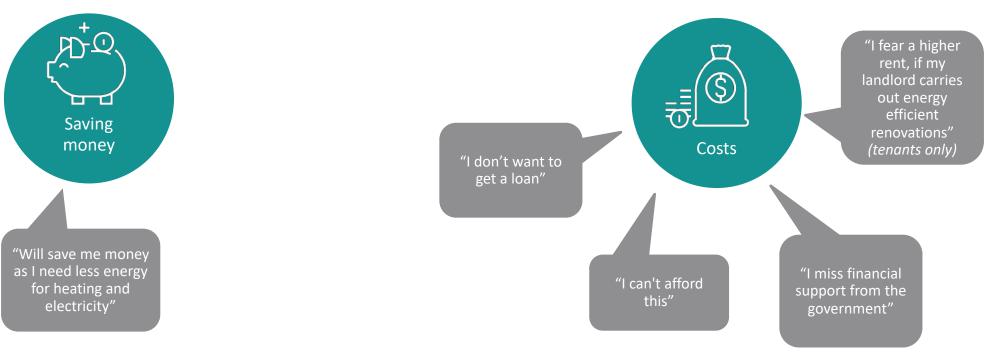
10%



Base: All respondents in Germany (n=2001)

German citizens are mostly motivated by saving money, but held back by the investments that need to be made

Motivations





Cost savings are good triggers...

In Germany energy efficiency is a popular and present topic. A positive cost-benefit balance is especially appealing: a renovation provides cost saving in the long term.



...but making investments is a barrier.

Barriers

Citizens are not able or not willing to make high costs for modernization. Tenants fear a rent increase.

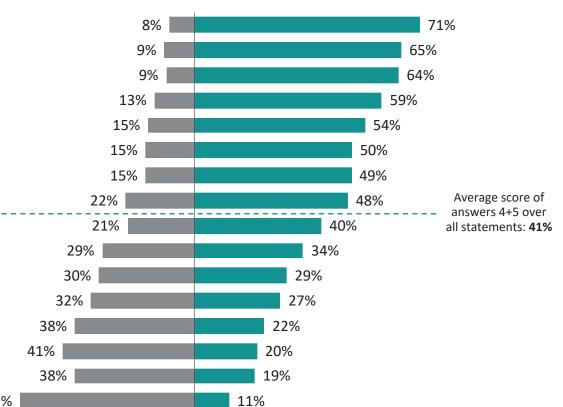


Total

Next to saving money, thermal comfort and healthy environment are most able to motivate Germans to renovate

Scale 1-5:

Motivations:



■ Not (at all) a motivation (1+2) ■ (Completely) a motivation (4+5)

Will save me money as I need less energy for heating and electricity Will improve thermal comfort in my house I will have a healthy environment to live in for me and my family Only asked for home owners Increases value of my property, so it will provide more financial security in the future I fear consequences of climate change and want to preserve the environment I feel personally responsible for preserving the environment Will make me feel in control of my energy bills and overall utility expenses Will reduce the amount of noise I hear from outside Will improve air quality in my house Financially attractive for me because of government programmes (tax rebates, grants, other incentives) I'm excited about new technologies and features and like to experiment with them I want to partner with my neighbours for a better local environment Will make my house look better I'm a frontrunner and want to have my home equipped with the latest (energy saving) technology I feel reassured it's a good financial investment as it has been recommended to me by others

Everyone is doing it and I want to keep up 55%



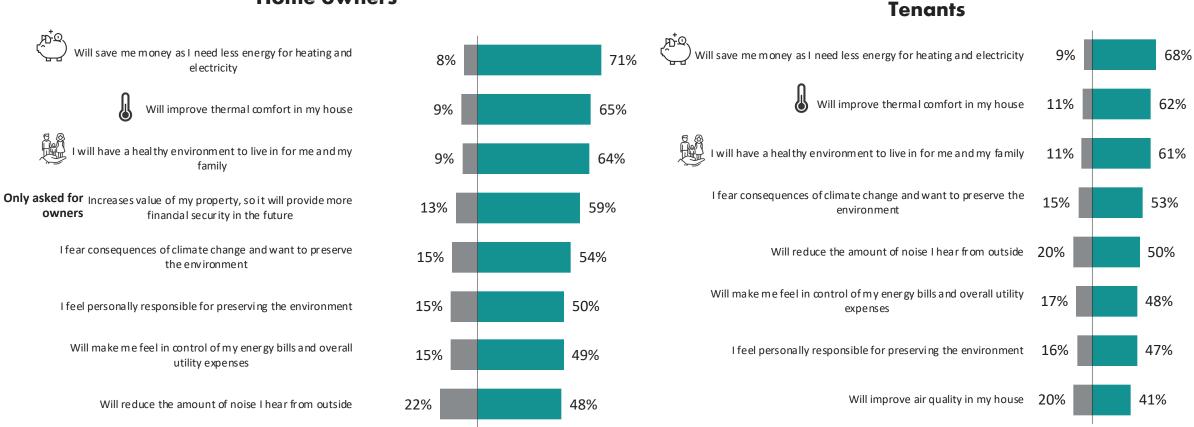
Question: Please indicate to what extent each of the following would be/has been a motivation for you to make energy efficient renovations around your house. Base: All respondents in Germany (n=2001)

Most important insights - Germany

Home owners and tenants are similarly motivated by the same triggers

Scale 1-5: ■ Not (at all) a motivation (1+2) ■ (Completely) a motivation (4+5)

Main motivations (score above country average) :



Home owners

The full list of motivations for home owners and tenants can be found in the appendix

Question: Please indicate to what extent each of the following would be/has been a motivation for you to make energy efficient renovations around your house.

Base: All respondents in Germany (n=2001)

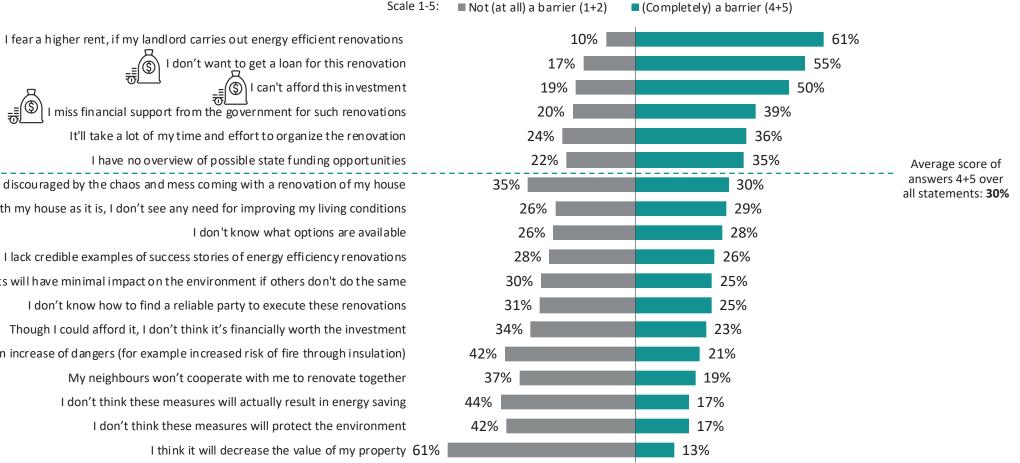
18

All German citizens, but especially tenants, are held back by monetary barriers

Barriers:

Only asked for

tenants

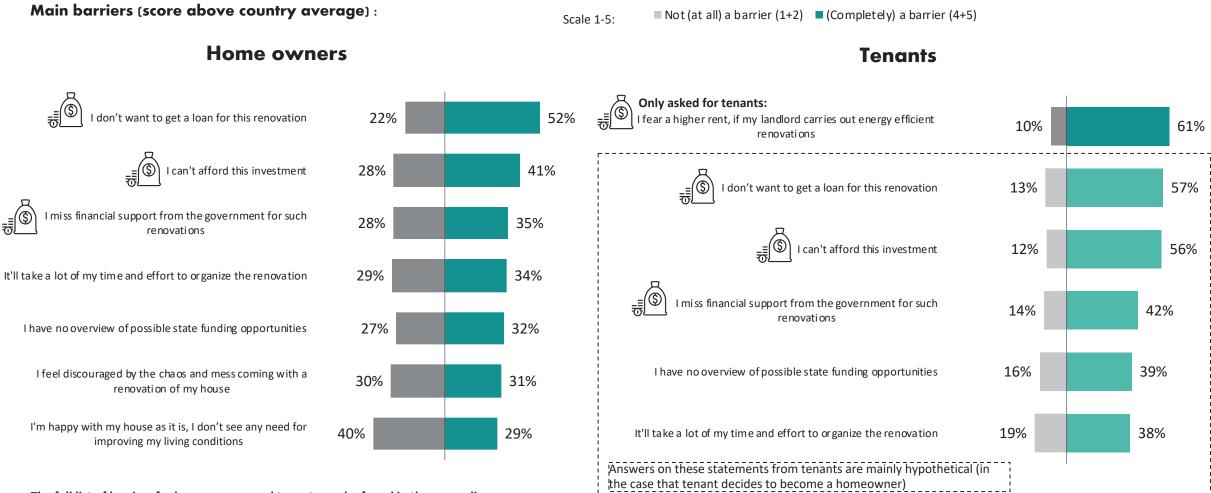


I miss financial support from the government for such renovations It'll take a lot of my time and effort to organize the renovation I have no overview of possible state funding opportunities I feel discouraged by the chaos and mess coming with a renovation of my house I'm happy with my house as it is, I don't see any need for improving my living conditions I lack credible examples of success stories of energy efficiency renovations I feel my personal efforts will have minimal impact on the environment if others don't do the same I don't know how to find a reliable party to execute these renovations Though I could afford it, I don't think it's financially worth the investment I fear an increase of dangers (for example increased risk of fire through insulation) My neighbours won't cooperate with me to renovate together I don't think these measures will actually result in energy saving I don't think these measures will protect the environment

Question: Now please indicate to what extent each of the following is/has been a barrier for you to make energy efficient renovations around your house. Base: All respondents in Germany (n=2001)



Barriers across home owners and tenants are nearly the same and only differ on two barriers



The full list of barriers for home owners and tenants can be found in the appendix

Question: Now please indicate to what extent each of the following is/has been a barrier for you to make energy efficient renovations around your house.

