


## BACKGROUND INFORMATION FOR WORKSHOP FACILITATORS

# HARP: Label of Existing Heating Appliances



**HARP online tool**

Use the HARP online tool to find out where your installed heating appliance fits on the energy label. The tool is also there to help you find a replacement! Fill in a few details about the characteristics of your dwelling and get an overview of the different suitable alternatives and their benefits as well as contact details of installers and an overview of the available subsidies. The HARP online tool in will soon be launched in the languages below!

**Good to Know**

60% of the heating appliances stock in EU are class C or lower inefficient boilers. Installed boilers can last for over 15 years, and their replacement rate is very low (4% per year).

Furthermore, except in Germany, consumers are not informed about the efficiency of their installed heating systems. HARP online tool aims to tackle this by enabling individuals to get an indication of the labelling classification of their heating system and of the most efficient alternatives available on the market.

## Toolbox Categories

**Online free application that aims to raise awareness and motivate citizens to plan the replacement of their old and inefficient heating appliances with more efficient alternatives, by providing an indication of the labelling classification of their heating system.**

- Country:** Europe
- Category:** Market and capacity building
- Media:** Guide and Application
- Language:** Portuguese, Spanish, French, Italian, German
- Source:** <https://heating-retrofit.eu/harp-app/>

**Summary:**

The HARP application is a European fiscal instrument designed to increase consumer awareness about the inefficiency of their current household heating systems. By providing an indicative calculation of a system's energy efficiency class and suggesting new energy-efficient and renewable solutions, HARP helps users understand and improve their heating efficiency. This tool offers significant financial benefits by guiding consumers toward systems that can reduce energy costs and qualify for incentive programs supporting the replacement of inefficient heating solutions. It is suitable for single-family houses (dwellings and apartments). It is particularly relevant for government stakeholders and consumers, promoting market capacity and endorsing the EU objectives for energy efficiency and sustainability. By fostering the adoption of modern, renewable-driven heating systems, HARP plays a crucial role in the heating transition and environmental goals.

## PROJECT OVERVIEW

**Title:** Heating Appliances Retrofit Planning (HARP)

**Objective:** HARP aims to motivate consumers to plan the replacement of their often old and inefficient heating appliances with more efficient and renewable heating solutions.

**Duration:** 2019 - 2022

**Partners:**

- ADENE – Agência para a Energia (Portugal)
- R2M Solution Spain SL (Spain)
- Environmental Coalition on Standards (Belgium)
- Universidade do Minho (Portugal)
- Anima - Federazione Delle Associazioni Nazionali Dell'industria Meccanica Varia Ed Affine (Italy)
- Solar Heat Europe/European Solar Thermal Industry Federation (Belgium)
- Association of the European Heating Industry (Belgium)
- Accademia Europea di Bolzano (Italy)
- Agenzia Nazionale per le Nuove Tecnologie, L'energia e lo Sviluppo Economico Sostenibile (Italy)
- Deutsche Energie-Agentur Gmbh (Germany)
- CREA Consultores SL (Spain)
- TRENKNERBRECHLIN UWE (Belgium)
- DECO – Associação para a Defesa do Consumidor (Portugal)
- UNICLIMA (France)
- Universidade Nova de Lisboa (Portugal)
- Energies et Avenir (France)
- Organization de Consumidores y Usuarios-Asociacion (Spain)
- Energies 2050 (France)

**Approach:** Harp project was funded by the European Union through the Horizon 2020 framework, focusing on 5 EU Member States: Portugal, Spain, France, Italy and Germany. The main idea behind the project is to motivate consumers to plan the replacement of their often old and inefficient household heating appliances, with more efficient alternatives. Among the 126 million boilers installed in the EU, a staggering 60% are inefficient (performing as a C or lower energy class) but consumers are rarely aware of the inefficiency of their heating systems and associated costs. Through an online free application, the HARP project enables individuals to get an indication of the labelling classification of their household heating system. The application also provides an estimation of the costs associated with their heating system, related to, for instance, energy consumption or maintenance. The application also gives an overview of the most efficient alternatives available on the market, along with a list of their benefits, such as energy and cost savings, reduction of CO<sub>2</sub> emissions, improvement of indoor air quality or noise reduction. Finally, HARP will list the incentives and financial support available at the national level to replace inefficient heating appliances with a more efficient alternative. This tool applies to single-family homes (apartments or dwellings) and multifamily buildings to evaluate centralised space heating systems, that is, systems in which a fluid (typically water) is heated in a heat generator (boiler, heat pump, or other) and led to the consumer elements (wall radiators, underfloor heating, or other) to heat the rooms. It is not possible to analyse localised solutions such as electric radiators or air conditioning in this application. The tool also evaluates domestic hot water systems, and separate and combined systems for hot water production and space heating.

