coolproducts
for a cool planet

The coolest heating:

***38 companies** leading the renewable heating transition in Europe*

A Climate Analysis of the Domestic Heating Market

Third Edition

The EEB is Europe's largest network of environmental citizens' organisations. We bring together over 180 civil society organisations from more than 38 European countries. We stand for sustainable development, environmental justice & participatory democracy.

Led by the EEB and ECOS, Coolproducts is a coalition of NGOs working to ensure better products for consumers and the planet.

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Last but not least, we would like to thank the European Climate Foundation (ECF). Without their support, this report would not have been possible.

EXECUTIVE SUMMARY

For the third year in a row, the European Environmental Bureau (EEB) audited the portfolios of the main manufacturers of domestic heating products who sell their products in Europe.

The authors examined publicly available data, as well as manufacturers' responses to a survey, to rank 72 companies according to the climate-friendliness of their portfolios.

In this 2023 edition of the Brand Audit of the European Heating Industry we were able, for the first time, to draw on data from the European Product Registry for Energy Labelling (EPREL), which is publicly available since 2022.

That allowed us to:

1. identify additional companies relevant for our analysis (our report covers ***72 companies*** in this edition, compared to some 50 in previous editions);
2. ***cross-check*** companies' responses to the survey
3. obtain information about companies ***who did not reply*** to our survey.

The results are encouraging:

38
leaders

38 “leaders”, of all sizes and from all across Europe, only sell technologies that are compatible with climate objectives, such as heat pumps and solar thermal systems. They are leading the clean heating transition, without waiting for legislation to prompt them.

1
follower

One “follower” company still sells technologies —such as fossil-fuel boilers— that would jeopardise Europe’s decarbonisation plans. But it has committed to stop the sales of such products in the short-term

22
laggards

We have also labelled 22 companies “laggards”, which means they still sell technologies —such as fossil-fuel boilers— that would jeopardise Europe’s decarbonisation plans. These companies did not share any plans to stop their sales of fossil fuel boilers; nor do they support legislation that would quickly phase out such technologies, as recommended by the European Commission[1] and the International Energy Agency[2].

11
dark side

Unfortunately, data is still missing for 11 companies. By late 2022, these companies had not yet uploaded their products information to the European Product Registry for Energy Labelling (EPREL)[3], a legal obligation since 2019[4], nor did they reply to our repeated requests for information. This lack of transparency deprives the public of valuable information about the all-important transition of the domestic heating sector. For that reason, such companies were allocated to “the dark side” category.

[1] European Commission. “EU ‘Save Energy’ Communication”. May 2022.

[2] International Energy Agency. “Net-zero by 2050: A Roadmap for the Global Energy Sector”. May 2021

[3] We made our best efforts to identify company products on EPREL. If company data existed at the date of writing but we missed it, we will be happy to update the report accordingly.

[4] Regulation (EU) 2017/1369 of the European Parliament and of the Council of 4 July 2017 setting a framework for energy labelling and repealing Directive 2010/30/EU (Text with EEA relevance.). July 2017.

The report also shows that manufacturers overwhelmingly support legislation that would enable the clean heating transition.

For example:

- ***100% of respondents support the end of subsidies for stand-alone boilers and water heaters that run on fossil fuels*** (up from 91% in last year's version of this report, and 87% in the first edition). What is more, 84% of all respondents support an immediate introduction of such a measure.

- ***90% of respondents support a ban on the sales of stand-alone boilers and water heaters that run on fossil fuels*** (up from 83% last year, and 60% in the first edition). Interestingly, 73% of all respondents support a ban no later than 2027.

- ***58% or respondents declare that natural-gas based heat pumps will represent the lion share of their product portfolio before 2030.*** Forty-seven percent (47%) say this will happen before 2027. Remarkably, 79% of the respondents consider that the F-gas regulation should only allow natural or ultra-low refrigerants use in the heat pump sector.

These findings come at a crucial moment. In the wake of Putin's war on Ukraine, Europe is grappling with its dangerous dependence on fossil fuels. European lawmakers are also realising the immense potential of decarbonising heating to reduce the dependency on gas, Russian but not only.

Luckily, the European Union (EU) is currently discussing legislation that aims at ensuring that European buildings play their part in decarbonising the economy: most notably, the Energy Performance of Buildings Directive (EPBD) recast; and the revision of the Ecodesign and Energy Labelling regulations for heating systems. At national level, several member states have already enacted some form of limitation to the installation of fossil heating, and the large majority (25 out of 27) had at least some form of support for clean heating in place, although most of these measures are far from ideal.[5]

It is often assumed in policy discussions that industry is not ready for decarbonisation, and that it will thus support fossil gas as a bridge fuel transition in the transition to renewables. This report shows however a very different picture: a clear message from companies that says:

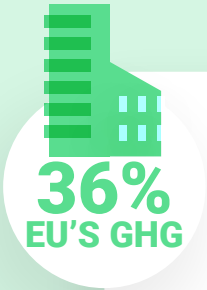
The era of fossil heating is over, and we are ready for the transition.

Policy-makers should be emboldened by such a message, and take urgent legislative action.

[5] Coolproducts. "Impact of a ban of fossil heating technologies on NECPs and national energy dependency". 19 July 2022.

INTRODUCTION

The previous version of the Brand Audit of the European Heating Market was published on 16 February 2022, just days before the Russian invasion of Ukraine. The energy landscape has abruptly changed since then, and the need to wean off fossil gas —not just the Russian— is now clearer than ever: over 40 per cent of the gas the EU imports is used for heating buildings[6], and a third of European homes use gas for heating[7].



Buildings are also responsible for about 36% of the EU's greenhouse gas emissions[8]. More than 220 million building units, representing 85% of the EU's building stock, were built before 2001. And 85-95% of the buildings that exist today will still be standing in 2050.

The EU plans to reduce its greenhouse gas emissions by at least 55% by 2030 compared to 1990[9], a first step towards achieving carbon neutrality by mid-century. To achieve that target, it is estimated that by 2030 the EU should reduce buildings' greenhouse gas emissions by at least 60%, their final energy consumption by at least 14%, and energy consumption for heating and cooling by at least 18%, all compared to 2015 levels[10].

To sharply reduce greenhouse emissions from European buildings by 2030, and achieve carbon neutrality by mid-century, the EU should first and foremost **focus on increasing the rate and depth of building renovations.** The EU's Renovation Wave aims to "at least double the annual energy renovation rate of residential and non-residential buildings by 2030 and to foster deep energy renovations" in order to "green buildings, create jobs and improve lives".

These are laudable but likely insufficient objectives, according to expert estimates[11]. The recast of both the Energy Efficiency Directive and European Performance of Buildings Directive, which should be finalised by legislators throughout 2023, bring a great opportunity to support or even improve the objectives of the Renovation Wave.

There is a need to ensure that the remaining energy consumed in buildings is decarbonised. And that it is done really fast. Clean heating advocates have been **calling for a 2025 end to the installation of fossil-fuel boilers[12].** The rationale is simple: because fossil fuel boilers can last up to 25 years, if their sale and installation continue beyond 2025, they will still be in place by 2050, when the EU should already be climate neutral. **The International Energy Agency (IEA) made exactly the same statement** in a 2021 Flagship Report[13], and the European Commission has recently suggested a more timid but still welcome 2029 deadline[14], adding pressure for an end to fossil fuel heating.

The bill of the clean heating transition in Europe would not be exorbitant, either. A recent Coolproducts report[15] shows that the additional amount of financial incentives needed to bring affordable clean heating to all Europeans stand at about €70bn, or about €4.5 bn per year on a 15 years decarbonisation plan. A figure compatible with the foreseen allocations of the Social Climate Fund, and funds for the Resilience and Recovery fund.

[6] Jan Rosenow. "How to end Europe's gas demand crisis". 7 December 2021.

[7] Financial Times. "Europe must get serious about renovating homes to ease energy crisis". 25 January 2022.

[8] European Commission's Communication on "A Renovation Wave for Europe", page 2

[9] The European Commission has proposed in the Climate Target Plan 2030 to cut net greenhouse gas emissions in the EU by at least 55% by 2030 compared to 1990. The European Parliament suggests a 60% target.

[10] European Commission's Communication on "A Renovation Wave for Europe", page 2.

[11] BPIE. "On the way to a carbon-neutral Europe". December 2020

[12] ECOS on behalf of the Coolproducts Campaign. "Five Years Left: How Ecodesign and Energy Labelling can decarbonise heating". December 2020.

[13] International Energy Agency. "Net-zero by 2050: A Roadmap for the Global Energy Sector". May 2021

[14] European Commission. "EU 'Save Energy' Communication". May 2022.

[15] Coolproducts. "Green Heat for All". October 2021.

[16] European Commission. REPowerEU: affordable, secure and sustainable energy for Europe. May 2022. https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal/repowereu-affordable-secure-and-sustainable-energy-europe_en

[17] Time Magazine. "Gas Companies Are Promoting Hydrogen to Heat Homes. But the Science Isn't on Their Side". 27 September 2022.

[18] New Scientist. "Heating homes with hydrogen is bad for both your wallet and the planet". 27 September 2022.

[19] IRENA. "Geopolitics of the Energy Transformation: The Hydrogen Factor". January 2022.

[20] Rosenow, J., and Lowes, R. (2020). Heating without the hot air: Principles for smart heat electrification. Brussels, Belgium: Regulatory Assistance Project. March 2020.

[21] Carbonbrief. "In-depth Q&A: Does the world need hydrogen to solve climate change?". November 2020.

