

## HC001: HEATING SYSTEM USED

**Topic and detailed topic:** New policy needs module / Household energy efficiency

**Variable type:** Ad hoc module

**Unit:** Household

**Reference period:** Current

**Mode of collection:** Household respondent or registers

**In use (period):** New, 2023

**Series' differences:** --

### VALUES AND FORMAT

- 1 District heating network / teleheating
- 2 Central heating system
- 3 Individual heating system
- 4 Non-fixed heating
- 5 No heating at all
- 99 Don't know

### FLAGS

- 1 Collected via survey/interview
- 2 Collected from administrative data
- 3 Imputed
- 4 Not possible to establish a source
- 1 Missing
- 7 Not applicable (not collected according to the implementation of the “multiannual rolling planning”)

### DESCRIPTION

This variable describes the type of main heating system used in the dwelling. The purpose is to identify where the heat is generated: (i) outside the building premises (district heating or teleheating); (ii) in common and at the level of the building premises (central heating); (iii) at dwelling level (individual heating); or (iv) through a portable heating source that can be moved from one room to another (non-fixed heating).

In multi-dwelling buildings, the heating system can be the same for all dwellings or differ between them. If more than one system is used for heating, the main one should be selected. The reference period in this variable is the current one; however, it should reflect the general situation. If the data is collected during warm months and no heating system is being used at the time of the interview, respondents should provide information about the heating system usually used during cold months.

A district heating network (also known as a heat network or teleheating) is the distribution of thermal energy in the form of steam or hot water from a central source of production through a network to multiple buildings or sites, for the use of space or process heating. A central heating system is used if thermal energy is provided either from an installation in the building or in its immediate proximity, installed to heat several building units, without regard to the source of energy.

Central heating differs from district heating in that heat generation occurs in one place, such as a furnace room or basement in the building, and is distributed throughout the building.

An individual heating system is located only in the dwelling and includes different ways of distributing heat inside the room or rooms, e.g. stove, radiators, boiler.

Non-fixed heating includes portable heaters such as an electric radiator or a fan heater, which can be easily moved from one room to another.

Suggested question:

HC001\_Q1: Which type of heating system do you mainly use?

1. District heating network/teleheating (thermal energy supplied to the dwelling through a heating network by pipes from a place other than the building in which the dwelling is located)
2. Central heating system (common heating system for the whole housing unit or for a building or a co-property serving several dwellings e.g. apartments in a block of flats)
3. Individual heating system (wood or gas stoves in each room, fixed electric radiators in each room, individual boilers, etc.)
4. Non-fixed heating (e.g. portable heaters such as an electric radiator or a fan heater which can be moved from one room to another)
5. No heating at all
99. Don't know

## HC002: MAIN ENERGY SOURCE

**Topic and detailed topic:** New policy needs module / Household energy efficiency

**Variable type:** Ad hoc module

**Unit:** Household

**Reference period:** Current

**Mode of collection:** Household respondent or registers

**In use (period):** New, 2023

**Series' differences:** --

### VALUES AND FORMAT

- 1 Electricity
- 2 Gas (natural or propane)
- 3 Oil
- 4 Biomass
- 5 Wood logs
- 6 Coal
- 7 Renewable energy
- 8 Other
- 99 Don't know

### FLAGS

- 1 Collected via survey/interview
- 2 Collected from administrative data
- 3 Imputed
- 4 Not possible to establish a source
- 1 Missing
- 2 Not applicable (HC001 = 5)
- 7 Not applicable (not collected according to the implementation of the “multiannual rolling planning”)

### DESCRIPTION

This variable identifies the main energy source used for heating the main dwelling. In multi-dwelling buildings, the heating system can be the same for all dwellings or differ between them. If more than one source of energy is used for heating, the main one should be selected. The main energy source should be the one that is mostly used and/or serves the biggest part of the dwelling in terms of floor area/surface.

Electricity includes air conditioners, fixed electric radiators or floor heating.

Gas includes heating using natural gas, propane, liquefied gas or butane. The heating could be distributed to the whole dwelling (e.g. a pipeline for gas) or not (e.g. stove with gas).

Oil as a source of heating includes oil heaters, oil-filled heaters, oil-filled radiators or column heaters.

Biomass includes pellet fuels (or pellets) that are compressed organic matter or biomass using wood or small woodchips, nutshells, corn kernels, etc.

Wood logs are large pieces of wood that could be used for heating. In this category, wood sawed into boards, planks, etc. can also be considered.

Coal includes heating using coal, lignite and the products of coal and lignite.

Renewable energy used for heating includes solar energy, wind energy, geothermal energy, heat pumps, etc.

The heating system used for dwellings other than the main one should not be considered.

Suggested question:

HC002\_Q1: What is the main source of energy of your heating system?

1. Electricity
2. Gas (natural or propane)
3. Oil
4. Biomass (pellets, other materials)
5. Wood logs
6. Coal
7. Renewable energy (solar, geothermal, etc.)
8. Other
- 99 Don't know

Implementation:

This variable needs to be asked after HC001.