Base: All respondents in Germany (n=2001)

20



Motivations and barriers differ between genders, life stages, political orientation and home owners/tenants

Motivations



Women score higher on environmental motivations. They more often fear consequences of climate change and feel more responsible for preserving the environment.

Women are also more triggered by improving their quality of living, by improving indoor air quality, a healthy environment and thermal comfort.



Households with children are more motivated in general. The same applies for average and higher income households and home owners.



Those within the age range of 18-34 seem to be more influenced by their peers. They are motivated to renovate because everyone is doing it or because it has been recommended by others.



Politically left oriented citizens are more often triggered by environmental motivations. They more often fear the consequences of climate change and feel more responsible for preserving the environment.

Politically right oriented citizens are more likely to renovate because they like to have the latest technology and want to improve the looks of their house. Also peer influence is a stronger motivator for them.

Barriers



While women are more often triggered to renovate, they are also more often held back to make them. Money is an even bigger barrier to them, but also the hassle and a lack of knowledge hold them back.



Those within the age range of 18-34 can't afford to renovate. They also lack awareness on where to find a reliable party, or what options are available.



Citizens aged 55-75 are less willing to take a loan to finance the renovation.

mmm	

German tenants face more (potential) barriers in general. The same applies to those living in urban areas and those living in apartments.



Politically right oriented citizens have the tendency of not being open to making energy efficient renovations. They don't think it's worth it, lack credible examples, don't believe it will result in energy saving or protect the environment.





Back to table of contents





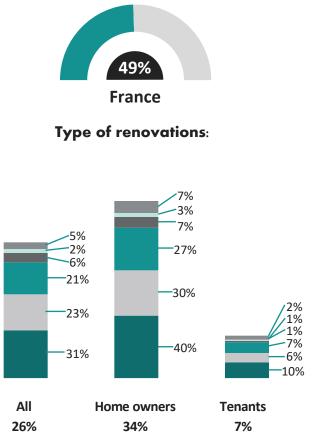
Most important insights



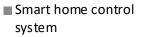
Who we spoke with

	Home owners	68%
	Tenants	32%
	Single detached home	50%
	Single attached home	15%
\sim	Apartment	35%
	Left politically oriented	43%
	Right politically oriented	35%
	No children	55%
	Children in household	45%

Made a renovation in their current home (at any given point in time):



Made at least 2 renovations:





Solar panels

- More efficient heating systems
- Roof, wall and floor insulation
- Better windows



Base: All respondents in France (n=1002)

The French are motivated by saving money and thermal comfort, but held back by the investments needed and the hazzle



Qualitative conversations

The house as a cocoon and making a calculated investment

Many **French** respondents associate housing with the notion of shelter, a nest, a cocoon, protecting them against the stress from their hectic and busy life.

Facts and figures proving that the return on investment will be positive reassure them that the renovation will be a good investment.



Costs in general hold them back

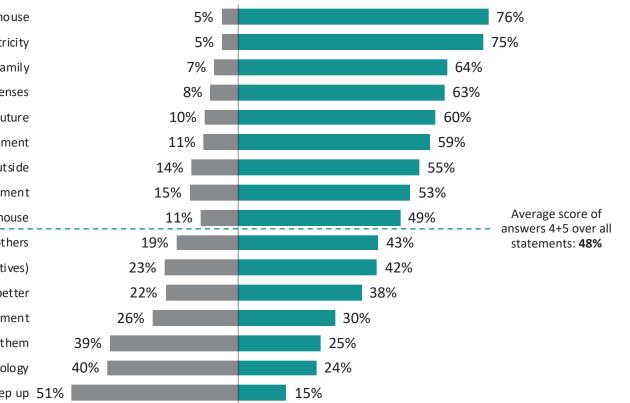
Functional barriers such as costs, but also complexity/feasibility of the works and lack of tax incentives are in the frontline.



Increased thermal comfort and saving money resonate strongly among all

Motivations:

Scale 1-5: Not (at all) a motivation (1+2) (Completely) a motivation (4+5)



Will improve thermal comfort in my house Will save me money as I need less energy for heating and electricity I will have a healthy environment to live in for me and my family Will make me feel in control of my energy bills and overall utility expenses Only asked to home owners Increases value of my property, so it will provide more financial security in the future I feel personally responsible for preserving the environment Will reduce the amount of noise I hear from outside I fear consequences of climate change and want to preserve the environment Will improve air quality in my house I feel reassured it's a good financial investment as it has been recommended to me by others Financially attractive for me because of government programmes (tax rebates, grants, other incentives) Will make my house look better I want to partner with my neighbours for a better local environment I'm excited about new technologies and features and like to experiment with them I'm a frontrunner and want to have my home equipped with the latest (energy saving) technology Everyone is doing it and I want to keep up 51%

Question: Please indicate to what extent each of the following would be/has been a motivation for you to make energy efficient renovations around your house. Base: All respondents in France (n=1002)

Not wanting to, or being unable to invest or pay more money is a top barrier

Scale 1-5:

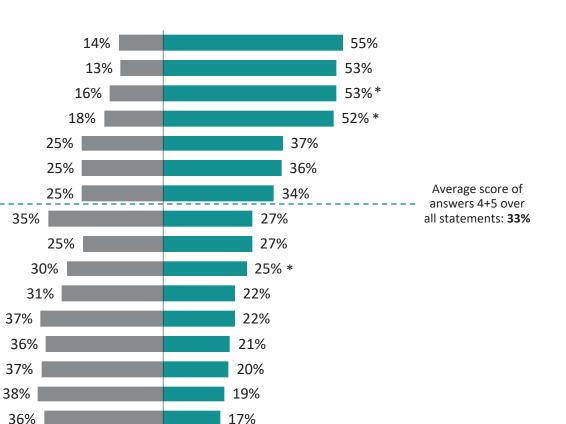
Not (at all) a barrier (1+2)

Barriers:

Only asked to tenants a light rent, if my landlord carries out energy efficient renovations ا miss financial support from the government for such renovations can't afford this investment I don't want to get a loan for this renovation It'll take a lot of my time and effort to organize the renovation I don't know how to find a reliable party to execute these renovations I feel my personal efforts will have minimal impact on the environment if others don't do the same I feel discouraged by the chaos and mess coming with a renovation of my house I don't know what options are available My neighbours won't cooperate with me to renovate together I lack credible examples of success stories of energy efficiency renovations Though I could afford it, I don't think it's financially worth the investment I'm happy with my house as it is, I don't see any need for improving my living conditions I don't think these measures will actually result in energy saving I don't want to change the look of my house I don't think these measures will protect the environment

*Significantly higher for tenants

Question: Now please indicate to what extent each of the following is/has been a barrier for you to make energy efficient renovations around your house. Base: All respondents in France (n=1002)



(Completely) a barrier (4+5)



Motivations and barriers differ between genders, life stages, political orientation, income and urbanization

Motivations

- (

Women like the feeling of being in control of utility expenses and saving money.



Women are also more triggered by improving their quality of living, by improving indoor air quality and a healthy environment.



Men are more interested in the new technology that comes with renovation, because they are excited to experiment with this.



Younger citizens (18-34) are more triggered by wanting to have the latest technology around their house and like to experiment with this.



For citizens aged 55-75 it is even more important to be able to save money and improve thermal comfort with a renovation.



Politically left oriented citizens more often fear the consequences of climate change and want to do something about this.

Politically right oriented citizens are more likely to renovate because they want to improve the looks of their house.



For people living in the city it is more often a motivation to renovate because it reduces noise and improves indoor air quality.

Barriers



Those within the age group of 18-34 lack money to finance the investment. They are also less aware of the possibilities in renovation and how they can find a reliable party to execute this for them.

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Citizens living in the cities more often do not make renovations because of the chaos and mess they bring. They also more often think it will cost them too much time and effort.

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French tenants more often don't want to renovate because they can't afford it, but also don't want to take a loan. They also more often have neighbours who won't cooperate to renovate together.



Households with a below average income more often can't afford to make a renovation and more often have neighbours who are not willing to cooperate.

Politically right oriented citizens have the tendency of not being open to making energy efficient renovations. They don't think it's worth it, don't believe it will help protect the environment, don't want to change the look of their house and they are just happy with how it is now.