---

The application is available in two different versions, a basic one for consumers, and an advanced one dedicated to professionals who, in turn, will be coached to provide a more detailed guidance to consumers regarding the replacement solutions tailored to their needs. Several deliverables for further reading are available at <https://heating-retrofit.eu/resources/>.

## TOOL EVALUATION

### How to Use

1. Access the HARP application site and select your language
2. Select the appropriate options to the questions below and click “let’s start”:
  - What would you like to calculate?
  - In which country is located the household?
  - Which is climatic zone?
3. Select the appropriate options for the characteristics of the heating system and click “calculate label”
4. Analyse and download the HARP label(s):  
Download and analyse the energy label(s) of the water/space heating systems
5. Generate and analyse the possible efficient solutions that suit your case:  
Click on the “calculate your options” button and answer the questions that appear. Finally click on the “show results” button. Explore the different available resources, including the information on the possible heating solutions that suit your case, and correspondent energy savings and benefits. You may download the detailed table with all the possible heating solutions, clicking on the button “table with all the possible heating solutions”.
6. Analyse the specific information for the heating industry in the chosen country:  
Click on the “guide to a more energy efficient heating system” bottom to access the information specific for the country you selected (information about installers/heating professionals in your country, existing incentives and energy efficient heating products). You can further download the complete report on the “PDF report” button.
7. Further reading:  
Explore the site <https://aquecimentoeficiente.adene.pt/> (in Portuguese) for further resources and information, including fact sheets on the different water and space heating technologies available.
8. Explore the HARP application:  
Explore the application generating labels for different settings (different types of heating systems, countries, climate zones, etc).

### Key Benefits

- Raises awareness and empowers citizens and homeowners on the energy efficiency of their house heating appliances, so they make more informed decisions.
- It evaluates both separate and combined domestic hot water production and space heating systems.

### Cost Aspects

- The application and resources are freely available to the public.
- Economic and energy savings for the consumers due to the change to more efficient water/space heating systems.

### Evaluation

- **Challenges:** The tool is applicable solely for single-family houses (dwellings and apartments) and multifamily buildings with centralised space and/or water heating systems. It is available solely for the following countries: Portugal, Spain, France, Italy, Greece, Poland and Germany. The application uses data from 2022, and no updates to energy prices or appliances investment
-

are foreseen. It assumes a comfortable pattern that implies that the house is always comfortable at around 18°C during all the heating season, so values presented in the energy and economic assessment may be different from expected and may require correlation with the real scenario and heating needs.

- **Success Factors:** Comprehensive quantitative approach with many additional resources for further reading. Raises awareness and empowers citizens as active agents on energy efficiency in the heating sector, thus as active agents on the reduction of their environmental footprint, reduction of fossil fuels dependence, real state valuation of the house, improved air quality, etc.

---

## MORE INFORMATION FOR WORKSHOP PREPARATION

**Contact:** [joana.fernandes@adene.pt](mailto:joana.fernandes@adene.pt)

**Willingness to engage in dialogue or workshop participation:** not contacted yet.

**Possible support within REDI4heat:** ADENE, Solar Heat Europe (SHE), DENA

**Similar Approaches in the Toolbox:** -

**Further information on topic (with focus on target countries):**

Heating labels in Germany: Since January 2016, heating installers, chimney sweeps and certain energy consultants have been authorized to issue efficiency labels for old heating systems.

Since January 2017, it has been the duty of authorized district chimney sweeps to affix the labels (obligated parties). They receive an expense allowance for this.

[https://www.bafa.de/DE/Energie/Energieeffizienz/Heizungsetikett/heizungsetikett\\_node.html](https://www.bafa.de/DE/Energie/Energieeffizienz/Heizungsetikett/heizungsetikett_node.html)

---