BEUC The European Consumer Organisation

The Consumer Voice in Europe

20 October 2026

Terms of Reference

A heat pump affordability study

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1. Background

The uptake of heat pumps is essential for the decarbonisation of Europe's buildings. Phasing out fossil fuel heating will reduce the EU's reliance on volatile and insecure energy sources that are still widely used in European homes and help achieve the EU's decarbonisation targets. The EU's plans, notably the Electrification Action Plan, published in July 2026, aims to speed up the decarbonisation of buildings and support households in this transition through dedicated policies and initiatives.

For consumers, cost-effectiveness and affordability are the most important factors in the uptake of heat pumps. However, the market conditions across Europe show that affordability remains a major barrier to switching. The upfront costs of purchasing and installing a heat pump are often higher than those of fossil fuel-based heating systems. This does not only discourage households from investing in a renewable heating system, but also makes the transition unaffordable for many households, and leaves them exposed to volatile fossil fuel prices and the costs of the gas phase-out.

However, affordability is not determined by upfront costs alone. The switch to a heat pump will affect the costs for consumers, including the purchase and installation price, potential upgrades to the dwelling and heat distribution system, operating costs (electricity costs), and savings generated over the heat pump's lifetime. Together, these costs and savings make up the Total Cost of Ownership (TCO). Understanding these impacts, in particular, the long-term cost effectiveness and possible savings, can help consumers make informed decisions, as well as provide policymakers with suitable evidence to design ambitious future policies and targets.

Moreover, a comprehensive assessment of the financial impact of heat pump installations must consider several factors. These include access to public support schemes, characteristics and conditions of the dwelling, such as its insulation level, as well as the climate conditions. The quality of installation, the extent to which the heat pump system is properly designed and configured for the house, and consumer behaviour (energy consumption patterns), also play an important role.

Together, these factors determine whether a heat pump can heat (and cool) a home comfortably, reduce energy bills and recover its investments within a reasonable payback period.

Against this background, BEUC is commissioning external research on the cost of heat pump installations and its affordability to support its work on household consumers' uptake of heat pumps [hereafter 'the Assignment']. This Assignment aims to contribute to a better understanding of the financial impact of heat pump installations across Europe and provide robust evidence that can inform BEUC's and that of national consumer organisations, regulators, policymakers, and other relevant stakeholders.

2. Objective & research questions

The objective of the study is to assess the cost impact for consumers of installing a heat pump in different housing types and conditions, countries, and climatic conditions within those countries.

The study is expected to answer the following questions. The detailed tasks per question are explained in the next section.

1) What is the total cost of ownership (TCO) of heat pump installations under different conditions?
2) Under what conditions is it more cost-effective to install a heat pump without prior investments into energy efficiency measures, such as insulation, than to carry out those measures before installing a heat pump?

While the results of the research questions above will provide valuable insights into overall costs, they do not indicate how these costs relate to the financial means of European households across different income groups in the target countries. Therefore, the third question is as follows:

3) How affordable are heat pumps for different households' groups?

The aim is to estimate the share of European households (per country) that can realistically afford the switch to a heat pump. Therefore, the study will examine households' ability to afford heat pump installations across different income groups in the selected countries and evaluate the households' different financing needs.

3. Tasks

The successful applicant shall undertake all activities necessary to deliver the objectives of the Assignment. The research activities involve desk research, data collection, analysis and preparation of the report.

The contractor is expected to answer the following questions:

1) What is the total cost of ownership (TCO) of heat pump installations under different conditions?

Task 1: The economic viability of heat pump installations will be assessed by calculating the total cost of ownership (TCO) under different conditions, including buildings' energy performance (annual electricity demand by heat pumps), climate conditions, electricity prices and costs for housing upgrades such as insulation or heat emitters. By comparing the energy bills estimation with fossil fuel prices for heating[1], the study will estimate the potential savings on household energy bills, and consequently, the payback period for heat pump investments. In other words,

[1] Anticipated developments in prices and additional cost factor such as ETS 2 should be factored in when estimating bills over the heat pump's lifetime.

the study will assess how much time it takes for a heat pump installation to recover its upfront investment costs and how much a consumer can save on their energy bills compared with using gas and biomethane heating systems.