[22] CAN Europe and EEB. "Building a Paris Agreement Compatible (PAC) energy scenario".

A straightforward **way to ending fossil fuel heating would be via the Ecodesign and Energy Labelling regulations for heating systems,** which are currently being revised: the energy label would need to allocate fossil fuel heating systems and direct electric systems to the lowest classes (F and G); and the Ecodesign regulation would ban the sales of these products by 2025. But current proposals from the European Commission are not yet in line with those needs, in particular regarding Ecodesign.

The 'Fit for 55' package of climate measures also holds immense potential to bring about the end of fossil heating. The REPowerEU Plan[16] —Europe's answer to the Russian invasion of Ukraine— further encourages the clean heating transition: a suggested deadline for the end of fossil fuel heating; an increased energy savings target, and an objective to double the rate of installation of heat pumps.

If properly designed, the different pieces of legislation currently being discussed would help align plans, objectives, financial incentives, training and restrictions towards a fossil-free heating future. **Legislators have a golden opportunity over the next few months.**

Legislators will however need to be wary of false solutions. Some in the heating sector argue that "decarbonised gases", such as hydrogen, will replace fossil gas in heating systems. There is, however, mounting evidence that the amounts of hydrogen will be limited, and that using it for heating would face a series of economic and technical challenges[17, 18, 19, 20, 21, 22, 34, 24, 25, 26, 27, 28].

There are also doubts about the green credentials of so-called "low-carbon gases"[29]. Hydrogen should therefore be used only in priority sectors that are hard to electrify. Which is not the case of domestic heating. **The graphic below perfectly makes the point on the hierarchy of hydrogen use across the economy:**

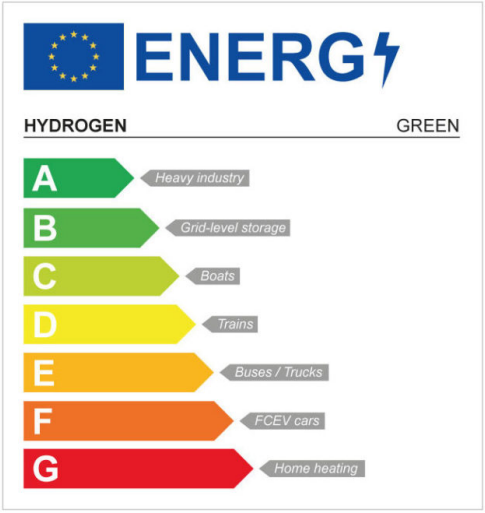


Figure 1: hierarchy of hydrogen uses. Source: Energy Cities.

[23] Michael Liebrich. "Separating Hype from Hydrogen – Part One: The Supply Side". Bloomberg NEF, October 2020.

[24] Michael Liebrich. "Separating Hype from Hydrogen – Part Two: The Demand Side". Bloomberg NEF, October 2020.

[25] Sunny, N., Mac Dowell, N., Shah, N. (2020). "What is needed to deliver carbon-neutral heat using hydrogen and CCS?"

[26] Lowes, R., Woodman, B, and Speirs, J. (2020). "Heating in Great Britain: An incumbent discourse coalition resists an electrifying future". December 2020.

[27] Jan Rosenow. "Heating homes with hydrogen: Are we being sold a pup?" Energy Monitor, 29 September 2020.

[28] David Cebon. "Blog: Hydrogen for Heating". 28 September 2020.

[29] Robert W. Howarth, Mark Z. Jacobson. "How green is blue hydrogen?" 12 August 2021.

In this legislative context, the European Environmental Bureau, under the Coolproducts campaign, wanted to scrutinise what companies in the domestic heating sectors are doing, and what they plan to do in the future, in terms of decarbonisation of their portfolios.

- **To what extent are manufacturers already selling renewable heating technologies?**
- **Are they planning to drop sales of fossil fuel heating systems?**
- **Do they support legislative action in that direction?**

Answers to these and other questions are captured in this report.

METHODOLOGY

Scope

The 2023 Brand audit of European Heating Manufacturers covers companies that sell domestic heating systems (for space and/or water heating) in the European Economic Area (EEA). The analysis does not include companies that only sell commercial or industrial heating systems. Nor does it cover companies that sell only cooling systems or ventilation systems. It covers those selling domestic heaters (the elements actually producing the heat, e.g. boilers, heat pumps, etc.), but not those that only sell emitters (e.g. radiators), or heating systems controls. When an industrial group includes several companies that sell heating products, we considered the group. The scope is therefore similar to previous editions of this report.

To make research manageable, but keep it representative of the European Heating Sector, we decided to focus our research on companies that:

EPEE EHI EHPA SHE

Are part of at least one of the four European heating associations: the European Heating Industry (EHI), the European Heat Pump Association (EHPA), the European Partnership for Energy and the Environment (EPEE), and Solar Heat Europe;

and/or

100 HEATING PRODUCTS

Have at least 100 heating products on the recently launched European Product Registry for Energy Labelling (EPREL)

After examining the 200+ combined membership of EHI, EHPA, EPEE and SHE, and analysing over 80,000 entries of heating products in EPREL, we identified 72 companies as falling within the scope of our research.

[30] https://eprel.ec.europa.eu/screen/home

Gathering information

Survey

Starting in late October 2022, we contacted each of these companies individually, and via their industry associations.

We sent them a questionnaire (see Annex I) with three broad sections:

1. ***Questions about their current activities and portfolios***
2. ***Questions about their future plans, and their position regarding possible legislative changes***
3. ***Other broad questions about the decarbonisation of the heating sector in Europe***

We gave companies two weeks to reply to the survey. Over the following weeks, we sent reminders and used different means of contact (email, online contact forms, social networks, phone calls and videoconferences) to ensure that our request was clearly understood; we worked with the industry associations to ensure that our request reached the right person within each company. We extended deadlines — sometimes by several weeks— to ensure that high workloads were not an obstacle to replying to the questionnaire. In our last reminders, we informed companies that, even in the absence of a reply, they would be named in our report. We made sure that all companies had a fair chance to reply to the survey.

Gathering information

EPREL Database

Nineteen (19) companies replied to the survey. To verify the information provided by companies, and to gather information on companies that did not reply to the survey, we meticulously analysed the EPREL data for heating products of all 72 companies identified. This involved examining the following product categories in EPREL:

- ***Space heaters/combination heaters***
  (24,000+ product entries as of late November 2022)
- ***Packages of space heaters/combination heaters***
  (~37,000 entries)
- ***Solar devices for space heaters***
  (~180 entries)
- ***Water heaters***
  (~7,500)
- ***Packages of water heaters***
  (~60 entries)
- ***Solar devices for water heaters***
  (~600 entries)
- ***Air conditioners*** [31]
  (~14,000 entries)

[31] Reversible air conditioners can be used for heating. Most air conditioners on EPREL are reversible.

Ranking companies

With the information above, we set off to rank companies in four different categories: leaders, followers, laggards, and the dark side.

The following flowchart summarises the criteria used:

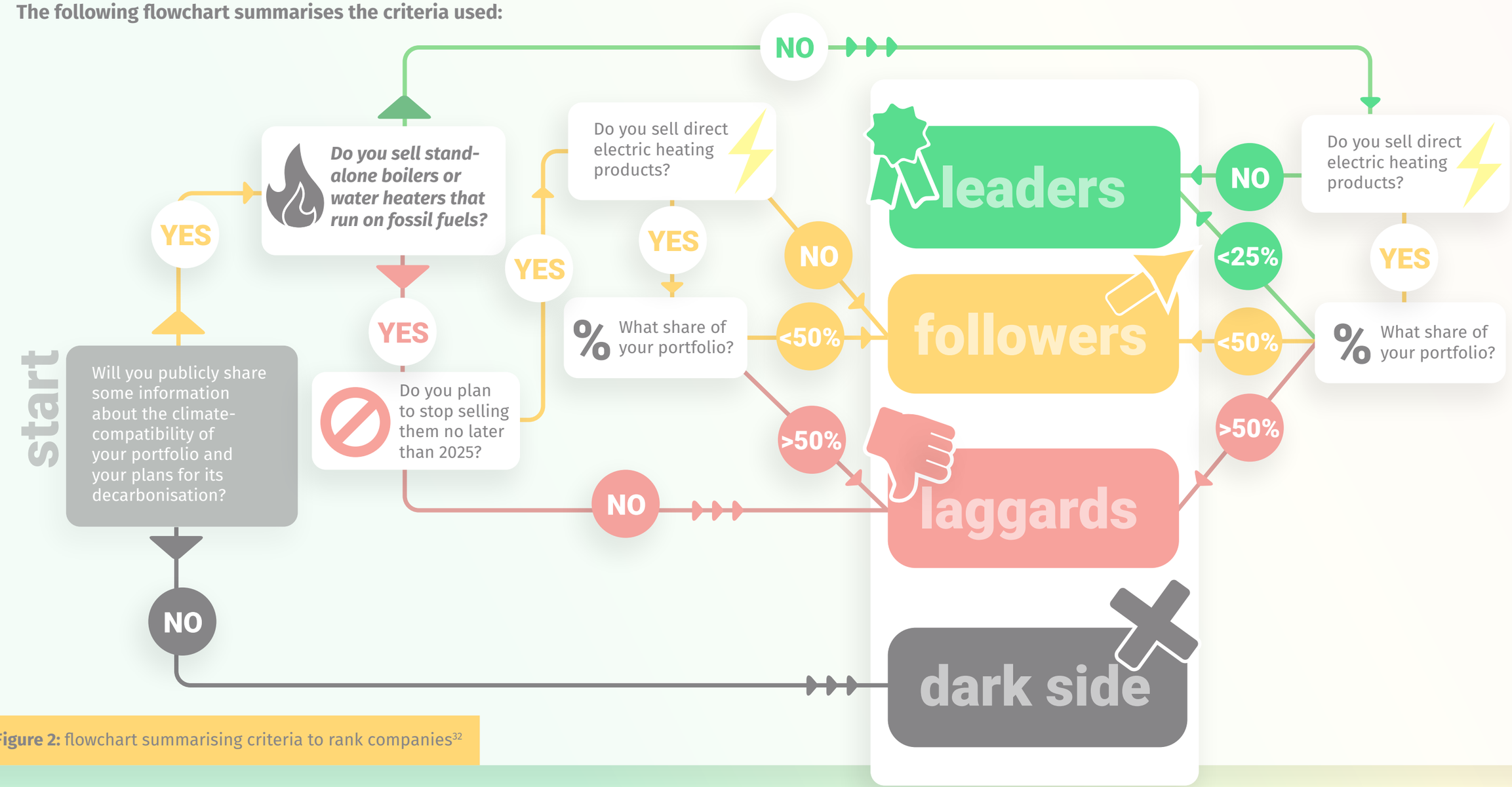


Figure 2: flowchart summarising criteria to rank companies[32]