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Back to table of contents





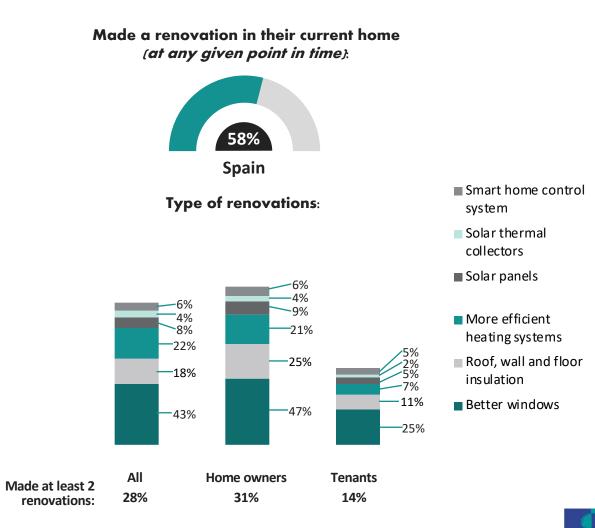
Most important insights



Most important insights - Spain

Who we spoke with

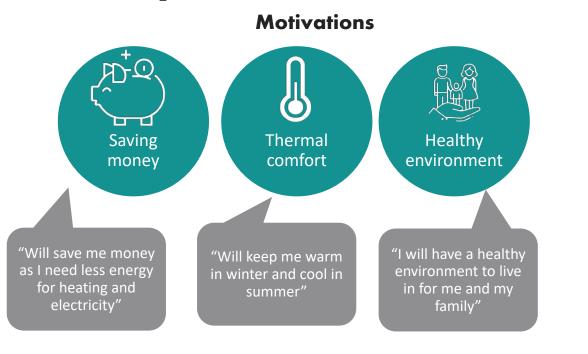
Home owners82%Tenants18%Single detached home15%Single attached home24%Apartment59%Left politically oriented57%Right politically oriented29%No children56%Children in household14%			
Single detached home 15% Single attached home 24% Apartment 59% Left politically oriented 57% Right politically oriented 29% No children 56%		Home owners	82%
Single attached home 24% Apartment 59% Left politically oriented 57% Right politically oriented 29% No children 56%		Tenants	18%
Single attached home 24% Apartment 59% Left politically oriented 57% Right politically oriented 29% No children 56%		Single detached home	15%
Left politically oriented 57% Right politically oriented 29% No children 56%		Single attached home	24%
Right politically oriented 29% No children 56% Children in household 56%	\sim	Apartment	59%
No children 56%	$\left(\leftarrow \right)$	Left politically oriented	57%
Children in household		Right politically oriented	29%
Children in household		No children	56%
		Children in household	44%

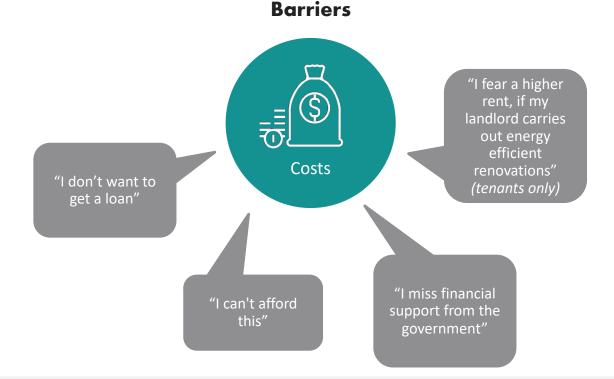


Base: All respondents in Spain (n=1000)

29

In Spain there are three big motivators, but only one barrier: money







Renovation provides dual benefits

Next to saving money for their own benefit, the Spanish also show concern about environmental problems. They want to contribute by talking about the subject and doing their own little bit in helping through conscious use of energy.



The strongest barrier is the process of renovating

Perceived as extremely expensive – never knowing the final costs that increase exponentially as renovation occurs. Renovation is a process they'd rather avoid because they feel there are many elements that are beyond their control.

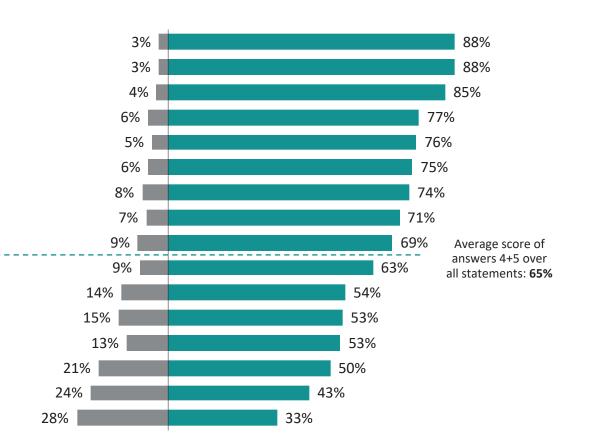


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Saving money, improving thermal comfort and having a healthy environment are the main motivations for Spanish citizens

Scale 1-5:

Motivations:



■ Not (at all) a motivation (1+2) ■ (Completely) a motivation (4+5)

Will save me money as I need less energy for heating and electricity Will improve thermal comfort in my house I will have a healthy environment to live in for me and my family Will reduce the amount of noise I hear from outside Will improve air quality in my house I feel personally responsible for preserving the environment I fear consequences of climate change and want to preserve the environment Will make me feel in control of my energy bills and overall utility expenses Only asked to home Increases value of my property, so it will provide more financial security in the future owners I feel reassured it's a good financial investment as it has been recommended to me by others I want to partner with my neighbours for a better local environment I'm excited about new technologies and features and like to experiment with them Will make my house look better Financially attractive for me because of government programmes (tax rebates, grants, other incentives) I'm a frontrunner and want to have my home equipped with the latest (energy saving) technology

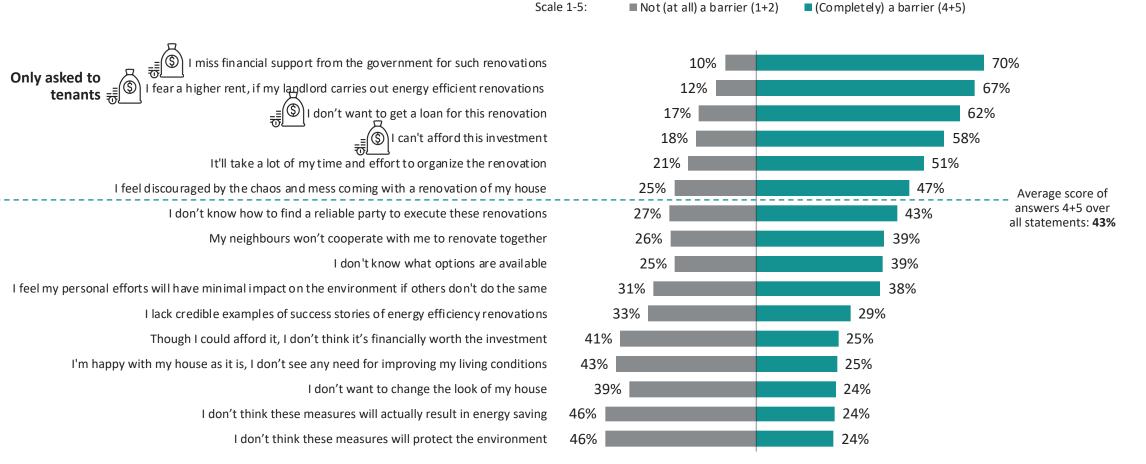
Everyone is doing it and I want to keep up



Question: Please indicate to what extent each of the following would be/has been a motivation for you to make energy efficient renovations around your house. Base: All respondents in Spain (n=1000)

Lack of financial support from the government and other monetary barriers are holding them back. Next to that, hazzle is a barrier

Barriers:



Question: Now please indicate to what extent each of the following is/has been a barrier for you to make energy efficient renovations around your house. Base: All respondents in Spain (n=1000)



Motivations and barriers differ between genders, life stages, political orientation, income and type of home



Women fear consequences of climate change and want to do something to preserve the environment.

Motivations



For citizens aged 55-75 it is even more important to be able improve thermal comfort with a renovation.



For people living in apartments it is more often a motivation to renovate because it reduces noises from the outside.



Households with an above-average income are more often frontrunners. they want their houses to be equipped with the latest technology and like to experiment with this.



Households with children are more motivated to make energy efficient renovations in general.

Politically left oriented citizens are more often triggered by environmental motivations.



they like to have the latest technology and because they want to keep up with others.

Barriers

Not being able to afford the renovation or wanting to take a loan for it is a bigger barrier for females than for males. The hassle it brings also holds them back.



The younger the citizens are, the less a lack of financial support from the government is a barrier.

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Households with a below-average income more often don't want to make renovations because they can't afford them, but also don't want to take a loan.

Politically right oriented citizens have the tendency of not being open to making energy efficient renovations. They don't think it's worth it, think their efforts will have no or minimal environmental impact, they don't want to change the look of their house, and they are just happy with how it is.



