

The replace project

Making heating and cooling for European consumers efficient, economically resilient, clean and climate-friendly

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replace-project.eu

Disclaimer: The views expressed in this presentation are the sole responsibility of the author and do not necessarily reflect the views of the REPLACE consortium



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Content

- The **replace** project (challenges, objectives etc.)
- Our **output** (tools and information materials)
- **replace** in action (replacement campaigns in pilot regions)



Situation on the European space heating market

- Heating and cooling sector (H&C)
 - represents about 50 % of the European final energy consumption

replace aims to boost the phase-out of inefficient and old heating systems by targeting consumers, investors & owners as well as intermediaries and helps them to make informed decisions.

- in 2019 58 % (61 million) space heaters installed in EU-27 have been inefficient non-condensing oil and gas boilers.



The **replace** team



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replace

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The **replace** project

- **Call 2017:** Building a low-carbon, climate resilient future: secure, clean and efficient energy (H2020-LC-SC3-2018-2019-2020)
- **Target sector:** residential buildings
- **Budget:** 2 Mio. EUR
- **Coordinator:** Austrian Energy Agency
- **Consortium:** 11 partners, 8 countries, 7 (national) languages
- **Project life:** Nov 2019 – Apr 2023



The **replace** consortium - 11 partners in 8 countries



The Challenge & Our Solution

- **Households** need **easy access** to independent **know-how** to make informed decisions
- **replace** supports this by providing
 - information on **sustainable solutions**
 - tools to find the most appropriate solution
 - and **best practice examples** to learn from



...and what do we offer?

How does **replace** deal specifically with decision-making?



Independent, product-neutral **replace** information to help you make informed decisions



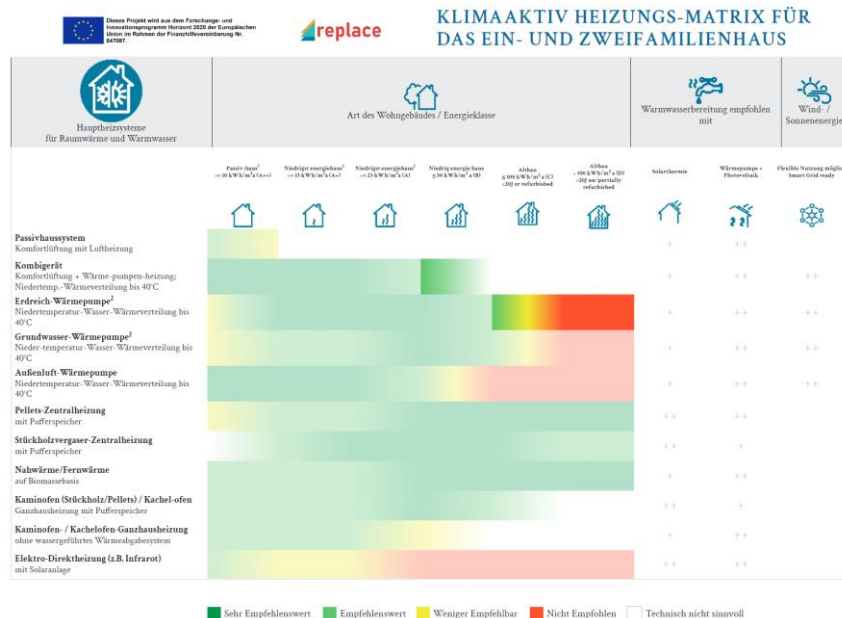
- **Heating matrices** (which heating system fits to my house)
 - replace-project.eu/replace-heating-matrix
- Replace Your Heating System **Calculator** (an easy do it yourself energy advice)
 - energieinstitut.at/tools/Replace
- Heating replacement **Handbook** for **end consumers** & **Handbook** for **professionals**
 - replace-project.eu/technology-guides
- **Best Practice Examples** of heating system replacements
 - replace-project.eu/best-practice/



Enabling an independent **replace**ment advice

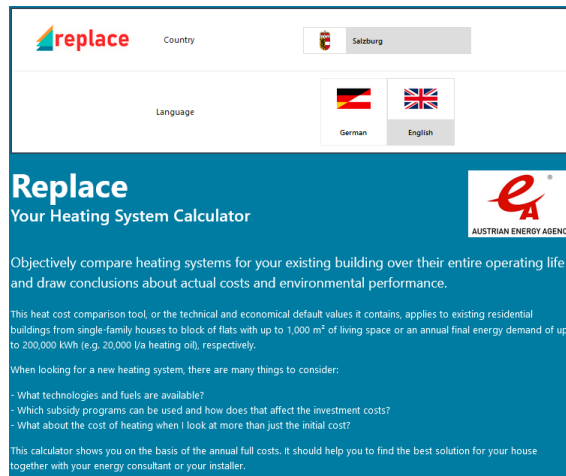
replace approach to support informed decision making

