

Description:	<i>This info sheet presents the results of a survey on consumers of heating and cooling appliances, at residential, commercial and industrial level, across 5 EU countries. It aims at understanding the end-users' key decision-making factors influencing the choice for a heating appliance, and the perception of renewable heating alternatives, including solar thermal.</i>
Date:	20.04.2018
Authors:	Stefano Lambertucci (Solar Heat Europe)
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Introduction: FRONt Project

The EU-funded FRONt project (Fair Renewable Heating Options and Trade) aimed at promoting a level playing field for Renewable Heating and Cooling (RHC) in Europe, and at developing strategies for its greater deployment. It improved transparency about costs of heating and cooling options (using RHC or fossil fuels), RHC support schemes and end-user key decision factors. This knowledge has helped towards developing Strategic Policy Priorities for RHC to be used by public authorities in designing and implementing better support mechanisms. It also supported the industry in engaging more effectively their prospective clients. The project was run by eleven organisations from across the continent and was active from 01/04/14 until 31/12/16. It was funded by the European Commission's IEE programme.

Survey on Consumers Choices: Goals, Methodology, Sampling

Among the different deliverables of the project, FRONt launched a survey on consumers to identify end-users' decision-making factors when making choices about heating and cooling (H&C) systems in five countries covered by the project: the Netherlands, Poland, Portugal, Spain and the United Kingdom. The surveys, conducted in three different sub-sectors: residential, non-residential and industrial, did identify key purchasing criteria (KPC) across the whole sector. These surveys have addressed the heating and cooling sector as whole, not only renewable energy solutions (RES). A national survey was carried out in each country under the coordination of the respective energy agency. The number of interviews conducted at European level was 4,195 in the residential sector (homeowners only), 896 in the non-residential sector and 585 in the industrial sector. A common methodology among partners has been agreed, covering the sample definition and size (error, confidence level, sample balancing), the timing and form of the application, and the questions, which were based on studies on consumer behavior, external influences, energy labelling, Building Performance Certificates, etc.

General Results of the Survey

According to the results of surveys, the main energy source employed in all sectors is natural gas followed by electricity. There is also a considerable variability in the industrial sector. In general, the main information source is professionals' opinions. However, its influence is more relevant in the non-residential and industrial sectors than in the residential sector, where there are other important information sources such as the internet or relatives.

Regarding key purchasing criteria, total economic savings is the most important criterion for the residential sector while for the non-residential sector it is reliability, followed by total economic savings. The industrial sector shows the same pattern as the non-residential sector.

The non-residential sector presents the greatest level of RES technology awareness followed by the industrial sector, making the residential sector the least aware. Overall, the most supported RHC technology is solar thermal energy, particularly in the residential sector. The perception of RHC technologies is very similar in all sectors. It is considered to require high investment costs and to deliver high economic savings.

The main rejection reason for RES technologies in the residential sector is the high investment required, followed by structural changes involved and the need of approval by neighbors or superiors. In the non-residential sector, the latter has less weight than the two former. The main rejection factor in the industrial sector is, by far, the high investment required. The industrial sector is most willing to pay for RHC, compared to residential and non-residential sectors.

Survey Results for Solar Thermal Customers

Out of the 4195 people interviewed in the residential sector, 94 declared using a solar thermal system as heating option (2.25% of total sample). The majority (69) used it for domestic hot water. Natural gas and electricity are the dominant auxiliary systems. On average, the sub-sample of solar thermal consumers resulted with a slightly higher income and education than the overall sample, and consistently more living in detached buildings outside the city center.

The overall satisfaction with the solar thermal system is relatively high, with 83 out of 94 consumers expressing a high level of satisfaction. Comfort, fuel price, environmental friendliness and reliability and safety are the most quoted reasons of satisfaction. Professionals and sales agents are the two most important sources of information used to decide on the H&C appliance to buy for solar thermal consumers, with an increased relevance of media and consumers/environmental associations than the overall sample.