Back to table of contents

5



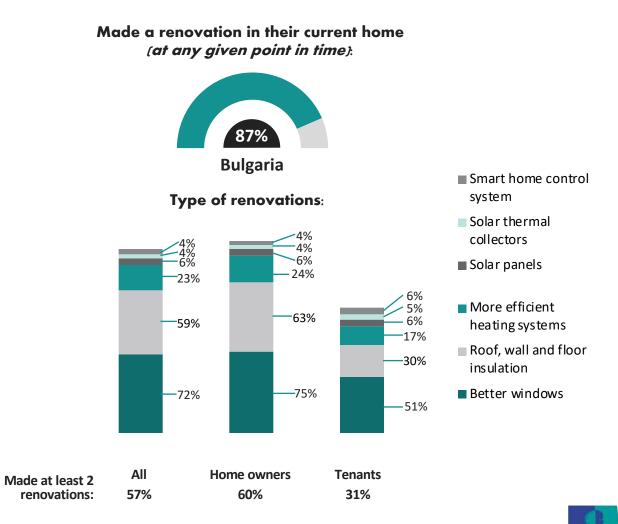
Most important insights



Most important insights - Bulgaria

Who we spoke with

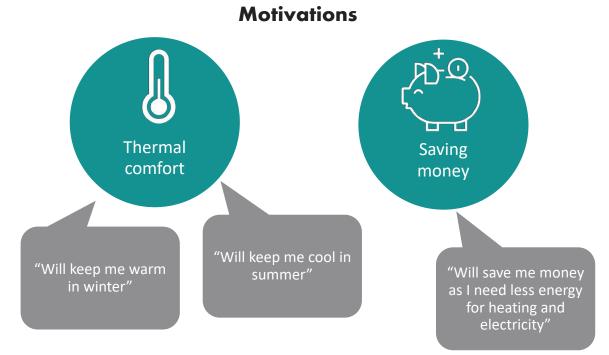
	Home owners	89%
ЕНЕІ	Tenants	11%
	Single detached home	31%
	Single attached home	12%
\sim	Apartment	57%
$\left(\leftarrow \right)$	Left politically oriented	31%
	Right politically oriented	37%
	No children	62%
	Children in household	38%

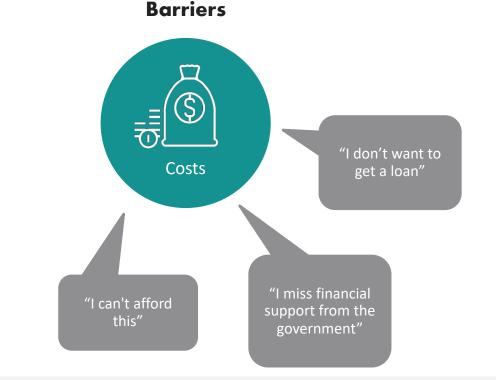


Base: All respondents in Bulgaria (n=1001)

35

Almost all Bulgarians are willing to renovate if it improves their thermal comfort and save money, but are held back by costs







Houses are seen as an important base of relations and a place of retreat.

People associate silence and thermal comfort with homes. Good insulation and glazing are elements that correspond to these attributes.



conversations

Money is the main reason not to invest in energy efficient solutions.

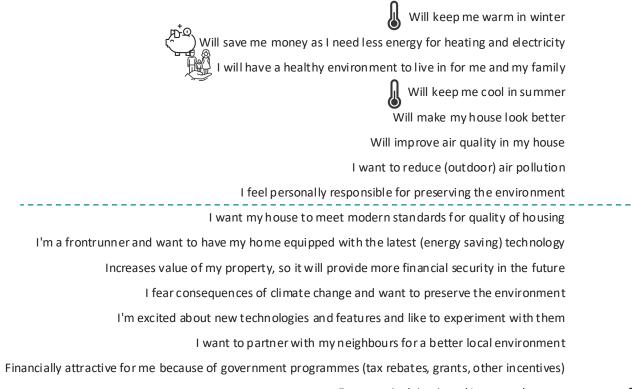
Participants believe that most Bulgarians would like to have an efficient home but lack the means to achieve it. One has to balance renovation against other spending priorities in the household.



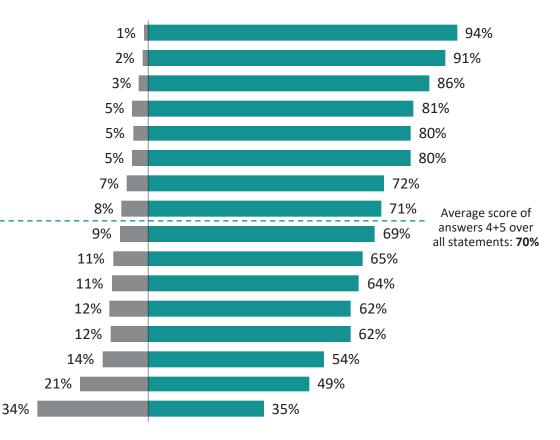
Next to thermal conditions and saving money, creating a healthy environment motivates Bulgarians to renovate

Motivations:

Scale 1-5: Not (at all) a motivation (1+2) (Completely) a motivation (4+5)



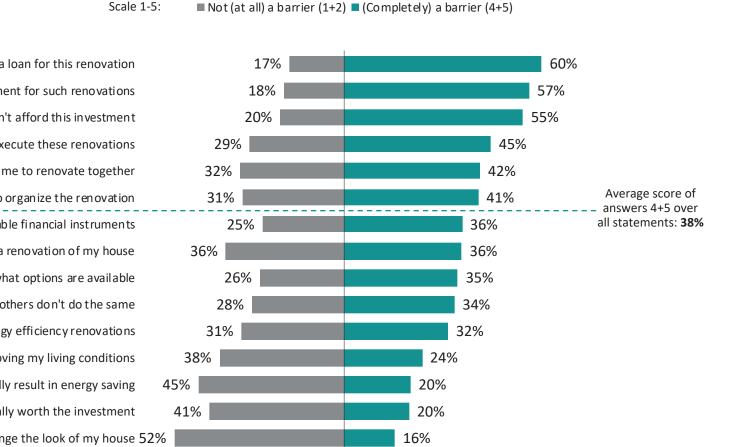
Everyone is doing it and I want to keep up

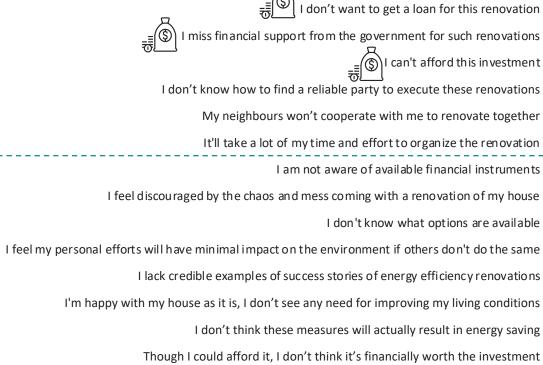




Barriers:

Money in general tops the list of barriers in Bulgaria





I don't want to change the look of my house 52%

Overall, there are not many group differences in motivations and barriers

Motivations

()

Women score higher on environmental motivations. They more often fear consequences of climate change, feel more responsible for preserving the environment and want better outdoor air quality.



Citizens who live in single detached houses are more motivated to renovate in order to make their house look better.

Politically right oriented citizens are more likely to renovate because
they like to have the latest technology and like to experiment with this.
They are more motivated to make their house meet the modern
standards of housing.

Barriers



Women more often indicate that they are not able to afford the

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Citizens living in the cities more often do not make renovations because heir neighbours are not willing to cooperate. The same applies to those iving in apartments.

•	
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Households with a below average income more often don't want to make renovations because they can't afford them, but also don't want to take a loan. They also lack financial support from the government.



Back to table of contents

6

Poland

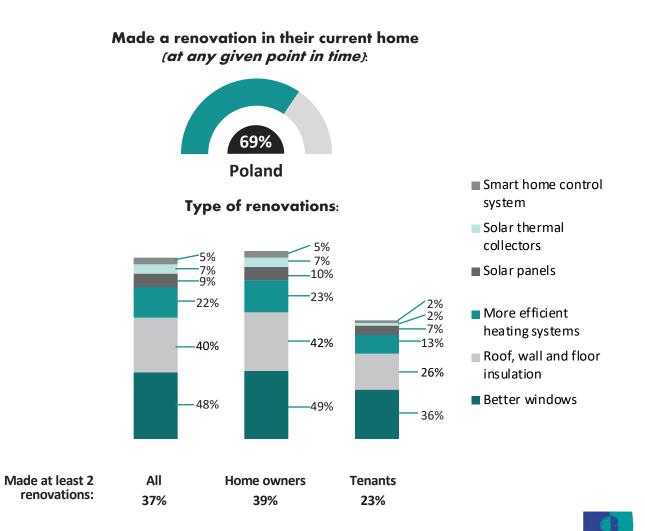
Most important insights



Most important insights - Poland

Who we spoke with

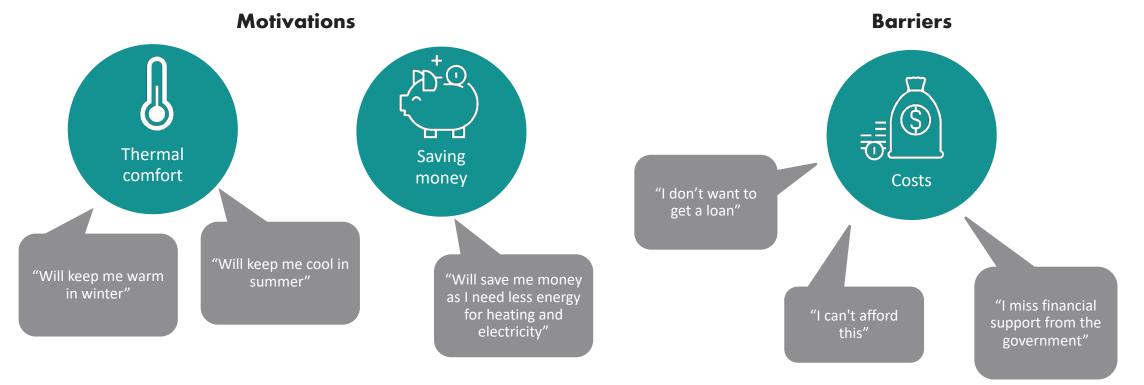
	Home owners	87%
	Tenants	13%
	Single detached home	34%
	Single attached home	6%
\sim	Apartment	60%
$\left(\leftarrow \right)$	Left politically oriented	43%
	Right politically oriented	35%
	No children	54%
	Children in household	46%

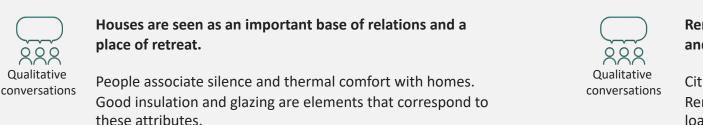


Base: All respondents in Poland (n=1000)

41

Almost all Polish citizens are motivated by improving thermal comfort and saving money, but can't or won't make the investment





Renovation evokes many negative associations and fears.