- Interactive online Heating matrices
- Answers which climate-friendly heating system(s) fit(s) best to your house
- replace-project.eu/replace-heating-matrix



replace approach to support informed decision making

- **replace Your Heating System Calculator**
- Supports an **easy do-it-yourself energy advice** (free of charge)
- energieinstitut.at/tools/Replace



replace Country Salzburg

Language German English

Replace Your Heating System Calculator

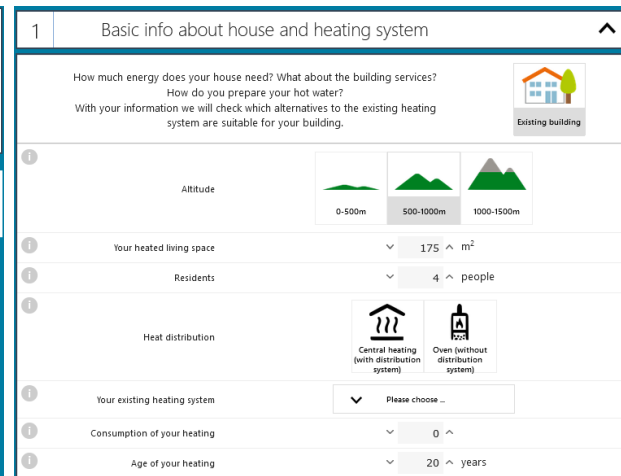
Objectively compare heating systems for your existing building over their entire operating life and draw conclusions about actual costs and environmental performance.

This heat cost comparison tool, or the technical and economical default values it contains, applies to existing residential buildings from single-family houses to block of flats with up to 1,000 m² of living space or an annual final energy demand of up to 200,000 kWh (e.g. 20,000 l/a heating oil), respectively.

When looking for a new heating system, there are many things to consider:

- What technologies and fuels are available?
- Which subsidy programs can be used and how does that affect the investment costs?
- What about the cost of heating when I look at more than just the initial cost?

This calculator shows you on the basis of the annual full costs. It should help you to find the best solution for your house together with your energy consultant or your installer.



1 Basic info about house and heating system

How much energy does your house need? What about the building services?
How do you prepare your hot water?
With your information we will check which alternatives to the existing heating system are suitable for your building.

Existing building

Altitude: 0-500m, 500-1000m, 1000-1500m

Your heated living space: 175 m²

Residents: 4 people

Heat distribution: Central heating (with distribution system), Oven (without distribution system)

Your existing heating system: Please choose ...

Consumption of your heating: 0

Age of your heating: 20 years



The Replace Your Heating System Calculator

Features

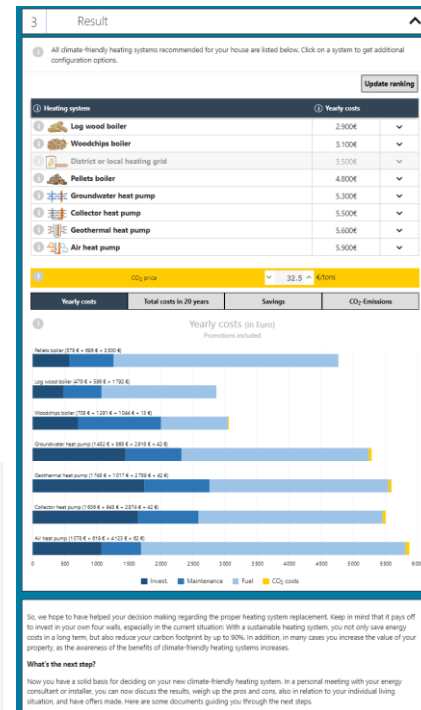


- Based on the Austrian klimaaktiv [Hexit calculator](#) (of the Ministry for Climate Action).
- The **calculator is tailored** to the situation
 - in **8 European pilot regions** (AT, BiH, DE, BG, ES, HR, MK, SL) and
- **Operates in 8 languages** (including English for each region)
- Provides **technical and economical default values** (for a quick result mode)
 - applying to heating system replacements in residential buildings
 - ranging from single-family houses to
 - block of flats with up to 20,000 l/a heating oil equivalent (i.e. 20 MWh/a).