[32] This methodology only allows the ranking of companies according to their domestic heating portfolios. Neither the EEB nor the Coolproducts campaign endorse their overall environmental or social practices.

Ranking companies

The main idea behind our ranking is the notion that **“fossil fuel boilers”** are not compatible with European climate objectives. The sales and installation in European buildings would make it extremely challenging to reach EU and global climate goals. Fossil-fuel boilers is a broad term that encompasses all heating devices (for space and/or water) that use coal, oil or fossil gas. Some in the heating industry prefer the terms “liquid boilers” for oil boilers, and “gaseous boilers” for fossil gas boilers. While technically these may be more accurate terms, we avoid them because they hide a bleak reality: the absolute majority -and the totality in most member states- work exclusively with fossil fuels, and there is no way to make sure they will not continue to do so for the years to come

Another key ranking criteria refers to **“direct electric heating systems”,** which include all electric devices other than electric heat pumps: electric boilers, radiators, water heaters and heat convectors. We acknowledge that some such products might be necessary for economic reasons, for example for small heating loads in seldom-used buildings; or to make use of surplus, on-site, photovoltaic electricity. However, our ranking criteria promotes electric heat pumps over direct electric heating, for several reasons: 1) they make use of renewable ambient heat; 2) they are several times more efficient than direct electric heating; 3) there are clear objectives for full decarbonisation of the power system in the EU, which will make electric heat pumps 100% renewable.

However, our ranking criteria promotes electric heat pumps over direct electric heating, for several reasons:

1. ***they make use of renewable ambient heat;***
2. ***they are several times more efficient than direct electric heating;***
3. ***there are clear objectives for full decarbonisation of the power system in the EU, which will make electric heat pumps 100% renewable.***

With all of the above in mind, our methodology allocates companies[33] to four different categories, depending on their responses to our questionnaire:

leaders

Leaders are companies that do not sell stand-alone boilers or water heaters that run on fossil fuels. And whose sales of direct electric heating products is limited to 25% of their annual turnover. A company can therefore be a leader if they sell hybrids (boiler + heat pump, for example), as we acknowledge that it might be necessary, for some specific building typologies, and for cold-weather events, to count on such hybrid solutions while the European building stock gets properly renovated.

followers

Followers are companies that either:

- Sell some stand-alone boilers or water heaters that run on fossil fuels. But these companies are committed to stopping such sales before 2025 (or earlier); or
- Do not sell stand-alone boilers or water heaters that run on fossil fuels. But whose sales of electric products account for 25% to 50% of their turnover.for 25% to 50% of their turnover.

laggards

Laggards are companies that either:

- Sell stand-alone boilers or
- water heaters; and have no plans to stop doing so before 2025.

dark side

Finally, the **dark side** covers companies that did not reply to our request for input, despite repeated reminders. And whose heating products have not yet been uploaded to the EPREL database. Since EPREL is relatively recent, we decided to be lenient with companies that have not yet had the time to upload their products to the database, but replied to our questionnaire.

[33] For industrial groups, we considered the whole group for the ranking. For example, if one of the group companies sells gas boilers and another one does not, then we consider that the group does sell gas boilers.

[34] Similarly, we are considering thermally-driven heat pumps (most of which run on fossil gas) as an acceptable transition solution, because of their high efficiency. In years to come, as heat pumps develop and deploy, our analysis will probably promote electric heat pumps over thermally-driven ones.

RESULTS

Improved market picture

Nineteen (19) companies of all sizes, and from across Europe, took the time to complete the questionnaire and send us the requested information. This is in the same range as in previous years (15 in 2021, 23 in 22).

In addition, for this 2023 edition of the Brand Audit of the European Heating Industry we were able, for the first time, to draw on data from the European Product Registry for Energy Labelling (EPREL), which is publicly available since 2022.

That allowed us to improve our research by:

1. ***identifying additional companies relevant for our analysis*** **(our report covers 72 companies in this edition, compared to some 50 in previous editions);**
2. ***double-checking the data*** **provided by companies in the survey; and**
3. **obtaining information for companies who *did not reply to our survey.***

All in all, we were able to obtain data for 61 out of 72 companies. This is a significant improvement from previous editions of the report, when we could only rely on replies to the questionnaire, and so had only data for 15 companies in 2021, and 19 in 2022.

Still, despite our repeated attempts to obtain information from companies, despite a legal obligation to upload their products to EPREL, and despite widespread self-branding about sustainability that can be observed across the industry, some 11 companies neither replied to our requests for input; nor have their products uploaded to EPREL. These companies belong to what we have dubbed “the dark side”, for their lack of transparency. This includes mostly —but not only— small- and medium-sized companies that may not have had the time to deal with administrative obligations and requests.

[35] We made our best efforts to identify company products on EPREL. If company data existed at the date of writing but we missed it, we will be happy to update the report accordingly.

[36] All percentages in figures 3 and 4 have been rounded to zero decimals. In some instances, this results in totals not adding up to 100%.

Overwhelming support for an immediate end to subsidies

Another interesting learning was that there is broad support, across all sizes and types of companies surveyed, for the end of subsidies to fossil fuel and direct electric heating.

All respondents to the survey support the end of subsidies for stand-alone boilers and water heaters that run on fossil fuels. This compares to 91% in last year's edition of, and 87% in the first edition. What's more, 84% of all respondents support an immediate introduction of such measure (up from 83 last year, and 53% in the first edition).

Would your company/group support the end of subsidies in Europe for boilers/water heaters that run entirely on fossil fuels?

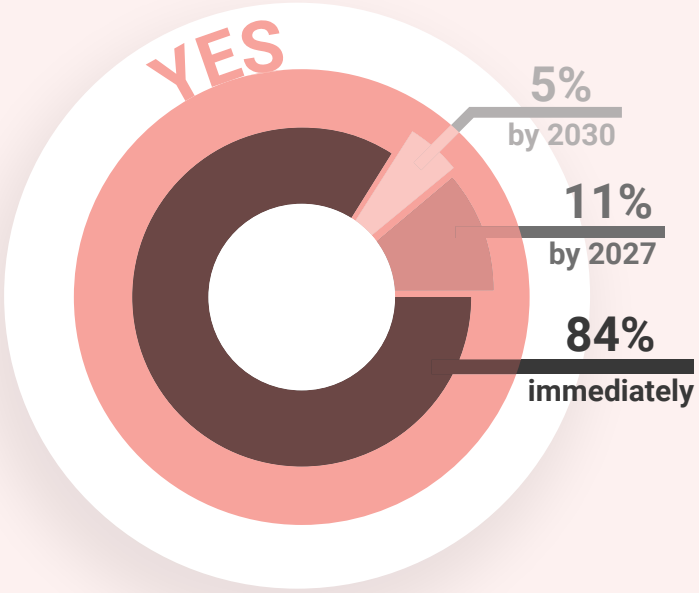


Figure 3: support for the end of subsidies for fossil-fuel boilers and water heaters.

In other words, EU governments would not face industry backlash were they to shift subsidies away from fossil fuel and direct electric heating systems, and towards heat pumps and solar thermal systems. According to a recent mapping of Europe's subsidies for fossil fuel heating systems, "at least 9 out of 27 EU governments still incentivise the purchase and/or installation of new fossil gas boilers through various tax reductions, loans and grants, which range between €300 and €2,500"[37].

[37] EEB on behalf of the Coolproducts Campaign. "Mapping Europe's subsidies for fossil fuel heating systems". December 2020.