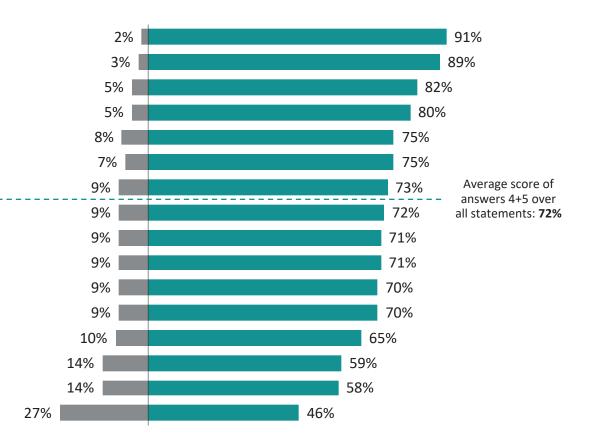
Citizens fear high cost of labour and materials. Renovation sometimes requires them to take a loan and sometimes also leads to additional, unexpected expenses.



Improving thermal comfort in the winter and saving money are especially important for Polish citizens

Scale 1-5:

Motivations:



■ Not (at all) a motivation (1+2) ■ (Completely) a motivation (4+5)

Will keep me warm in winter Will save me money as I need less energy for heating and electricity I will have a healthy environment to live in for me and my family Will improve air quality in my house I want to reduce (outdoor) air pollution Will keep me cool in summer I'm a frontrunner and want to have my home equipped with the latest (energy saving) technology Increases value of my property, so it will provide more financial security in the future I fear consequences of climate change and want to preserve the environment I feel personally responsible for preserving the environment Will make my house look better I want my house to meet modern standards for quality of housing I want to partner with my neighbours for a better local environment Financially attractive for me because of government programmes (tax rebates, grants, other incentives) I'm excited about new technologies and features and like to experiment with them Everyone is doing it and I want to keep up

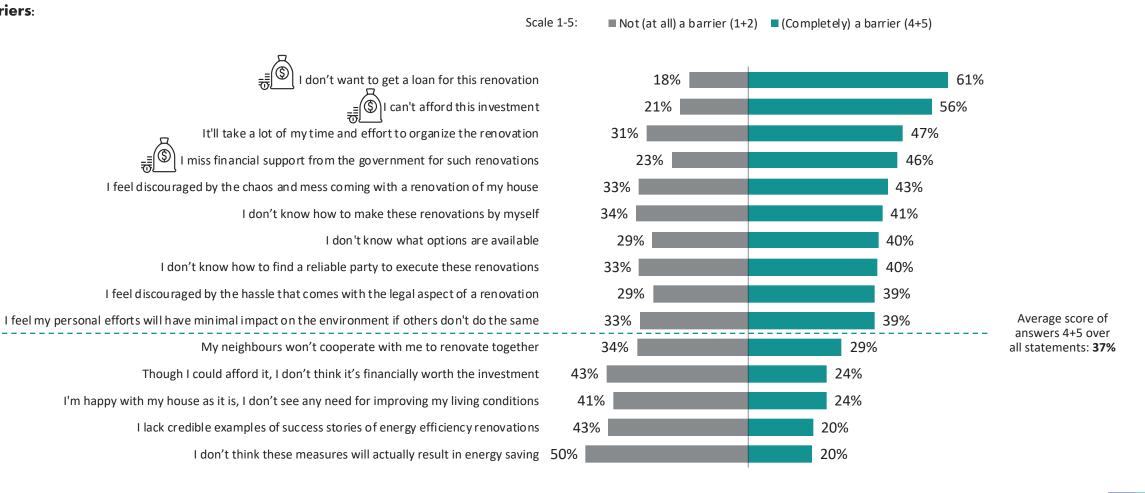
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Question: Please indicate to what extent each of the following would be/has been a motivation for you to make energy efficient renovations around your house. Base: All respondents in Poland (n=1000)



Not being able to afford a renovation and taking a loan for it are the main barriers in Poland. Also, lack of knowledge hold them back

Barriers:





Motivations and barriers differ between genders, life stages, political orientation, income and type of house

Motivations



Women score higher on environmental motivations. They more often fear consequences of climate change and feel more responsible for preserving the environment.

Women are also more triggered by improving their quality of living, by improving indoor air quality and a healthy environment.



Citizens aged 55-75 are more likely to be motivated because everyone is doing it. They are also more motivated to renovate in order to make their house look better.



Citizens who live in single detached houses are more motivated in general. The same applies to higher income households.



Politically left oriented citizens are more often triggered by keeping themselves warm in winter.

Politically right oriented citizens are more likely to renovate because everyone is doing it and they want to keep up.

Barriers



Women are more often triggered to make renovations, but they also score higher on some main barriers: money is even a bigger barrier for women and also the hassle and lack of knowledge hold them back.



Those within the age range of 18-34 tend not to want to take a loan and lack awareness about how to approach the process of renovation.

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Citizens living in the cities are more often held back by the hassle that comes with a renovation, or don't know how to find a reliable party. The same applies to citizens living in apartments.



Households with a below average income more often lack the knowledge on what options are available.

 Politically right oriented citizens have the tendency of not being open to making energy efficient renovations. They don't think it's worth it, are discouraged by the hassle, don't want to change the look of their house, and they are just happy with how it is.







Back to table of contents

Appendix

Research set-up



Introduction

Research set-up

Main question of the study: What motivations show most potential to enhance engagement of European citizens to support energy efficient renovations?



Step 1 Qualitative research

To explore the functional and emotional motivations and the barriers that citizens hold when it comes to net zero emission buildings



Focus group discussions (120min)

 2-4 focus groups per country of 2 hours with 6 participants in each group. Two groups with home owners and in some countries (Germany, France, Spain) 1-2 groups with tenants.



Demographics

- Mix in gender, life stages, age
- Mix in single family homes / multiple family homes
- All pay for their own rent or mortgage, and live in this property (no landlords)
- All are personally responsible for making decisions about their house
- Mix in political opinions, no extreme opinions when it comes to environmental solutions

Step 2 Quantitative research

To validate the motivations and barriers found in the qualitative research.



Online survey

- n=1000 citizens per country (Representative)
- n=2000 in Germany with n=1000 home owners and n=1000 tenants
- Age 18-75, the sample is nationally representative
- Fieldwork was conducted between November 16 and November 28, 2018



Questionnaire (5 min)

- Questions on socio-demographics and other background are the same across all the countries
- While the majority of the motivations and barriers tested were common across all countries, a few country-specific statements were also tested.



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47

Overview of set-up qualitative research



Focus group discussions (120min)

- 2-4 focus groups per country of 2 hours with 6 participants in each group. Two groups with home owners and in some countries (Germany, France, Spain) 1-2 groups with tenants.
- Focus groups discussions have been executed in July and August 2018
- The discussion covered:
- Getting to know the participants and their living situation
- Understanding the participants' cultural values, perceptions and attitudes regarding homes in general, including also a deep dive into the motivations, needs and perceptions around energy efficient homes
- Uncovering the four layers of participants' triggers and barriers for renovating homes to make them more energy efficient, including emotional benefits, personality, social identity and functional characteristics
- Testing the participants' reactions to statements on energy efficient buildings related to health, well-being/productivity and community/society.

Country	City	Target: Home owners	Target: Tenants
Germany	Berlin	2 focus groups	2 focus groups
France	Paris	2 focus groups	2 focus groups
Poland	Warsaw	2 focus groups	-
Spain	Madrid	2 focus groups	1 focus group
Bulgaria	Sofia	2 focus groups	-



Back to table of contents

Appendix

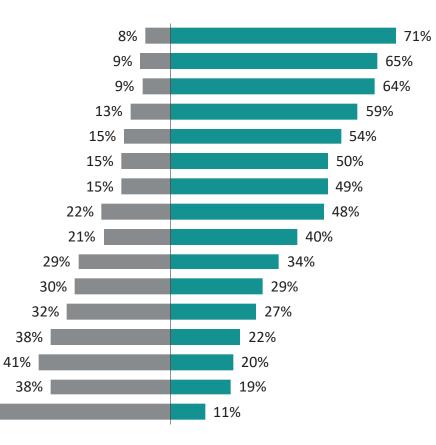
Additional interesting insights





Motivations – Germany: home owners

Scale 1-5: Not (at all) a motivation (1+2) (Completely) a motivation (4+5)



Will save me money as I need less energy for heating and electricity Will improve thermal comfort in my house I will have a healthy environment to live in for me and my family Increases value of my property, so it will provide more financial security in the future I fear consequences of climate change and want to preserve the environment I feel personally responsible for preserving the environment Will make me feel in control of my energy bills and overall utility expenses Will reduce the amount of noise I hear from outside Will improve air quality in my house Financially attractive for me because of government programmes (tax rebates, grants, other incentives) I'm excited about new technologies and features and like to experiment with them I want to partner with my neighbours for a better local environment