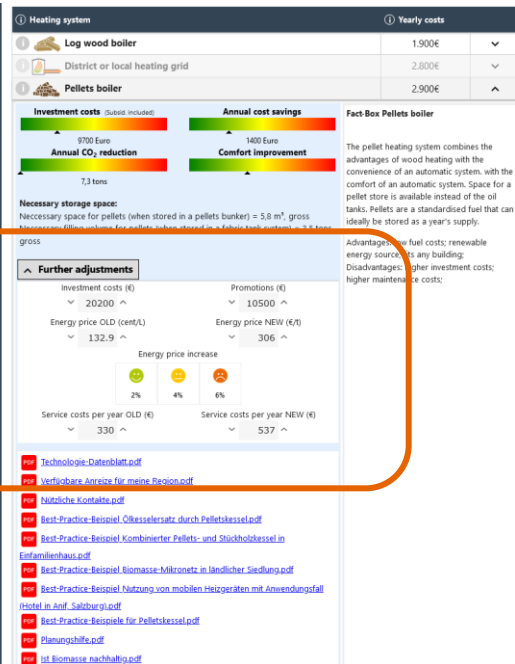
The Replace Your Heating System Calculator

Results



“Quick” and “Expert” mode, the latter If you want to **compare economics of installers’ offers**, etc.

Manual updates of
investment,
subsidies, fuel
prices, other costs
possible



Heating system Yearly costs

Heating system	Yearly costs
Log wood boiler	1.900€
District or local heating grid	2.800€
Pellets boiler	2.900€

Investment costs (subsidies included) **Annual cost savings**

9700 Euro **Annual CO₂ reduction** 7.3 tons **Annual cost savings** 1400 Euro **Comfort improvement**

Necessary storage space:
Necessary space for pellets (when stored in a pellets bunker) = 5.0 m³ gross
Necessary floor surface for pellets (when stored in a pellets bunker) = 3.4 m² gross

Fact-Box Pellets boiler

The pellet heating system combines the advantages of wood heating with the convenience of an automatic system, with the comfort of an automatic system. Space for a pellet store is available instead of the oil tanks. Pellets are a standardised fuel that can ideally be stored as a year's supply.

Advantages: low fuel costs; renewable energy source; no any building; Disadvantages: higher investment costs; higher maintenance costs;

Further adjustments

Investment costs (€) Promotions (€)
Energy price OLD (cent/kWh) Energy price NEW (€)
Energy price increase ☐ 2% ☐ 4% ☐ 6%
Service costs per year OLD (€) Service costs per year NEW (€)

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White-label option

for professionals & public energy advise



- **White-label option**
 - Businesses, installers, energy advisors, local energy offices etc. can **integrate** the **Calculator** into their own website **via a frame or place a link to** the Calculators landing page
 - Please contact the national REPLACE project partner
- The calculator will be **hosted until 30.11.2025.**



Handbooks for Heating System Replacements

- for end consumers
- for professionals & investors
- replace-project.eu/technology-guides



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Best practice examples of RH&C replacements

- **Catalogue of best practices** and innovative approaches for H&C replacement from **Western, to Central to South-Eastern Europe**.
- Show how **replacements** can be implemented under **real local conditions**, being technically and economically **feasible** at the same time.
- replace-project.eu/best-practice/

BEST PRACTICE EXAMPLES
OF (R)HC REPLACEMENTS
IN THE TARGET REGIONS



Making heating and cooling for European consumers
efficient, economically resilient, clean and climate-friendly

replace campaigns tailored to **nine** different pilot regions



replacement campaigns

implemented by nine Local Working Groups (LWG)

LWG composition

- Regional authorities
- Policy makers
- Municipalities
- Energy advisers
- Installers
- Chimney sweepers
- Equipment manufacturers
- Equipment wholesalers
- ESCOs
- Local/regional managers
- Ministries in charge
- Funding bodies
- Energy agencies
- Etc.



**Local
Working
Groups**

**Campaigns in
pilot regions**



**Offer a range of tailored 'activity packages' to
address and reduce key barriers**



Thank you for your
attention!

Contact



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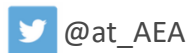
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