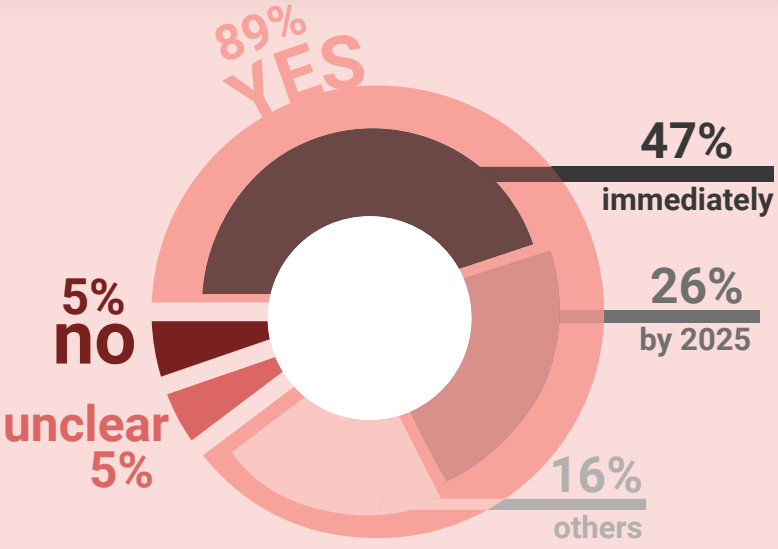
Clear and growing support for a ban on fossil fuel heating products

Around 89% of respondents support a ban on the sales of fossil fuel heating products. This is up from 83% in last year's edition of the audit, and 60% in the first edition, and points to an increased sense of urgency for clear regulation among manufacturers. Interestingly, 73% of all respondents (up from 57% last year, and 40% in the first edition) support a ban no later than 2025, as requested by the Coolproducts coalition[38], and recently backed by the International Energy Agency in a flagship report[39]. Some respondents also pointed out that a ban on the installation of fossil fuel heaters in new buildings could come even earlier than a complete ban on sales.

Contrary to what happened in previous editions of the audit, none of the companies that did not clearly support the ban, suggested an alternative requirement that all boilers and water heaters can run on a 20% hydrogen blend. ***We welcome this evolution of the sentiment around this topic, as we believe this requirement would have several problems:***

1. ***it would not ensure that hydrogen will actually flow through the gas network***
2. ***it would not ensure the level of decarbonisation needed in heating systems, creating instead a long-term lock-in to fossil fuels***
3. ***it would risk making both boilers and gas bills more expensive for citizens.***

Would your company/group support a legal ban in Europe on the sale of new domestic boilers and water heaters that run entirely on fossil fuels?



[38] ECOS on behalf of the Coolproducts Campaign. "Five Years Left: How Ecodesign and Energy Labelling can Decarbonise Heating". December 2020.

[39] International Energy Agency. "Net Zero by 2050 - A Roadmap for the Global Energy Sector". May 2021.

Figure 4: support for a ban on the sales of fossil-fuel boilers and water heaters.

Figure 5 takes a closer look at manufacturers' support for a ban on fossil fuel heating:

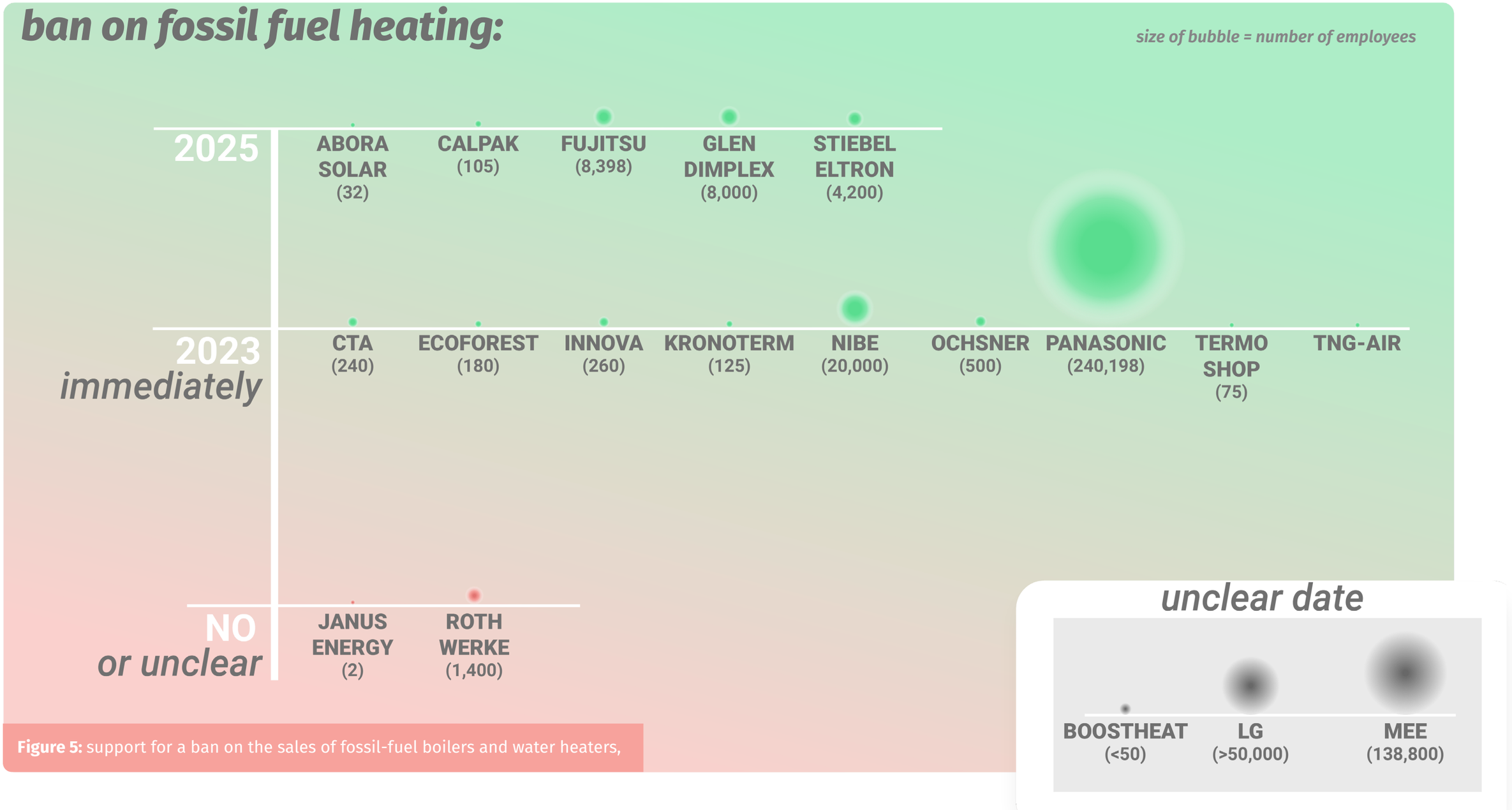


Figure 5: support for a ban on the sales of fossil-fuel boilers and water heaters,

Heat pumps keep improving

Seventeen respondents out of 19 confirmed that their products can provide demand-side flexibility of some sort (either directly or by integrating other plug-in technologies) and react to signals (e.g. grid load, price, CO2 emissions). This is an important feature to balance the electricity grid, and to ensure the integration of a large number of heat pumps in the power system.

Ten out of 19 respondents to the survey already already provide heat pumps that use natural refrigerants (e.g. CO2, propane, ammonia). Another manufacturer is planning to introduce these refrigerants in their product portfolio this year. This is important because refrigerant leakage is an important fraction of the greenhouse gas emissions associated with heat pumps. A fraction whose importance on the carbon footprint of heating is bound to increase as the power mix is increasingly decarbonised through renewables. It is also very important because natural refrigerants are often associated with the capacity of achieving high flow temperatures that can allow heat pumps to be deployed first in staged renovations .

Approximately 60% of the respondents replied that natural refrigerant heat pumps will play a major role in their product portfolio before the end of the decade. One fourth of the respondents are in favour of only allowing sales of natural refrigerant heat pumps by 2025, while another half of them would approve the measure if introduced at a later date.

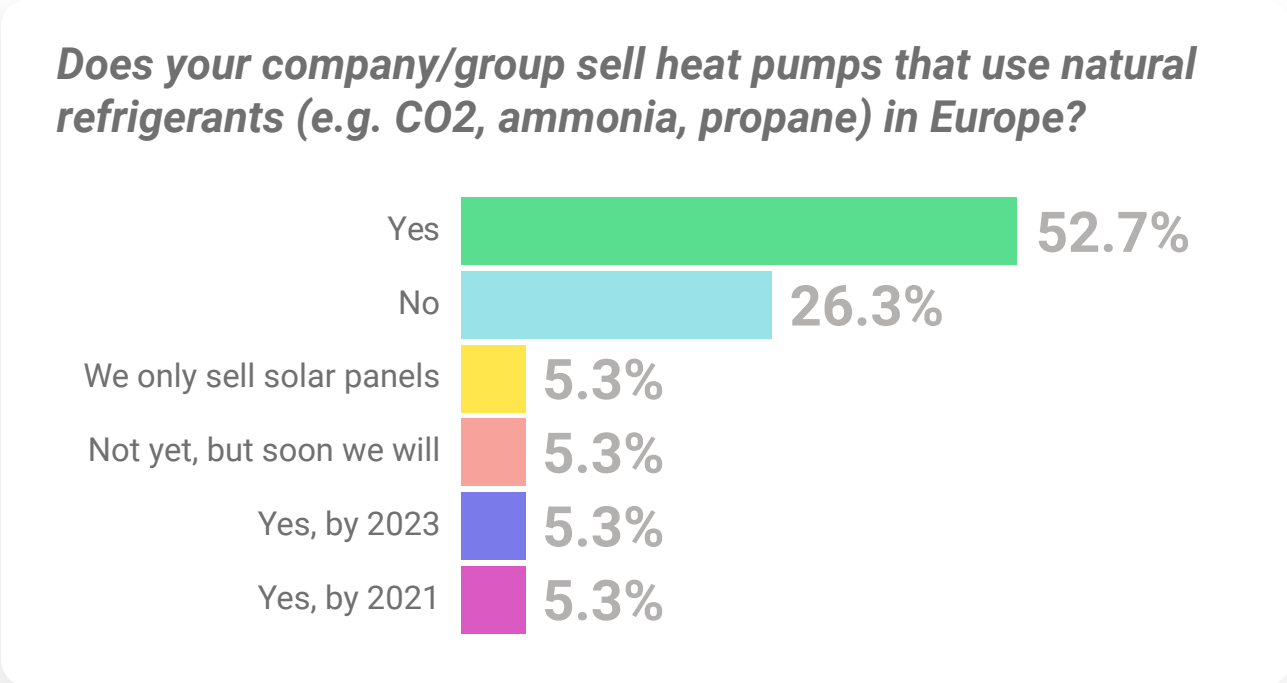


Figure 6: support for a ban on the sales of fossil-fuel boilers and water heaters, by year and company size

Do you expect that heat pumps with natural refrigerants will make up most of your portfolio in the future?