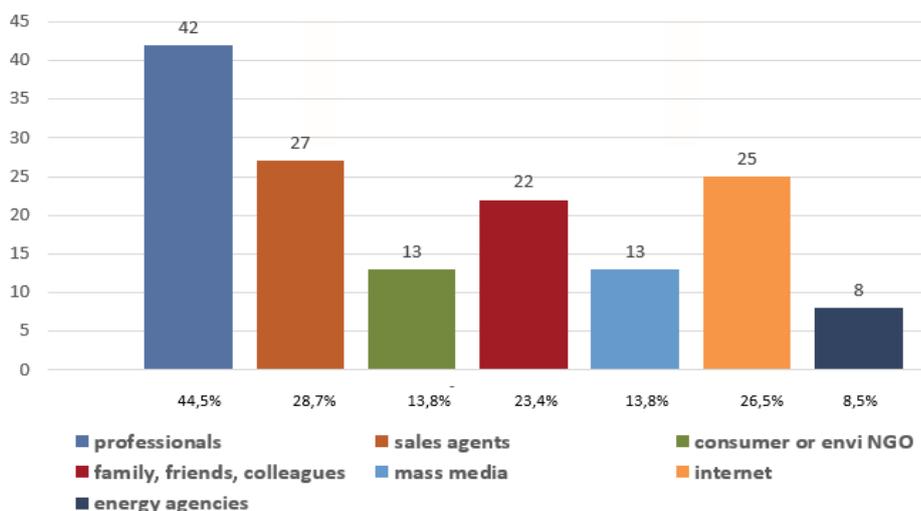


Fig 1. Information resources for solar thermal.

According to the key decision factors, the main reasons for buying a solar thermal system are savings and comfort. Comparing this with the overall results of the larger sample, two results are striking: the increase in percentage of people quoting environmental reasons as a KDF for solar thermal (+23% than overall sample) and the reliability of the brand (+26%).

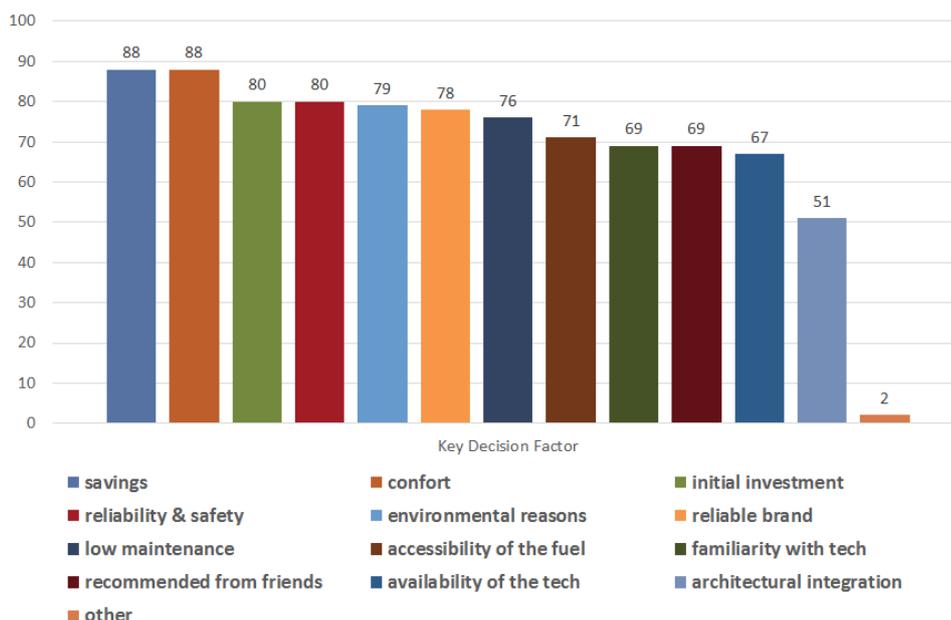


Fig 2. Key decision factors for solar thermal.

Conclusion

Analysing the results of the survey, we can find the following observations for solar thermal consumers: Solar Thermal is less deployed in city centres and in non-detached houses, it is bought by slightly higher income and higher education people, mostly for domestic hot water with gas as auxiliary space heater. Professionals and sales agents are the main information sources. Still, the vast majority of solar thermal owners is unaware of solar thermal uses for cooling. The technology is perceived as reliable, safe, providing high level of comfort and with a reasonable initial investment. Comfort, fuel price, environmental friendliness and reliability & safety are the top reasons for consumers satisfaction with their solar systems. Environmental matters are very important for solar thermal buyers, while incentives do also play an important role. Finally, the reliability of the solar thermal brand matters significantly for consumers.

References

“European report on end user decision making factors for Heating and Cooling systems”, FRONT Project, <http://www.front-rhc.eu/library/#market>