If the respondent does not know the answer to the question, please indicate that this type of information can be retrieved from:

- the research done on prices charged by different energy suppliers at the moment of registration;
- the contract with the energy supplier;
- the bill (e.g. a gas company, or a renewable energy one, etc.);
- the rental contract of the dwelling;
- the landlord or the facility manager;
- visual clues, e.g. a solar panel on the roof.

## HC003: RENOVATION (THERMAL INSULATION, WINDOWS OR HEATING SYSTEM)

**Topic and detailed topic:** New policy needs module / Household energy efficiency

**Variable type:** Ad hoc module

**Unit:** Household

**Reference period:** Last 5 years

**Mode of collection:** Household respondent

**In use (period):** New, 2023

**Series' differences:** --

### VALUES AND FORMAT

- 1 Yes – three or more measures
- 2 Yes – two measures
- 3 Yes – one measure
- 4 No
- 99 Don't know

### FLAGS

- 1 Filled
- 1 Missing
- 7 Not applicable (not collected according to the implementation of the “multiannual rolling planning”)

### DESCRIPTION

This variable identifies whether the dwelling<sup>70</sup> was renovated in the last 5 years to improve its energy efficiency (e.g. thermal insulation, windows or heating system replaced, etc.).

All renovations that have had an effect on the dwelling's thermal conditions should be considered and counted. For instance, even if only one window in the dwelling was replaced in the last 5 years, as opposed to all the windows, the information should still be accounted for this variable.

The following renovation measures should be included:

- improvement in thermal insulation of external walls, roof or floor;
- replacement of single glazed windows with double or triple glazed windows;
- replacement of the heating system with a more efficient one.

Relevant measures include renovations done either in the whole building or only in the dwelling; and renovations done or arranged by the household or by somebody else, e.g. the owner of the property.

Measures to be taken into account should not include minor renovation work that did not change the dwelling's condition or energy efficiency level.

For buildings which are less than 5 years as well as all other buildings which for whatever reason have not gone through energy renovation, the answer modality '4-No' should be used.

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<sup>70</sup> A dwelling is a room or suite of rooms – including its accessories, lobbies and corridors – in a permanent building or a structurally separated part of a building which, by the way it has been built, rebuilt or converted, is designed for habitation by one private household all year round. A dwelling can be either a one-family dwelling in a stand-alone building or detached edifice, or an apartment in a block of flats. Dwellings include garages for residential use, even when apart from the habitation or belonging to different owners (Retrieved from <https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:Dwelling>).

The number of measures refers to the number of different types of renovation done in the dwelling, for instance, insulation of the roof and new windows should be considered as two measures.

Suggested question:

HC003\_Q1: Has the building you live in been improved in the last 5 years in terms of thermal insulation, windows or the heating system?

[The following improvements should be considered: (i) improvement of thermal insulation of external walls, roof or floor, (ii) replacement of single glazed windows with double- or triple glazed ones, (iii) replacement of heating systems with better and more efficient ones]

1. Yes – three or more measures
2. Yes – two measures
3. Yes – one measure
4. No
- 99 Don't know

## HC060: INABILITY TO KEEP THE DWELLING COMFORTABLY WARM DURING WINTER

**Topic and detailed topic:** New policy needs module / Household energy efficiency

**Variable type:** Ad hoc module

**Unit:** Household

**Reference period:** Usual

**Mode of collection:** Household respondent

**In use (period):** Yes, 2007, 2012, 2023

**Series' differences:** Yes, Identifier (MH050 in 2007)

### VALUES AND FORMAT

- 1 Yes
- 2 No

### FLAGS

- 1 Filled
- 1 Missing
- 7 Not applicable (not collected according to the implementation of the “multiannual rolling planning”)

### DESCRIPTION

This variable identifies whether the household is able to keep the dwelling comfortably warm in winter, taking into account the insulation of the dwelling and the heating system in place.

The purpose for this variable is to address the following concerns: 'Is the heating system used enough to keep the dwelling warm?' and/or 'Is the dwelling sufficiently insulated against the cold?'. Interviewers should take into account these two questions even though they were not explicitly documented in the questionnaire.

This variable does not measure whether the household has the financial resources to keep the dwelling comfortably warm during the winter. Therefore, it should not be confused with the HH050 variable 'Ability to keep home adequately warm', which refers to the financial resources of the household and for which the concern could be expressed as: 'Does the household have sufficient financial resources to keep its dwelling sufficiently warm during the winter?' It also does not measure if the household is able to keep the dwelling comfortably warm during extreme weather situations, e.g. extreme cold spells.

Suggested question:

HC060\_Q1: Apart from your household's ability to afford heating costs, do you consider that the dwelling's heating system and thermal insulation are adequate to keep the dwelling comfortably warm during the winter?