Will make myhouse look better

I'm a frontrunner and want to have my home equipped with the latest (energy saving) technology I feel reassured it's a good financial investment as it has been recommended to me by others

Everyone is doing it and I want to keep up 55%



Question: Bitte geben Sie an, wie sehr folgende Punkte Sie motiviert haben/würden, eine energetische Sanierung Ihres Hauses durchzuführen. Base: All home owners in Germany (n=1001)

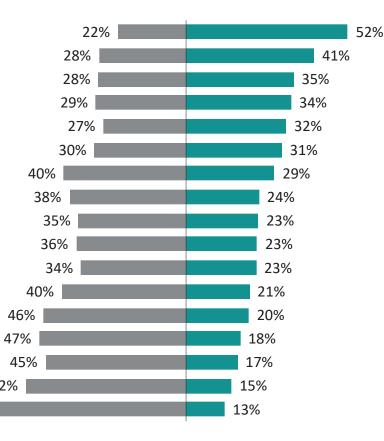




Barriers – Germany: home owners

Not (at all) a barrier (1+2)

(Completely) a barrier (4+5)



Scale 1-5:

I don't want to get a loan for this renovation

I can't afford this investment I miss financial support from the government for such renovations It'll take a lot of my time and effort to organize the renovation I have no overview of possible state funding opport unities I feel discouraged by the chaos and mess coming with a renovation of my house I'm happy with my house as it is, I don't see any need for improving my living conditions I don't know what options are available I lack credible examples of success stories of energy efficiency renovations I feel my personal efforts will have minimal impact on the environment if others don't do the same I don't know how to find a reliable party to execute these renovations Though I could afford it, I don't think it's financially worth the investment I fear an increase of dangers (for example increased risk of fire through insulation) My neighbours won't cooperate with me to renovate together I don't think these measures will actually result in energy saving I don't think these measures will protect the environment 52% I think it will decrease the value of my property 61%

Question: Bitte geben Sie jetzt an, wie sehr folgende Punkte Sie davon abhalten/abgehalten haben, eine energetische Sanierung Ihres Hauses durchzuführen. Base: All home owners in Germany (n=1001)

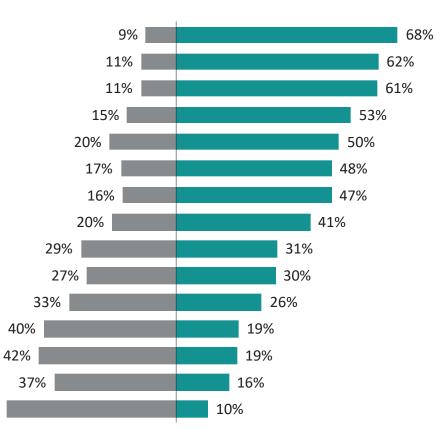




Motivations – Germany: tenants



Scale 1-5: Not (at all) a motivation (1+2) (Completely) a motivation (4+5)



Will save me money as I need less energy for heating and electricity Will improve thermal comfort in my house I will have a healthy environ ment to live in for me and my family I fear consequences of climate change and want to preserve the environment Will reduce the amount of noise I hear from outside Will make me feel in control of my energy bills and overall utility expenses I feel personally responsible for preserving the environment Will improve air quality in my house Financially attractive for me because of government programmes (tax rebates, grants, other incentives) I want to partner with my neighbours for a better local environment I'm excited about new technologies and features and like to experiment with them Will make my house look better

I'm a frontrunner and want to have my home equipped with the latest (energy saving) technology

I feel reassured it's a good financial investment as it has been recommended to me by others

Everyone is doing it and I want to keep up 52%

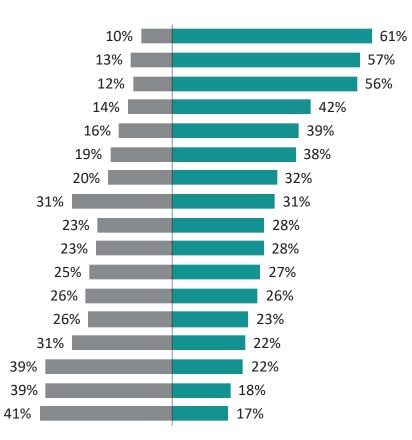
Question: Bitte geben Sie an, wie sehr folgende Punkte Sie motiviert haben/würden, eine energetische Sanierung Ihres Hauses durchzuführen oder Ihre/-n Vermieter/-in darum zu bitten. Base: All tenants in Germany (n=1000)



Barriers – Germany: tenants

Tenants

■ Not (at all) a barrier (1+2) ■ (Completely) a barrier (4+5)



Scale 1-5:

I fear a higher rent, if my landlord carries out energy efficient renovations I don't want to get a loan for this renovation I can't afford this investment I miss financial support from the government for such renovations I have no overview of possible state funding opportunities It'll take a lot of my time and effort to organize the renovation I don't know what options are available I feel discouraged by the chaos and mess coming with a renovation of my house I lack credible examples of success stories of energy efficiency renovations I don't know how to find a reliable party to execute these renovations I'm happy with my house as it is, I don't see any need for improving my living conditions I feel my personal efforts will have minimal impact on the environment if others don't do the same My neighbours won't cooperate with me to renovate together Though I could afford it, I don't think it's financially worth the investment I fear an increase of dangers (for example increased risk of fire through insulation) I don't think these measures will protect the environment I don't think these measures will actually result in energy saving

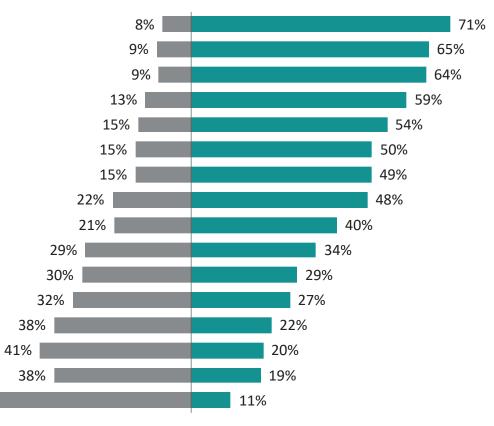
Question: Bitte geben Sie jetzt an, wie sehr folgende Punkte Sie davon abhalten/abgehalten haben, eine energetische Sanierung Ihres Hauses durchzuführen oder Ihre/-n Vermieter/-in darum zu bitten? Base: All tenants in Germany (n=1000)

Local translations of the motivations and barriers



Motivations - Germany

Scale 1-5: Not (at all) a motivation (1+2) (Completely) a motivation (4+5)



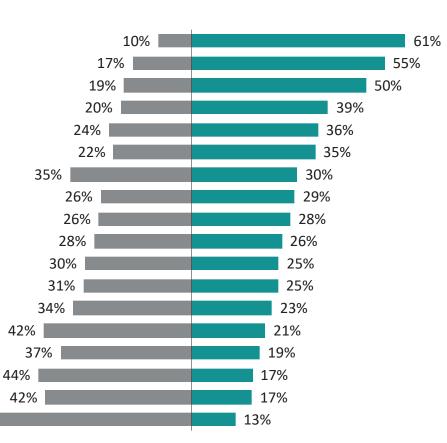
Ich spare damit Geld, da ich weniger Energie für Strom und Heizung brauche Damit wird der Wärmekomfort in meinem Haus erhöht Ich möchte, dass meine Familie und ich in einer gesunden Umgebung leben können Erhöht den Wert meiner Immobilie, die so in der Zukunft für mehr finanzielle Sicherheit sorgen wird Ich befürchte die Folgen des Klima wandels und möchte die Umwelt erhalten Ich will persönliche Verantwortung für die Erhaltung der Um welt übernehmen Ich bekomme damit das Gefühl, die Kontrolle über meine Stromrechnungen und Versorgungsaufwendungen zu haben Es reduziert den Lärm, den ich von draußen höre Damit wird die Luftqualität in meinem Haus verbessert Es ist für mich aufgrund staatlicher Programme finanziell attraktiv Ich interessiere mich sehr für neue Technologien und experimentiere gerne mit ihnen Ich möchte mich zusammen mit meinen Nachbarn für eine bessere lokale Um welt einsetzen Damit wird mein Haus besser aussehen Ich will immer gerne Vorreiter sein und möchte meine Wohnung mit den neuesten (energiesparenden) Technologien ausstatten Da es mir von Anderen empfohlen wurde, gehe ich davon aus, dass es eine gute Finanzinvestition ist Alles machen es 55%



Question: Bitte geben Sie an, wie sehr folgende Punkte Sie motiviert haben/würden, eine energetische Sanierung Ihres Hauses durchzuführen. Base: All respondents in Germany (n=2001)

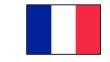
Barriers - Germany

■ (Completely) a barrier (4+5)

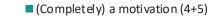


Scale 1-5: Not (at all) a barrier (1+2)