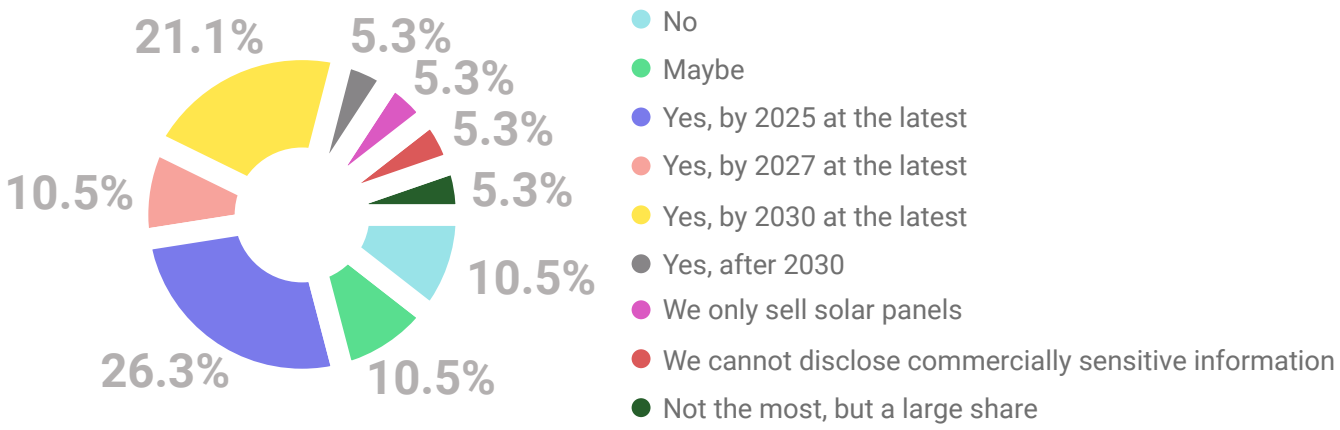


Figure 7: number of respondents that are moving to natural refrigerants

The F-gas regulation is currently being revised, and plans to ban some of the refrigerants with the highest global warming potential (GWP).
According to your company, the F-gas regulation should:

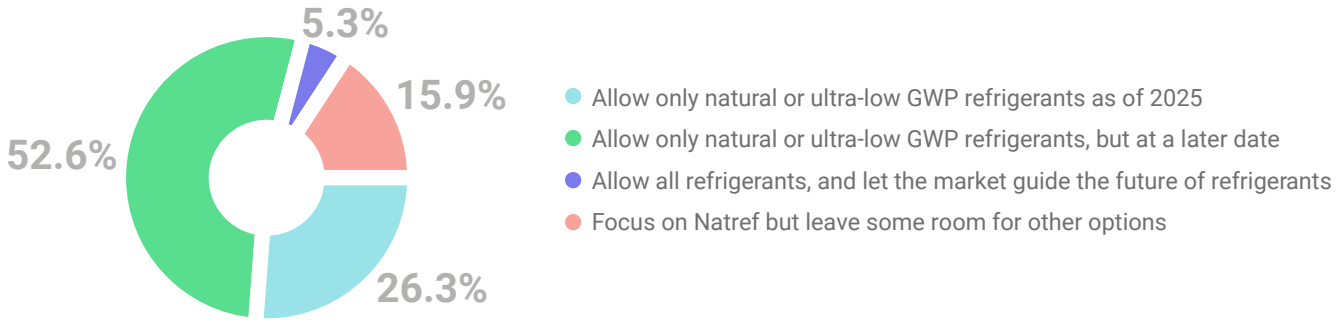


Figure 8: number of respondents that support phase out of F-gas in the regulation

Improved policy and financial framework needed

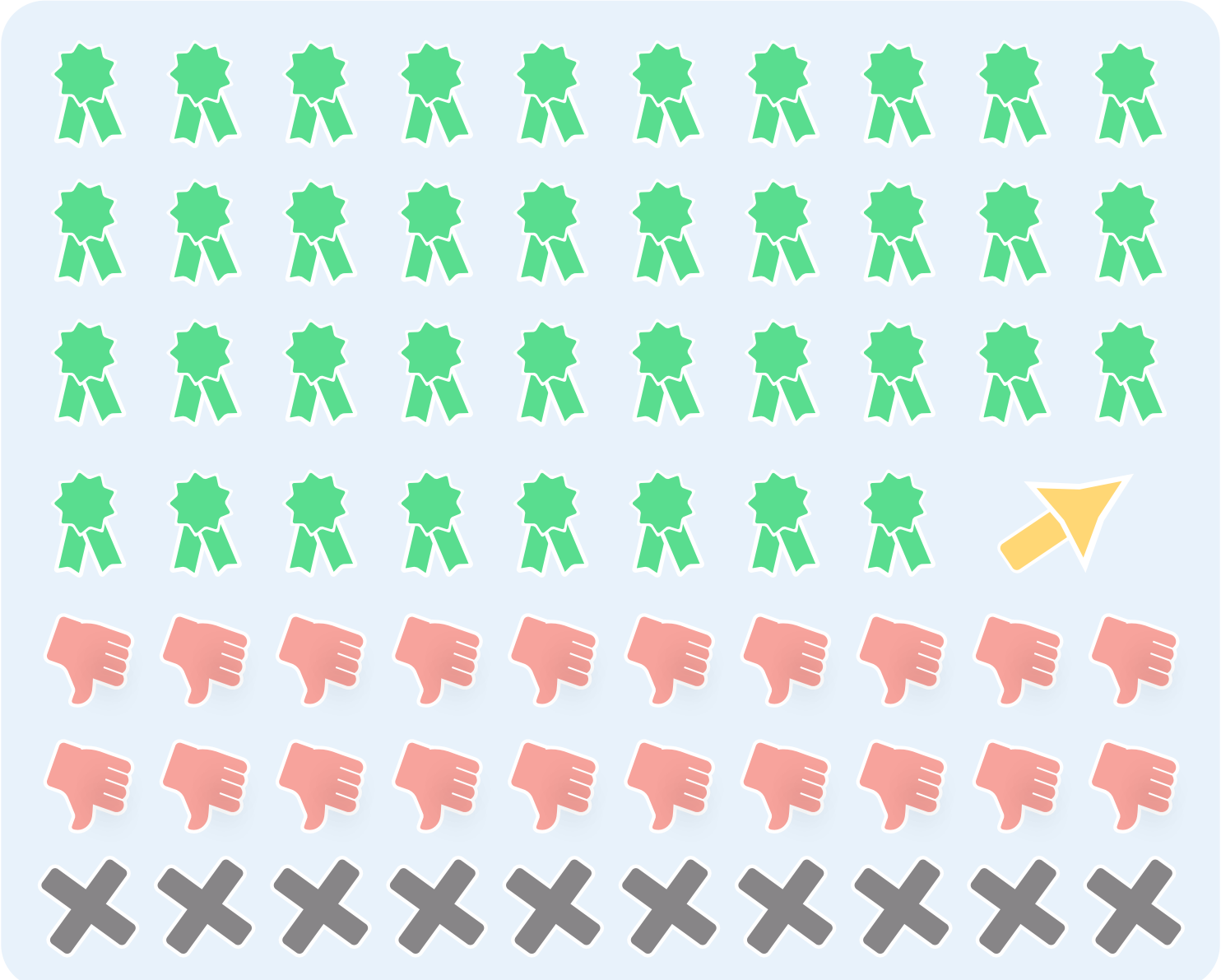
Asked about the key measures needed to achieve climate-neutrality in the building sector by 2050, respondents asked for clearer support for renewable heating, in several forms:

- ***Information/awareness campaigns addressed at end-customers.***
- ***Subsidies and other financial support for the purchase of renewable heating systems.***
- ***Enhanced training of installers***
- ***Minimum Energy Performance Standards (MEPS) for buildings.***
- ***A tax shift away from electricity, and towards fossil gas.***

Based on the responses to the questionnaire, and the additional information obtained from EPREL, we were able to allocate companies to four categories :

Leaders, Followers and Laggards.