- 1. Yes
- 2. No

## HC070: INABILITY TO KEEP THE DWELLING COMFORTABLY COOL DURING SUMMER (OPTIONAL)

**Topic and detailed topic:** New policy needs module / Household energy efficiency

**Variable type:** Ad hoc module

**Unit:** Household

**Reference period:** Usual

**Mode of collection:** Household respondent

**In use (period):** Yes, 2007, 2012, 2023

**Series' differences:** Yes, identifier (MH070 in 2007, HC070 in 2012)

### VALUES AND FORMAT

- 1 Yes
- 2 No

### FLAGS

- 1 Filled
- 1 Missing
- 7 Not applicable (not collected according to the implementation of the “multiannual rolling planning”)
- 8 Not applicable (variable not collected)

### DESCRIPTION

This variable identifies whether the household is able to keep the dwelling comfortably cool during the summer, taking into account the insulation of the dwelling and the cooling system in place. The purpose of this variable is to address the following concerns: ‘Is the cooling system efficient enough to keep the dwelling cool?’ and/or ‘Is the dwelling sufficiently insulated against heat?’

This variable does not measure whether the household has the financial resources to keep the dwelling comfortably cool during the summer; or is able to keep the dwelling comfortably cool during extreme weather situations, e.g. extreme heatwaves.

If the household needs to make the apartment/dwelling cooler as what is currently in place is not sufficient and they buy additionally cooling appliances, or if the building is poorly insulated and the household tries to compensate for it by having several cooling systems the answer should be ‘no’.

Suggested question:

HC070\_Q1: Apart from your household's ability to afford cooling costs, do you consider that the dwelling's cooling system and thermal insulation are adequate to keep the dwelling comfortably cool during the summer?

Please do not consider whether the household has the financial resources to keep the dwelling comfortably cool during the summer.

- 1. Yes
- 2. No

## HC004: TYPE OF WINDOWS (OPTIONAL)

**Topic and detailed topic:** New policy needs module / Household energy efficiency

**Variable type:** Ad hoc module

**Unit:** Household

**Reference period:** Current

**Mode of collection:** Household respondent

**In use (period):** New, 2023

**Series' differences:** --

### VALUES AND FORMAT

- 1 Only single glazing
- 2 Only double glazing
- 3 Triple glazing or more
- 4 Mixed single and double/triple glazing
- 5 Mixed double and triple glazing
- 99 Don't know

### FLAGS

- 1 Filled
- 1 Missing
- 7 Not applicable (not collected according to the implementation of the “multiannual rolling planning”)
- 8 Not applicable (variable not collected)

### DESCRIPTION

This variable identifies the type of windows installed in the dwelling in terms of glazing. The following definitions should be considered:

- Single glazed – windows are made of a single pane of glass;
- Double glazed – windows are made of two panes of glass;
- Triple glazed or more – windows are made of at least three panes of glass.

Mixed single and double or triple glazing should be selected if different types of windows are used in the dwelling, some of which are single glazed and others (at least one) double or triple glazed.

Mixed double and triple glazing should be selected if different types of windows are used in the dwelling, some of which are double glazed and some triple glazed.

Suggested question:

HC004\_Q1: What type of windows do you have in your dwelling?

1. Only single glazing
2. Only double glazing
3. Triple glazing or more
4. Mixed single and double/triple glazing
5. Mixed double and triple glazing
- 99 Don't know

## HC005: YEAR OF CONSTRUCTION (OPTIONAL)

**Topic and detailed topic:** New policy needs module / Household energy efficiency

**Variable type:** Ad hoc module

**Unit:** Household

**Reference period:** Current

**Mode of collection:** Household respondent or registers

**In use (period):** New, 2023

**Series' differences:** --

### VALUES AND FORMAT

- 1 1945 or before
- 2 1946–1960
- 3 1961–1980
- 4 1981–2000
- 5 2001–2020
- 6 2021 or after
- 99 Don't know

### FLAGS

- 1 Collected via survey/interview
- 2 Collected from administrative data
- 3 Imputed
- 4 Not possible to establish a source
- 1 Missing
- 7 Not applicable (not collected according to the implementation of the “multiannual rolling planning”)
- 8 Not applicable (variable not collected)

### DESCRIPTION

This variable indicates the year of completion (recognition as suitable for use) of the dwelling in which the household lives.

If the dwelling underwent a major renovation, the year that the renovation finished should be the one recorded. Major renovation refers to an extensive modernisation of the building, with insulation, roof, electrical system, heating system, etc. replaced. However, if only minor renovations or repairs were carried out, the year of construction should be recorded.

Suggested question:

HC005\_Q1: What was the year of construction or major renovation of the dwelling (house or apartment building) that you live in?

[In case of major renovation (extensive modernisation with insulation, roof, electrical system, heating system, etc. replaced), report the year in which the renovation finished]:

1. Before 1945
2. 1946–1960
3. 1961–1980
4. 1981–2000
5. 2001–2020
6. 2021 or after
99. Don't know