	Ich befürchte eine Mieterhöhung, wenn mein/-e Vermieter/-in eine energetische Sanierung dur chführt
	Ich möchte keinen Kredit für die energetische Sanier ung aufnehmen
	Ich kann mir die Investition nicht leisten
	Mir fehlt die finanzielle Unterstützung vom Staat für eine derartige energetische Sanierung
	Die Organisation der energetischen Sanierung wird mich viel Zeit und Mühe kosten
	Ich habe keinen Überblick über mögliche staatliche Fördermöglichkeiten
	Mich schrecken das Chaos und die Unordnung durch eine energetische Sanierung meines Hauses ab
	Ich bin mit meinem Haus in seinem aktuellen Zustand zufrieden und sehe keine Notwendigkeit für eine Verbesserung meiner Lebensbedingungen
	Ich weiß nicht, welche Optionen es gibt
	Ich kenne nicht genügend überzeugende Beispiele und Erfolgsgeschichten über energieeffiziente Renovierungen
	Ich glaube, dass sich meine persönlichen Bemühungen minimal auf die Umwelt auswirken werden, wenn Andere nicht das Gleiche tun
	Ich weiß nicht, wie ich einen verlässlichen Berater und Partner für die Durchführung solcher Sanierungen finden kann
	Ich kann es mir zwar leisten, glaube aber nicht, dass sich die Investition wirtschaftlich lohnt
	Ich fürchte eine Erhöhung von Gefahren (z.B. erhöhte Brandgefahr durch Isolierung)
	Meine Nachbarn wollen bei einer gemeinsamen energetischen Sanierung nicht mitmachen
	Ich glaube nicht, dass man durch solche Maßnahmen wirklich Energie sparen kann
	Ich glaube nicht, dass solche Maßnahmen zum Umweltschutz beitragen werden
61%	Ich glaube, dass der Wert meiner Immobilie dadurch sinkt



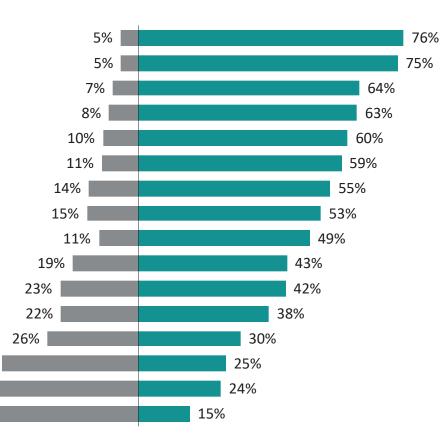
Appendix Motivations - France



Scale 1-5: Not (at all) a motivation (1+2)

39%

40%



Cela me permettra d'économiser de l'argent, puisque je consommerai moins d'énergie pour le chauffage et l'électricité Cela nous permettra de vivre dans un environnement sain, ma famille et moi Cela me donnera le sentiment de maîtriser mes factures et mes dépenses globales en matière d'énergie Cela augmente la valeur de mon bien, m'assurant une plus grande sécurité financière à l'avenir

Je me sens personnellement responsable de protéger l'environnement

Cela atténuera les bruits provenant de l'extérieur

J'ai peur des conséquences du changement climatique et je veux protéger l'environnement

Cela améliorera la qualité de l'air dans mon logement

Cela améliorera le confort thermique de mon logement

Je suis convaincu(e) qu'il s'agit d'un bon i nvestissement financier, car d'autres personnes me l'ont recommandé

C'est financièrement intéressant pour moi en raison des programmes d'aide de l'État

Cela améliorera l'apparence de mon logement

Je veux travailler main dans la main avec mes voisins en faveur d'un meilleur environnement local

Je suis passionné(e) par les nouvelles technologies et les fonctionnalités dernier cri, et j'ai me les essayer

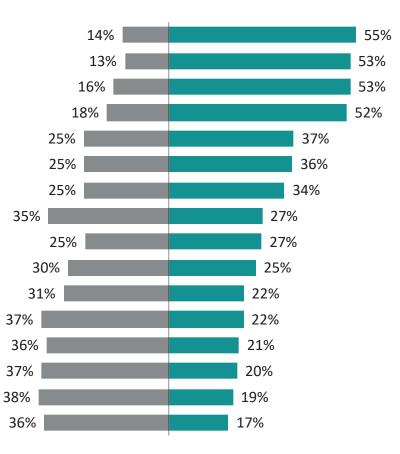
Je suis un(e) précurseur(e) et je veux que mon logement soit équipé des dernières technologies en matière d'économies d'énergie

Tout le monde fait œ genre de travaux et je veux suiv re la tendanœ 51%

Question: Veuillez indiquer dans quelle mesure chacun des éléments suivants constituerait/constitué une motivation pour réaliser des travaux de rénovation énergétique dans votre logement. Base: All respondents in France (n=1002)

Barriers - France

Scale 1-5: ■ Not (at all) a barrier (1+2) ■ (Completely) a barrier (4+5)

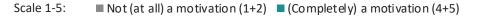


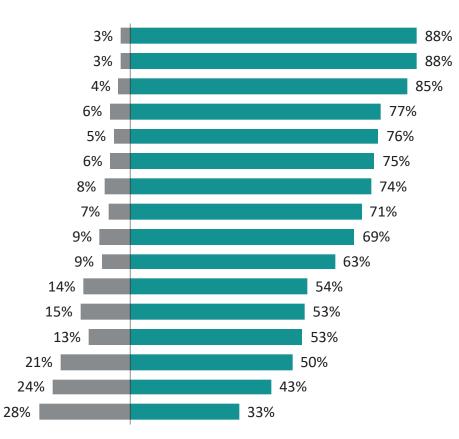
J'ai peur que mon loyer augmente si mon propriétaire réalise des travaux de rénovation énergétique Les aides financières de l'État sont insuffisantes pour de tels travaux de rénovation Je n'ai pas les moyens de faire un tel investissement Je ne veux pas contracter d'emprunt pour de tels travaux de rénovation Organiser les travaux de rénovation me demandera beaucoup de temps et d'efforts Je ne sais pas comment trouv er une entreprise fiable pour réaliser de tels travaux de rénovation J'ai le sentiment que mes efforts personnels auront un impact limité sur l'environnement si personne d'autre ne fait comme moi Je me sens découragé(e) à l'idée du chaos et du désordre que causerait une rénovation de mon logement J'ignore les différentes possibilités dans ce domaine Mes voisins ne voudront pas coopérer avec moi pour réaliser ensemble de tels travaux de rénovation Je n'ai pas entendu assez d'hist oires crédibles de travaux de rénovation énergétique ayant porté leurs fruits Bien que j'aie les moyens de le faire, je ne pense pas que cet investissement soit financièrement rentable

- Je suis heureux(-se) dans mon logement en l'état et je ne ressens pas le besoin d'améliorer mes conditions de vie
 - Je ne pense pas que de tels travaux engendreront de réelles économies d'énergie
 - Je ne veux pas modifier l'apparence de mon logement
 - Je ne pense pas que de tels travaux permettront de protéger l'environnement

Question: À présent, veuillez indiquer dans quelle mesure chacun des éléments suivants (a) représente un obstacle pour réaliser des travaux de rénovation énergétique dans votre logement. Base: All respondents in France (n=1002)

Motivations - Spain





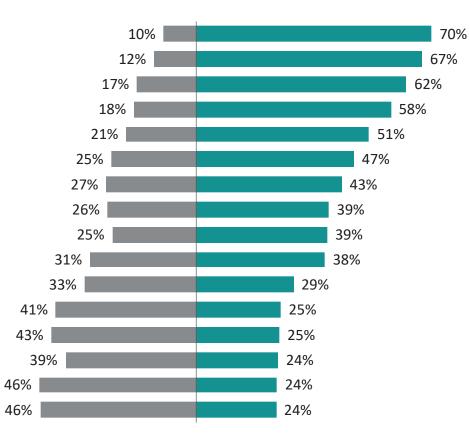
Ahorraré más al necesitar menos energía para la calefacción y la electricidad Mejorará el confort térmico de mi vivienda Mi familia y yo vivirem os en un ambiente saludable Reducirá la cantidad de ruidos exteriores que oigo Mejorará la calidad del aire en mi vivienda Me siento responsable per sonalmente por cuidar el medio ambiente Temo las consecuencias del cambio climático y quiero cuidar el medio ambiente Me hará sentir que tengo el control sobre mis facturas energéticas y sobre mis gastos generales de suministros Aumenta el valor de mi propiedad, así que me aportará una mayor seguridad económica en el futuro Me reconforta saber que es una buena inversión económica, puesto que me lo han recomendado otras personas Quiero colaborar con mis vecinos para tener un mejor entorno local Me emocionan las nuevas tecnologías y funciones y me gusta experimentar con el las Mejorará la apariencia de mi vivienda Es una opción económicamente atractiva gracias a los programas estatales Soy un pionero y quiero que mi vivienda esté equipada con la tecnología más reciente (de ahorro energético)

Todo el mundo lo está haciendo y quiero seguir el ejemplo



Question: Indique en qué medida cada una de las siguientes opciones le motivaría/ha motivado a realizar reformas de rendimiento energético en su vivienda. Base: All respondents in Spain (n=1000)

Barriers - Spain



Echo en falta una a yuda económica por parte del Estado para realizar dichas reformas Temo que mi casero me aumente el alquiler si realiza las reformas de eficiencia energética No quiero pedir un préstamo para realizar esta reforma No me puedo permitir la inversión Organizar la reforma llevará mucho tiempo y esfuerzo Me desanima el caos y el desorden que provocaría una reforma en mi vivienda No sé cómo encontrar una empresa fiable para realizar estas reformas Mis vecinos no van a colaborar conmigo en la realización de las reformas Creo que mis esfuerzos personales tendrán un impacto mínimo en el medio ambiente si los demás no hacen lo mismo No he visto ningún ejemplo creíble de reformas de eficiencia energética que hayan tenido éxito Aunque me lo puedo permitir, no creo que la inversión valga la pena económicamente