For each country, the contractor will provide an overview of all the cost factors that determine the TCO under different housing energy performance levels and climatic conditions. While collecting data on the energy performance levels and types of dwellings, information on the income levels of households owning them will also be compiled. This will enable an overview of the distribution of households across income groups and dwelling condition and types which will be used as a basis for the affordability analysis (Task 3).

2) **Under what conditions is it more cost-effective to install a heat pump without prior investments into energy efficiency measures, such as insulation, than to carry out those measures before installing a heat pump?**

Task 2: This task should provide a cost-benefit analysis that provides insights into how and to what extent housing upgrades (such as insulation) affect the economic case of a heat pump installation. The aim is to compare investments in housing upgrades with the option of installing a larger or more efficient heat pump, in order to identify which approach delivers greater savings for consumers.

3) **How affordable are heat pumps for different households' groups?**

Task 3: To gain an understanding of the affordability of heat pumps from a household perspective and their potential for wider uptake in the selected countries, the study assesses the affordability of heat pump adoption across different household income groups in the selected countries.

In doing so, the analysis will evaluate the financial impact of switching to a heat pump across different household income levels/groups and estimate the share of households for which the investment is financially accessible. The assessment should consider both the availability of existing financing options and without such support. The study should also estimate the share of households (homeowners) in the respective countries that remain unable to afford a heat pump installation despite the existing financing support schemes.

For each country, the researcher will group homeowners by income level, preferably deciles, based on national income statistics, and by the different housing energy performance levels and climatic conditions identified in Task 1. The analysis will examine incomes and the TCO and will highlight what proportion of examined groups would be able to afford to switch to a heat pump.

4. Scope

4.1 Geographical scope and use of data

The geographical scope of the study will be four EU countries: Denmark, France, Italy and Slovenia.

The study will make use of market data on heat pump and installation prices, retail electricity, gas and biomethane prices, and price projections from the four countries. Where biomethane price tariffs are not yet available on the market, the consultant will build plausible tariffs.

The selected target buildings in the respective countries will reflect a range of housing characteristics and, where appropriate, will cover different locations in various climate zones.

For the second task, the study will use national statistical data on household income levels in each country to assess the affordability of heat pump investments.

4.2 Heat pump appliances considered

The consultant will use air-to-water heat pump models commonly installed in each respective country and operating with propane (R-290) as the refrigerant. In countries with particularly high cooling demand, air-to-air heat pumps could also be considered.

5. Methodology

Applicants are expected to propose a robust methodology appropriate to the objectives of the Assignment. The proposal should clearly explain:

- Research design.
- Data sources.
- Analytical framework.
- Quality assurance processes.
- Limitations and risks.
- Measures to ensure independence and objectivity.
- Compliance with applicable ethical and data protection requirements, including the GDPR where relevant.

6. Deliverables

The Applicant shall provide the following deliverables:

1) Final report (which shall incorporate comments received from BEUC).

The final report shall respect the following points:

- Maximum of 60 pages (excl. Annex), including, a summary of max. 4 pages with the key findings aimed at a non-expert audience, methodology, findings and conclusions.
- The findings of each task should be clearly presented, separately for each country.
- Annex includes further details such as detailed methodology, calculations, and graphs.

- The report should be written in clear language (English) to be understandable by a non-expert readership.

2) Presentation of results. The Applicant shall present the findings during a dedicated (online or physical) meeting with BEUC and its member organisations in 2027. The exact date and format of the meeting will be defined at a later stage.

7. Proposed budget

The maximum budget available for the Assignment shall be **EUR 56,000.00 (excluding VAT)**.

All costs should be included in the proposed price.