And “The Dark Side”.



leaders

ABORA SOLAR, AERMEC, ARBONIA, BOOSTHEAT, CALPAK, CTA, ECOFOREST, ELECTROLUX, ENERBLUE, FISHER, FUJI, FUJITSU GENERAL, GREE, HAIER, HISENSE, INNOVA, INVENTOR, ITHO DAALDEROP, JANUS ENERGY, KRONOTERM, LENNOX, LG ELECTRONICS, MIDEA, MITSUBISHI ELECTRIC EUROPE, NIBE, OLIMPIA SPLENDID, OCHSNER, PANASONIC, PVG, QVANTUM ENERGI, ROTH WERKE, SINCLAIR, SAMSUNG, STIEBEL ELTRON, TERMO SHOP, TNG-AIR, TOYOTA, VIVAX

followers

GLEN DIMPLEX

laggards

ARISTON, ATLANTIC, BDR THERMEA, BOSCH, CARRIER, CLAGE, DAIKIN, DOMUSA TEKNIK, ELDOM, FERROLI, FONDITAL, HAJDU, HOVAL, IMMERGAS, PURMO GROUP, RINNAI, ROBUR, SIME, TESY, VAILLANT, VIESSMANN, WEISHAUPT

dark side

ENERTECH, HELIOTHERM, IDM ENERGIE, IRSAP, JOHNSON CONTROLS, KORADO, MICHL TECHNIK, OILON, RHEEM, THERMOPLUS, VIVRECO

Figure 9: ranking of companies

The ranking above shows good news, with over half of companies falling in the leaders categories. A closer look reveals further detail:

38 leaders

Thirty-eight (38) companies —over half of the companies within the scope of our research— qualified as "leaders", as compared to 19 last year. The greater number of leaders is due chiefly to our ability to use, for the first time, data from the EPREL database. Most leaders from last year repeat, but many are new. The leaders are mostly heat pump manufacturers, but there are also some producers of solar heating systems. They range from small SMEs to large multinationals. And they come from all corners of Europe —and beyond.

1 follower

One (1) company qualified as a follower in this year's edition of the report, compared to none last year. This company has pledged to stop by 2025 its sales of domestic boilers and water heaters that run entirely on fossil fuels.

22 laggards

Twenty-two (22) companies fall in the laggards category this year, as compared to four laggards last year. Again, the greater number of leaders responds to our ability to use EPREL for the first time. All of the laggards from last year's edition repeat, and we have identified 19 new companies that fall in the laggards category[40]. Our hope would be for these companies to commit to stopping sales of fossil-fuel boilers, so they can help transition the domestic heating market, and so they can be moved to the "followers" category of our ranking.

11 dark side

Eleven (11) companies (down from 26 last year, and 38 in the first edition) were ranked in this category. The reduced number of "darksiders" responds once again to our ability to use data from the EPREL database. The darksiders are members of well-known national and European industry associations. Despite that, they chose not to not to reply to our repeated requests for input, and they did not have the time/capacity to deal with the administrative burden of uploading their products data to EPREL. While this can be understood in light of them —but not all— being SMEs, this nonetheless undermines the value of the EPREL database, which is meant to provide info to consumers for comparing products.

The changes in the ranking between the 2022 and 2023 editions of our report are summarised in figure 10

[40] Centrotec, one of last year's laggards, was acquired by Ariston, who is itself categorised as a "laggard" in this 2023 edition of the report.

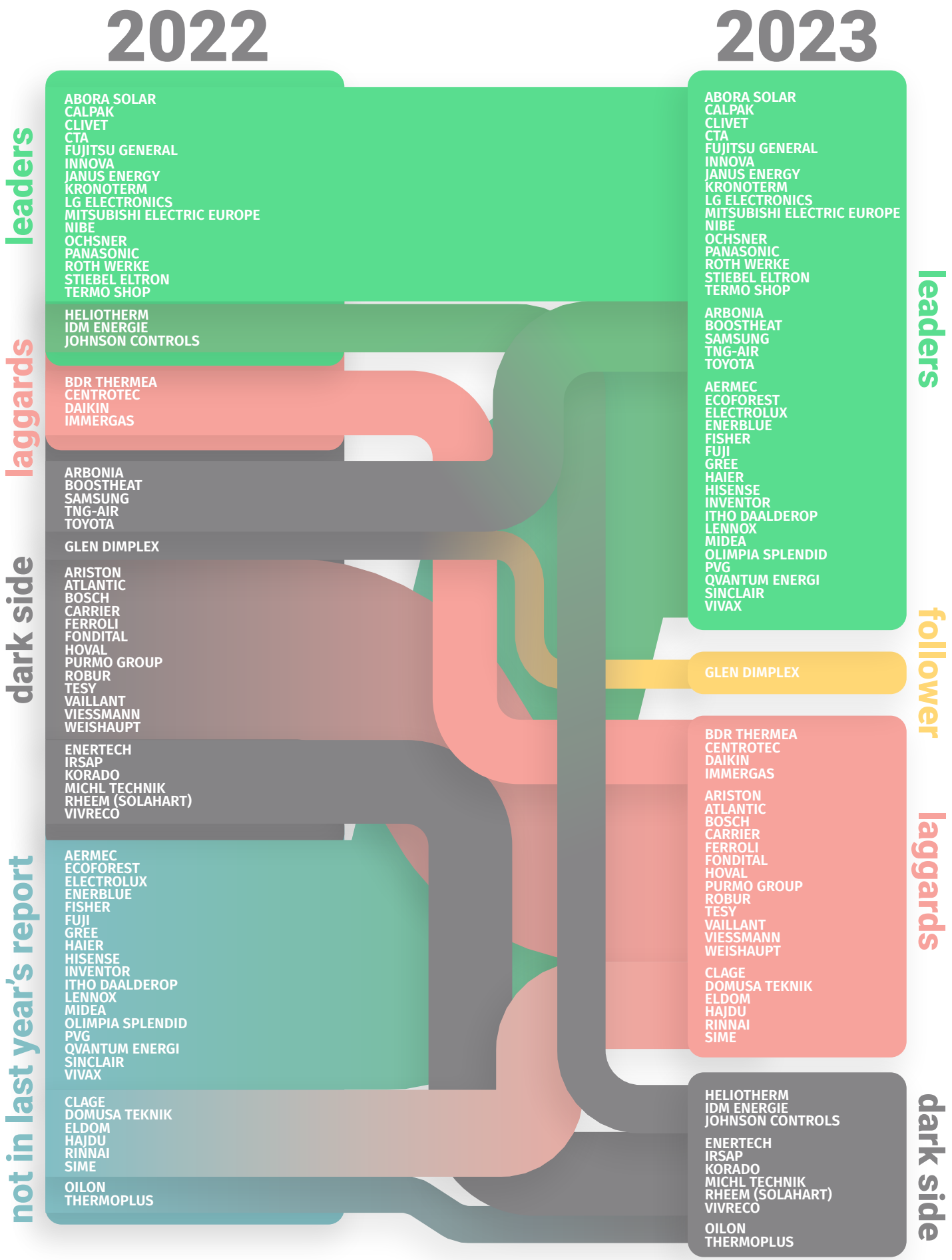


Figure 10: changes in the ranking of companies

CONCLUSIONS

Time is running out for the EU to decarbonise the heating sector. If fossil fuel boilers continue to be installed in European buildings beyond 2025, there is a risk that they will still be in place in 2050, when the EU should be climate-neutral. Heating decarbonisation is also key to reduce the EU's dependency on fossil gas, Russian but not only.

Our report shows that there is broad and increasing support from heating companies for a rapid ban on fossil fuel boilers and water heaters, as recently recommended by the International Energy Agency[43], and the European Commission[44].

Putting an end to subsidies for polluting and inefficient heating technologies is also uncontroversial, according to companies' input to the report. Shifting subsidies to climate-friendly technologies, such as electric heat pumps and solar thermal systems, would help Europe reduce their reliance on fossil fuel imports, and shield itself against their volatile prices.

The next few months provide plenty of room for policy makers to move in that direction, turning into concrete legislative action the laudable objectives of the REPower EU Plan, the EU's response to Russia's war on Ukraine. The discussions on the Fit-for-55 package of climate and energy measures will be on the table, as will be the revisions of the Ecodesign and Energy Labelling regulations for heating products.

Our report also shows that 38 industry leaders —large and small companies from across Europe— are already moving, ahead of legislation. Their portfolios consist exclusively of climate-friendly products such as heat pumps and solar thermal systems, and are thus compatible with European climate objectives. These technologies can bring the same or higher comfort than gas in all climates, according to a recent major survey[45].

A large number of companies are either dragging their feet on the heating decarbonisation transition (22 "laggards" still sell heating systems that run exclusively on fossil fuels), or do not publicly share information on the topic (11 companies in "the dark side" neither have their products on the EPREL database, nor did they reply to our repeated requests for information). This is in stark contrast with all the communication and branding about sustainability that can be observed across the industry, and remarkably in many ads and websites. Some of these companies argue that "decarbonised gases" will make today's fossil fuel boilers decarbonised, despite mounting evidence in the opposite direction.

Overall, there is room for improvement in terms of decarbonisation of the heating industry. That is why we plan to follow up in the coming years with updated editions of this report, to track how the heating industry is walking the decarbonisation talk; and to call on them for additional decarbonisation pledges. We will continue to rely on the European Product Database for Energy Labelling (EPREL) for our research, which should allow us to track companies' progress on the decarbonisation of their portfolios.

[43] International Energy Agency. "Net-zero by 2050: A Roadmap for the Global Energy Sector". May 2021

[44] COM(2022) 240 final. COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS. EU 'Save Energy'. 18 May 2022.

[45] EEB on behalf of the Coolproducts Campaign. "The Comfort Zone. European Users' Perception Of Renewable Heating Performance" February 2022.

COMPANY
FACTSHEETS[41]

[41] The following pages summarise manufacturers' answers to our survey. They are therefore based on the information that companies have reported. We have done our best to counter-check such information with publicly available information, but cannot guarantee that all information is 100% accurate.