- Me gusta mi vivienda com o es, no veo la necesidad de mejorar mis condiciones de vida
 - No quiero cambiar la apariencia de mi vivienda
 - No creo que estas medidas vayan a dar lugar a un ahorro energético
 - No creo que estas medidas vayan a proteger el medio ambiente

Question: Indique en qué medida cada una de las siguientes opciones constituye/ha constituido una barrera para que realice reformas de rendimiento energético en su vivienda. Base: All respondents in Spain (n=1000)

Scale 1-5: ■ Not (at all) a barrier (1+2) ■ (Completely) a barrier (4+5)

60

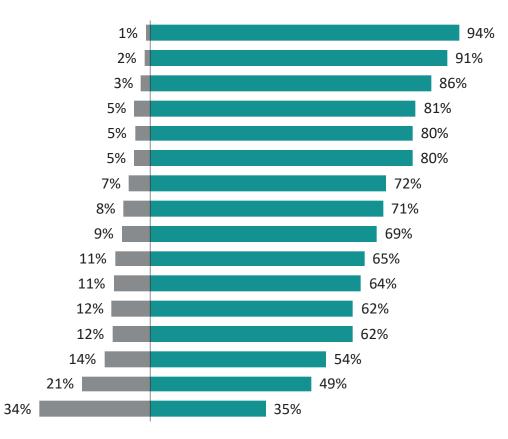


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61

Appendix Motivations - Bulgaria

Scale 1-5: Not (at all) a motivation (1+2) (Completely) a motivation (4+5)

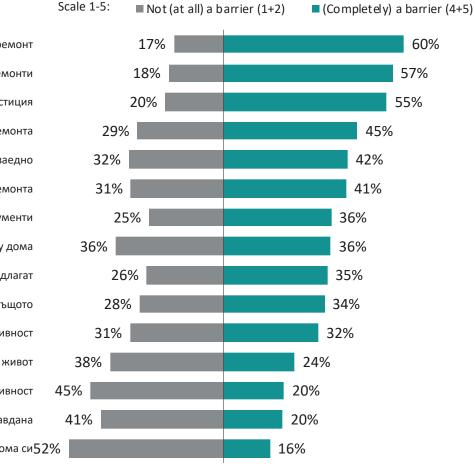


Ще бъда на топло през зимата Ще ми спести пари, защото се нуждая от по-малко енергия за отопление и електричество Ще имам здравословна среда за живот за мен и семейството ми Ще бъда на хладно през лятото Това ще даде на дома ми по-добър облик Ще подобри качеството на въздуха в дома ми Искам да намаля замърсяването на въздуха (на открито) Чувствам се лично отговорен/а за опазването на околната среда Искам домът ми да отговаря на модерните стандарти за качество на дома Аз съм далновиден/на и искам домът ми да бъде оборудван с най-модерните увеличава стойността на моя имот, така че ще осигури повече финансова сигурност в бъдеще Страхувам се от последствията от изменението на климата и искам да опазя околната среда Вълнувам се от новите технологии и функции и искам да експериментирам с тях Искам да подкрепя съседите си за по-добра местна околна среда Финансово привлекателна за мен заради правителствени програми Всички го правят и аз искам да съм в крак

Question: Моля, посочете до каква степен всяко от следните би било мотивация за Вас да извършите ремонти за енергийна ефективност в дома Ви. Моля, посочете до каква степен всяко от следните е било мотивация за Вас да извършите ремонти за енергийна ефективност в дома. Base: All respondents in Bulgaria (n=1001)



Barriers - Bulgaria



Не искам да вземам заем за подобен ремонт Нямам финансова подкрепа от правителството за подобни ремонти Не мога да си позволя тази инвестиция

Не знам как да намеря надеждно лице, което да извърши ремонта

Съседите ми няма да се включат заедно с мен, за да ремонтираме заедно

Ще ми отнеме много време и усилия да организирам ремонта

Не съм запознат/а с предлаганите финансови инструменти

Обезкуражават ме хаосът и бъркотията при един ремонт у дома

Не знам какви опции се предлагат

Усещам, че личните ми усилия ще окажат минимално въздействие върху околната среда, ако останалите не направят същото

Липсват ми надеждни примери за успешни ремонти за енергийна ефективност

Доволен/на съм от дома си такъв, какъвто е, не виждам нужда да променям условията си на живот

Не смятам, че мерките ще доведат до по-висока енергийна ефективност

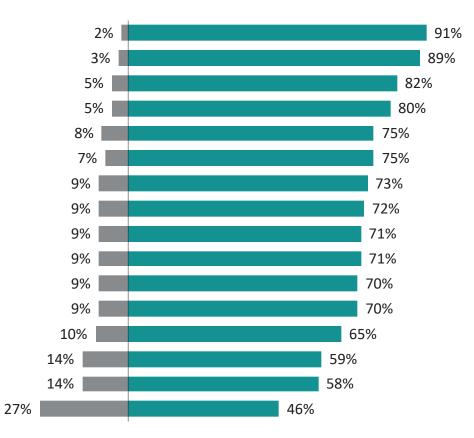
Въпреки че мога да си го позволя, не смятам че инвестицията е финансово оправдана

Не искам да променям облика на дома си52%

Question: Сега, моля, посочете до каква степен всяко от следните е пречка за Вас да извършите ремонти за енергийна ефективност в дома Ви. Сега, моля, посочете до каква степен всяко от следните е било пречка да извършите ремонти за енергийна ефективност в дома Ви. Base: All respondents in Bulgaria (n=1001)

Appendix Motivations - Poland

Scale 1-5: Not (at all) a motivation (1+2) (Completely) a motivation (4+5)



Będzie mi ciepło w zimie Oszczędzę pieniądze, ponieważ będę wydawać mniej na ogrzewanie i prąd Ja i moja rodzina będziemy mieli zdrowsze środowisko życia To poprawi jakość powietrza w moim domu Chcę ograniczy ć zanieczy sz czenie powietrza (na zewnątrz) Będzie to dla mnie źródłem ochłody w lecie Popieram innowacje i chce, aby mój dom był wyposażony w najnowsze (energooszczędne) technologie Dzięki tem u wzrośnie wartość mojego domu, co zapewni mi zabezpieczenie finansowe na przyszłość Martwią mnie konsekwencje zmian klimatycznych, więc chcę chronić środowisko Odczuwam osobi stą odpowiedzialność za ochronę środowiska Mój dom będzie lepiej wyglądał Chcę, aby mój dom spełniał nowoczesne wytyczne jakości budynków mieszkalnych Chcę razem z sąsiadami zadbać o poprawę środowiska w naszej okolicy Ta opcja jest dla mnie atrakcyjna ze względu na programy rządowe Fascynują mnie nowe technologie i urządzenia – lubię z nimi eksperymentować

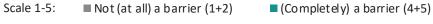
Wszyscy to robią, a ja nie chcę zostać w tyle

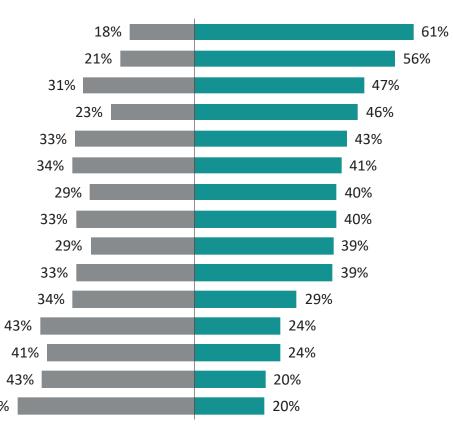
Question: W jakim stopniu każde z poniższych byłoby dla Pana/Pani motywacją, aby przeprowadzić remont zwiększający efektywność energetyczną Pana/Pani domu? W jakim stopniu każde z poniższych było dla Pana/Pani motywacją, aby przeprowadzić remont zwiększający efektywność energetyczną Pana/Pani domu? Base: All respondents in Poland (n=1000)

Question: Teraz proszę zaznaczyć, w jakim stopniu każde z poniższych powstrzymuje Pana/Panią przed tym, aby przeprowadzić remont zwiększający efektywność energetyczną Pana/Pani domu? Teraz proszę zaznaczyć, w jakim stopniu każde z poniższych powstrzymywało Pana/Panią przed tym, aby przeprowadzić remont zwiększający efektywność energetyczną Pana/Pani domu? Base: All respondents in Poland (n=1000)

Appendix

Barriers - Poland





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Nie chcę brać pożyczki na taki remont Nie stać mnie na taką inwestycję Organizacja remontu pochłonie wiele czasu i energii Mój rząd nie zapewnia wsparcia finansowego umożliwia jącego przeprowadzanie takich remontów Zniechęca mnie chaos i bałagan nieodłącznie związany z remontem domu Nie wiem, jak przeprowadzić taki remont sa modzielnie Nie wiem, jakie opcje są dla mnie dostępne Nie wiem, jak znaleźć godną zaufania ekipę do przeprowadzenia takiego remontu Zniechęcają mnie niedogodności wynikające z prawnych aspektów remontu Uważam, że moje osobiste wysiłki niewiele zmienią, jeśli inni nie będą robić tego samego Moi sąsiedzi nie chcą ze mną współpracować w celu przeprowadzenia takiego remontu Mimo, że mnie na niego stać, nie uważam, że warto inwestować w taki remont Jestem zadowolony(-a) z mojego domu, nie widzę potrzeby poprawiania moich warunków mieszkaniowych Nie słyszałem (-am) żadnych wiarygodnych historii, w których remont mający zwiększyć efektywność energetyczną domu poskutkował

Nie wierzę, że takie działania naprawdę przyniosą oszczędność energii 50%