Payments shall be made based on invoices and according to the following timeframe:

[UPDATED ON 26 October 2026]

- The first instalment representing **40 %** of the agreed amount: upon signature of the contract.
- The **second** instalment corresponding to **30 %** of the agreed amount will be paid upon reception and agreement by BEUC of the draft final Report.
- The final instalment corresponding to the **30 %** of the agreed amount will be paid upon reception and agreement by BEUC of the final Report no later than two weeks after all feedback has been addressed and incorporated into the final report.

8. Timeline

BEUC provides the following indicative timeline for the project:

a. Deadline for receiving applications: 22 November 2026
b. BEUC to communicate results of tender process: 30 November 2026
c. Signature of contract and payment of first invoice by BEUC: Early December 2026
d. Kick-off call with BEUC: 1st week of December 2026
e. Provision of draft report (preliminary results) to BEUC: 15 February 2027
f. Provision of BEUC's feedback and feedback call: By 26 February 2027
g. Provision of final report and submission of final invoice: 31 March 2027

9. Submission of proposals

To be considered, all proposals must include:

- A technical **proposal,** including:
  - Understanding of the Assignment.
  - Proposed methodology.
  - Workplan and timeline.

- A **financial proposal**, including
  - Total budget.
  - A detailed cost breakdown.

- A **description of the project team** with CV of the researcher(s) and proof of research experience.

Applicants should be able to demonstrate:

- Proven expertise in the subject matter.
- Experience conducting comparable research projects.
- Strong analytical and drafting skills.
- Experience in heat pump markets, energy economics, life-cycle cost analyses and working with national statistical data.
- Capacity to deliver within the proposed timeframe.

All proposals should be submitted in **one PDF file** to: frederico.silva@beuc.eu and sophia.pereira@beuc.eu by **22 November (23.59 Brussels times)**.

Late submissions may not be considered.

If you would like to discuss anything while you draw up your proposal, please contact us using this address: **energy@beuc.eu**.

10. Evaluation Criteria

Proposals will be evaluated against the following criteria:

Understanding of Assignment:	30%
Quality of methodology:	40%
Relevant expertise and experience:	20%
Value for money:	10%

BEUC may invite shortlisted applicants for interviews or clarification discussions.

11.Conflict of interest

BEUC is committed to support high-quality research. Applicants must disclose any actual, potential or perceived conflict of interest that could affect the independence or objectivity of the work carried out for the Assignment.

BEUC reserves the right to exclude applicants where conflicts cannot be adequately managed or if conflicts arise during the contract performance.

12.Confidentially

The Applicant shall treat as confidential all information received from BEUC in connection with the Assignment. Such information shall not be disclosed to third parties without BEUC's prior written consent. This obligation shall survive completion or termination of the contract.

13.Data protection

The Applicant shall comply with all applicable data protection legislation, including Regulation (EU) 2016/679 (GDPR) where personal data are processed.

Any processing of personal data carried out on behalf of BEUC shall be subject to appropriate contractual arrangements.

14.Ownership and dissemination

The copyright of the **Assignment** shall be granted to BEUC under an exclusive license. The Applicant may use the results, the data and information collected, for example in the context of possible publication in peer-reviewed journals, provided that two conditions are met:

- BEUC provides consent before any use of the Results,
- the Applicant indicates clearly that the article is based on research carried out for BEUC but does not reflect the position of BEUC or its members.

15.Reservation of rights

BEUC reserves the right to:

- Reject any or all proposals.
- Request additional information from applicants.

- Negotiate aspects of proposals prior to contract award.
- Award the contract in whole or in part.
- Cancel the procurement process at any stage without awarding a contract.

No compensation shall be payable to applicants in connection with the preparation or submission of proposals.

16.Contact

For questions regarding these Terms of Reference, please contact:

Frederico Oliveira da Silva, Head of Energy, frederico.silva@beuc.eu

Sophia Pena Pereira, Energy Policy Officer, sophia.pereira@beuc.eu