ABORA SOLAR

Based in Spain

32 employees

Operates in

AT, BE, CH, DE, ES, FR, GR, IS, IT, NL, PL, PT, RO, SE, UK.

www.abora-solar.com

See ABORA SOLAR's full answer to our questionnaire

Products sold in Europe:

- ABORA SOLAR sells domestic hybrid solar panels (photovoltaic and thermal).
- ABORA SOLAR does not sell domestic, stand-alone boilers or water heaters that run exclusively on fossil fuels.
- ABORA SOLAR does not sell domestic direct electric heating systems.
- ABORA SOLAR does not have its products on EPREL.

Positions on EU policy:

- ABORA SOLAR supports an immediate end of subsidies in Europe for boilers and water heaters that run exclusively on fossil fuels.
- ABORA SOLAR supports a 2025 ban on the sales of boilers and water heaters that run exclusively on fossil fuels.

Back to ranking

BOOSTHEAT

Based in France

< 50 employees

Operates in CH, DE, FR

www.boostheat-group.com

See BOOSTHEAT's full answer to our questionnaire

Products sold in Europe:

- BOOSTHEAT sells gas heat pumps in Europe.
- BOOSTHEAT does not sell domestic, stand-alone boilers or water heaters that run exclusively on fossil fuels.
- BOOSTHEAT does not sell domestic direct electric heating products.
- BOOSTHEAT does not have its products on EPREL.

Positions on EU policy:

- BOOSTHEAT supports an end to subsidies for boilers and water heaters that run exclusively on fossil fuels, but "not for gas heat pumps equipped with boilers as back up".
- BOOSTHEAT supports a ban on the sales of boilers and water heaters that run exclusively on fossil fuels, but "not for gas heat pumps equipped with boilers as back up".

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CALPAK

Based in Greece

105 employees

Operates in

AT, BE, BG, CY, CZ, DE, EE, FR, GR, HU, IE, IT, NL, PT, RO

www.calpak.gr

See CALPAK's full answer to our questionnaire

Products sold in Europe:

- CALPAK sells domestic solar thermal systems in Europe.
- CALPAK does not sell domestic, stand-alone boilers or water heaters that run exclusively on fossil fuels.
- CALPAK does not have its products on EPREL.

Positions on EU policy:

- CALPAK supports an end to subsidies for boilers and water heaters that run exclusively on fossil fuels no later than 2027.
- CALPAK supports a ban on the sales of boilers and water heaters that run exclusively on fossil fuels no later than 2025.

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CTA

Based in Switzerland

240 employees

Operates in

AT, BE, CH, CZ, DE, ES, FR, IT, LI, LU, NL, NO, PL

www.cta.ch

See CTA's full answer to our questionnaire

Products sold in Europe:

- CTA sells electric heat pumps and hybrids (heat pump + boiler) in Europe.
- CTA does not sell domestic, stand-alone boilers or water heaters that run exclusively on fossil fuels.
- CTA does not sell domestic direct electric heating products.

Positions on EU policy:

- CTA supports an immediate end of subsidies for boilers and water heaters that run exclusively on fossil fuels.
- CTA supports an immediate ban on the sales of boilers and water heaters that run exclusively on fossil fuels.

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ECOFOREST

Based in Spain

180 employees

Operates in

AT, BE, BG, CH, CY, CZ, DK, DE, ES, EE, FI, FR, GR, HU, HR, IE, IT, LV, LI, LU, MT, NL, NO, PL, PT, RO, SE, SI, UK

www.ecoforest.com

See ECOFOREST's full answer to our questionnaire

Products sold in Europe:

- ECOFOREST sells domestic electric heat pumps and biomass boilers/stoves in Europe.
- ECOFOREST does not sell domestic, stand-alone boilers or water heaters that run exclusively on fossil fuels.
- ECOFOREST does not sell domestic direct electric heating systems.
- ECOFOREST does not have its products on EPREL.

Positions on EU policy:

- ECOFOREST supports an immediate end to subsidies for boilers and water heaters that run exclusively on fossil fuels.
- ECOFOREST supports an immediate ban on the sales of boilers and water heaters that run exclusively on fossil fuels.

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FUJITSU GENERAL

(FUJITSU GENERAL LIMITED GROUP)

Based in Japan

8,398 employees

Operates in

AT, BE, BG, CH, CY, CZ, DK, DE, ES, EE, FI, FR, GR, HU, HR, IE, IS, IT, LV, LI, LT, LU, MT, NL, NO, PL, PT, RO, SE, SI, SK, UK

www.fujitsu-general.com

See FUJITSU GENERAL's full answer to our questionnaire

Products sold in Europe:

- FUJITSU GENERAL sells domestic electric heat pumps in Europe.
- FUJITSU GENERAL does not sell domestic, stand-alone boilers or water heaters that run exclusively on fossil fuels.
- FUJITSU GENERAL does not sell domestic direct electric heating systems.

Positions on EU policy:

- FUJITSU GENERAL supports an immediate end of subsidies for boilers and water heaters that run exclusively on fossil fuels.
- FUJITSU GENERAL supports a 2025 ban on the sales of boilers and water heaters that run exclusively on fossil fuels.

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GLEN DIMPLEX

Based in Ireland

8,000 employees

Operates in

AT, BE, CH, CZ, DK, DE, ES, FI, FR, IE, IT, NL, NO, PL, SE, UK

www.glendimplex.de

See GLEN DIMPLEX's full answer to our questionnaire

Products sold in Europe:

- GLEN DIMPLEX sells in Europe: gas boilers and water heaters; heat convectors/fan coils; domestic electric radiators, boilers and water heaters; and electric heat pumps.
- GLEN DIMPLEX has pledged to stop by 2025 its sales of domestic boilers and water heaters that run exclusively on fossil fuels.

Positions on EU policy:

- GLEN DIMPLEX supports an immediate end of subsidies for boilers and water heaters that run exclusively on fossil fuels.
- GLEN DIMPLEX supports a 2025 ban on the sales of boilers and water heaters that run exclusively on fossil fuels.

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INNOVA

Based in Italy

260 employees

Operates in

AT, BE, BG, CH, CZ, DK, DE, EE, ES, FI, FR, GR, HR, HU, IT, LT, LV, NL, NO, PL, PT, SE, SI, SK, UK

www.innovaenergie.com

See INNOVA's full answer to our questionnaire

Products sold in Europe:

- INNOVA sells domestic electric heat pumps in Europe.
- INNOVA does not sell domestic, stand-alone boilers or water heaters that run exclusively on fossil fuels.
- INNOVA does not sell domestic direct electric heating systems.

Positions on EU policy:

- INNOVA supports an immediate end to subsidies for boilers and water heaters that run exclusively on fossil fuels.
- INNOVA supports an immediate ban on the sales of boilers and water heaters that run exclusively on fossil fuels.

JANUS ENERGY

Based in Italy

2 employees

Operates in BG, IT

www.janusenergy.it

See JANUS ENERGY's full answer to our questionnaire

Products sold in Europe:

- JANUS ENERGY sells domestic solar thermal systems in Europe.
- JANUS ENERGY does not sell domestic, stand-alone boilers or water heaters that run exclusively on fossil fuels.
- JANUS ENERGY does not sell domestic direct electric heating systems.
- JANUS ENERGY does not have its products on EPREL.

Positions on EU policy:

- JANUS ENERGY supports an immediate end of subsidies for boilers and water heaters that run on fossil fuels.
- It is unclear whether JANUS ENERGY supports a ban on the sales of boilers and water heaters that run exclusively on fossil fuels.

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KRONOTERM

Based in Slovenia

125 employees

Operates in

AT, CH, CZ, DK, DE, FR, HU, HR, IE, IT, NL, RO, SI, SK

www.kronoterm.com

See KRONOTERM's full answer to our questionnaire

Products sold in Europe:

- KRONOTERM sells domestic electric heat pumps in Europe.
- KRONOTERM does not sell domestic, stand-alone boilers or water heaters that run exclusively on fossil fuels.
- KRONOTERM does not sell domestic direct electric heating systems.

Positions on EU policy:

- KRONOTERM supports an immediate end of subsidies for boilers and water heaters that run exclusively on fossil fuels.
- KRONOTERM supports an immediate ban on the sales of boilers and water heaters that run exclusively on fossil fuels.

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LG ELECTRONICS

(LG CORPORATION)

Based in South Korea

50,000 employees

Operates in

AT, BE, BG, CH, CY, CZ, DK, DE, ES, EE, FI, FR, GR, HU, HR, IE, IS, IT, LV, LI, LT, LU, MT, NL, NO, PL, PT, RO, SE, SI, SK, UK

www.lg.com/global

See LG ELECTRONICS's full answer to our questionnaire

Products sold in Europe:

- LG ELECTRONICS sells domestic electric heat pumps in Europe.
- LG ELECTRONICS does not sell domestic, stand-alone boilers or water heaters that run exclusively on fossil fuels.
- LG ELECTRONICS does not sell domestic direct electric heating systems.

Positions on EU policy:

- LG ELECTRONICS supports an immediate end of subsidies for boilers and water heaters that run exclusively on fossil fuels.
- LG ELECTRONICS supports a ban on the sales of boilers and water heaters that run exclusively on fossil fuels "as early as it is determined to be feasible, provided that the socio-economic impacts on the EU population are properly evaluated and addressed".

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MITSUBISHI ELECTRIC EUROPE

(MITSUBISHI ELECTRIC CORPORATION)

Based in UK

138,700 employees

Operates in

AT, BE, BG, CH, CY, CZ, DK, DE, ES, EE, FI, FR, GR, HU, HR, IE, IS, IT, LV, LI, LT, LU, MT, NL, NO, PL, PT, RO, SE, SI, SK, UK

www.emea.mitsubishielectric.com

See MITSUBISHI ELECTRIC EUROPE's full answer to our questionnaire

Products sold in Europe:

- MITSUBISHI ELECTRIC EUROPE sells domestic electric heat pumps in Europe.
- MITSUBISHI ELECTRIC EUROPE does not sell domestic, stand-alone boilers or water heaters that run exclusively on fossil fuels.
- MITSUBISHI ELECTRIC EUROPE does not sell domestic direct electric heating systems.

Positions on EU policy:

- MITSUBISHI ELECTRIC EUROPE supports an immediate end of subsidies for boilers and water heaters that run exclusively on fossil fuels.
- MITSUBISHI ELECTRIC EUROPE supports a ban on the sales of boilers and water heaters that run exclusively on fossil fuels, between now and 2030.

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NIBE

Based in Sweden

20,000 employees

Operates in

AT, BE, BG, CH, CY, CZ, DK, DE, ES, EE, FI, FR, GR, HU, HR, IE, IS, IT, LV, LI, LT, LU, MT, NL, NO, PL, PT, RO, SE, SI, SK, UK

www.nibe.eu

See NIBE's full answer to our questionnaire

Products sold in Europe:

- NIBE sells in Europe: domestic electric boilers and water heaters; electric heat pumps; and packages of heat pump and solar.
- NIBE does not sell domestic, stand-alone boilers or water heaters that run exclusively on fossil fuels.

Positions on EU policy[42]:

- NIBE supports an immediate end of subsidies for boilers and water heaters that run exclusively on fossil fuels.
- NIBE supports an immediate ban on the sales of boilers and water heaters that run exclusively on fossil fuels.

[42] Although beyond the scope of our questionnaire, it is noteworthy that NIBE has publicly supported a quick rescaling of the energy label for space heaters.

OCHSNER

Based in Austria

500 employees

Operates in

AT, CH, DE, FR, IE, IT, LI, PL, UK

www.ochsner.com

See OCHSNER's full answer to our questionnaire

Products sold in Europe:

- OCHSNER sells domestic electric heat pumps in Europe.
- OCHSNER does not sell domestic, stand-alone boilers or water heaters that run exclusively on fossil fuels.
- OCHSNER does not sell domestic direct electric heating systems.

Positions on EU policy:

- OCHSNER supports an immediate end of subsidies for boilers and water heaters that run exclusively on fossil fuels.
- OCHSNER supports an immediate ban on the sales of boilers and water heaters that run exclusively on fossil fuels.

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PANASONIC MARKETING EUROPE

(PANASONIC CORPORATION)

Based in Japan

240,198 employees

Operates in

AT, BE, BG, CH, CY, CZ, DK, DE, ES, EE, FI, FR, GR, HU, HR, IE, IS, IT, LV, LI, LT, LU, MT, NL, NO, PL, PT, RO, SE, SI, SK, UK

www.panasonic.com/global

See PANASONIC's full answer to our questionnaire

Products sold in Europe:

- PANASONIC sells domestic electric heat pumps in Europe.
- PANASONIC does not sell domestic, stand-alone boilers or water heaters that run exclusively on fossil fuels.
- PANASONIC does not sell domestic direct electric heating systems.

Positions on EU policy:

- PANASONIC supports an immediate end of subsidies for boilers and water heaters that run exclusively on fossil fuels.
- PANASONIC supports an immediate ban on the sales of boilers and water heaters that run exclusively on fossil fuels.

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ROTH WERKE

Based in Germany

1,400 employees

Operates in

AT, BE, BG, CH, CY, CZ, DK, DE, ES, EE, FI, FR, GR, HU, HR, IE, IS, IT, LV, LT, LU, MT, NL, NO, PL, PT, RO, SE, SI, SK, UK

www.roth-industries.com

See ROTH WERKE's full answer to our questionnaire

Products sold in Europe:

- ROTH WERKE sells domestic electric heat pumps in Europe.
- ROTH WERKE does not sell domestic, stand-alone boilers or water heaters that run exclusively on fossil fuels.
- ROTH WERKE does not sell domestic direct electric heating systems.

Positions on EU policy:

- ROTH WERKE supports a 2027 end to subsidies for boilers and water heaters that run exclusively on fossil fuels.
- ROTH WERKE does not support a ban on the sales of boilers and water heaters that run on fossil fuels.

STIEBEL ELTRON

Based in Germany

4,200 employees

Operates in

AT, BE, BG, CH, CY, CZ, DK, DE, ES, EE, FI, FR, GR, HU, HR, IE, IS, IT, LV, LI, LT, LU, MT, NL, NO, PL, PT, RO, SE, SI, SK, UK.

www.stiebel-eltron.de

See STIEBEL ELTRON's full answer to our questionnaire

Products sold in Europe:

- STIEBEL ELTRON sells in Europe: domestic electric radiators, boilers and water heaters; and electric heat pumps.
- STIEBEL ELTRON does not sell domestic, stand-alone boilers or water heaters that run exclusively on fossil fuels.

Positions on EU policy:

- STIEBEL ELTRON supports an immediate end of subsidies for boilers and water heaters that run exclusively on fossil fuels.
- STIEBEL ELTRON supports a 2025 ban on the sales of boilers and water heaters that run exclusively on fossil fuels.

TERMO SHOP

Based in Slovenia

60 employees

Operates in

AT, BE, BG, CH, CY, CZ, DK, DE, ES, FR, GR, HR, LT, MT, NL, PL, RO, SI, SK, UK

www.termoshop.com

See TERMO SHOP's full answer to our questionnaire

Products sold in Europe:

- TERMO SHOP sells in Europe: domestic electric heat pumps; and packages of domestic electric heat pumps and solar.
- TERMO SHOP does not sell domestic, stand-alone boilers or water heaters that run exclusively on fossil fuels.
- TERMO SHOP does not sell domestic direct electric heating systems.
- TERMO SHOP does not have its products on EPREL.

Positions on EU policy:

- TERMO SHOP supports an immediate end of subsidies for boilers and water heaters that run exclusively on fossil fuels.
- TERMO SHOP supports a 2025 ban on the sales of boilers and water heaters that run exclusively on fossil fuels.

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TNG-AIR

Based in Czech Republic

Operates in
CZ, HU, IS, PL, SK

www.zatopime.cz

See TNG-AIR's full answer to our questionnaire

Products sold in Europe:

- TNG-AIR sells in Europe: domestic electric heat pumps; and packages of domestic electric heat pumps and solar.
- TNG-AIR does not sell domestic, stand-alone boilers or water heaters that run exclusively on fossil fuels.
- TNG-AIR does not sell domestic direct electric heating systems.
- TNG-AIR does not have its products on EPREL.

Positions on EU policy:

- TNG-AIR supports an immediate end of subsidies for boilers and water heaters that run exclusively on fossil fuels.
- TNG-AIR supports an immediate ban on the sales of boilers and water heaters that run exclusively on fossil fuels.

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European Heating Industry - www.ehi.eu

European Heat Pump Association - www.ehpa.org

European Partnership for Energy and the Environment - www.epeeglobal.org

Solar Heat Europe - http://solarheateurope.eu/

Company websites

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AERMEC - https://global.aermec.com/
ARBONIA - https://www.arbonia.com/
KERMI (ARBONIA) - https://www.kermi.com/
VASCO GROUP (ARBONIA) - https://vasco-group.eu/
ARISTON THERMO GROUP - https://www.aristonthermo.com/en/
CENTROTEC (ARISTON) - https://www.centrotec.de/
ATLANTIC - https://groupe-atlantic.fr/en
BDR THERMEA - https://www.bdrthermeagroup.com/
BOOSTHEAT - https://www.boostheat.fr/
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TOSHIBA (CARRIER) - https://www.toshiba-airconditioning.eu/
CLAGE - https://www.clage.com/
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DAIKIN EUROPE - https://www.daikin.eu/
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INVENTOR - https://www.inventorairconditioner.com/
IRSAP - https://www.irsap.com/
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JOHNSON CONTROLS - https://www.johnsoncontrols.com
KRONOTERM - https://kronoterm.com/
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LENNOX - https://www.lennoxemea.com/
LG ELECTRONICS - https://www.lg.com/global/
MICHL - http://michl.com/
MIDEA - https://www.midea.com/us/air-conditioners
CLIVET (MIDEA) - https://www.clivet.com/
MITSUBISHI ELECTRIC EUROPE - https://emea.mitsubishielectric.com/en/index.html
NIBE - https://www.nibe.eu/
OCHSNER - https://www.ochsner.com/de-at
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OLIMPIA SPLENDID - https://www.olimpiasplendid.com/
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PVG GROUP - https://pvg.eu/
RHEEM - https://www.rheem.com/
RINNAI - https://www.rinnai.com/
ROBUR - https://www.robur.com/
SAMSUNG - https://www.samsung.com/fr/
SIME - https://www.sime.it/
SINCLAIR - https://www.sinclair-world.com/
STIEBEL ELTRON - https://www.stiebel-eltron.de/
TESY - https://tesy.com/
THERMOPLUS - https://www.thermo-waermepumpen.de/
TERMO SHOP - https://www.termoshop.si/
TNG-AIR - https://www.zatopime.cz/en/
TOYOTA - https://www.toyota-global.com/
AISIN SEIKI (TOYOTA) - https://aisin.com/product/energy/
VAILLANT - https://www.vaillant.com/home/europe/
VIESSMANN - https://www.viessmann.de/
VIVAX - https://www.vivax.com/
VIVRECO - http://vivrecoheatpumps.com/
WEISHAUPT - https://www.weishaupt.de/