

# REPORT ON THE WORKSHOP WITH CONSUMER ORGANISATIONS ON THE HEAT PUMP MARKET

**FEBRUARY 2024**



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# ABOUT THE PROJECT

Consumers Leading the EU's Energy Ambition Response through uptake of Heat Pumps (CLEAR-HP) is an ambitious adaptation of a tried-and-tested methodology, designed and developed to address consumers' needs, specifically in the adoption of heat pumps for space heating, cooling and domestic hot water production.

The **overall objective** is to facilitate consumers' access to heat pump products by accompanying consumers throughout the whole purchasing journey, and by addressing financial and regulatory barriers.

The **specific objectives** are:

1. Consumer awareness and trust in heat pump products and available subsidies is increased and more than 40,000 consumers are ready to act and change their behaviour.
2. More qualified and skilled installers of heat pumps are available to consumers at national level.
3. Consumer investments in heat pump products increase.
4. Regulatory frameworks and financing schemes for easier adoption of heat pump products are simplified and more accessible for consumers.

Through the provision of trusted information, collective purchase schemes, an improved regulatory framework, and better access to qualified installers, CLEAR-HP will facilitate consumers' access to household renewables at an affordable price, thus allowing consumers to improve the energy performance and comfort of their homes and to reduce their energy bills in the long term.

The project activities cover [7 target countries](#), Belgium, Bulgaria, Italy, Portugal, Slovakia, Slovenia and Spain, where independent national consumer organisations are supported by BEUC, The European Consumer Organisation, the International Consumer Research & Testing (ICRT) and the European Heat Pump Association (EHPA).

|                            |  |
|----------------------------|--|
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| <b>Submission Date</b>     | 16/02/2024   |
| <b>Author</b>              | Nicole Bernefeld & Sílvia Gomes da Silva (ICRT GmbH)                       |
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# INTRODUCTION

The Work Package 2 (WP2) will provide the underpinning for WP4, WP5 and WP6 by **identifying and testing relevant heat pump** products in the target Member States (Belgium - TA, Bulgaria - BNAAC, Italy - AC, Portugal - DECO, Slovakia - SOS, Slovenia - ZPS and Spain - OCU).

The sub-objectives of WP2 include:

1. Market data gathered on different kinds of heat pumps available in the target countries.
2. Project partners to be up to date on heat pumps and their national markets.
3. Heat pumps for collective purchases to be identified, purchased in store, and laboratory tested.
4. Results to be interpreted from a consumer perspective.

This ***Report on the workshop with consumer organisations on the heat pump market*** (Deliverable D2.2), provides an overview of the Workshop on the heat pump market organised for the CLEAR-HP partners and consumer organisations that are members of ICRT with the aim of sharing best practice, getting more familiar with the heat pump market and ICRT testing procedure and learn about market specifics and tools and consult with experts.

The workshop was organised by ICRT and was held virtual on 22<sup>nd</sup> & 23<sup>rd</sup> January 2024. 35-40 participants joined the workshop including external speakers from the testing laboratory and EHPA.

Brief summaries of all presentations are given below in the next sections.

# DAY 1 – 22<sup>ND</sup> JANUARY 2024

Participants<sup>1</sup>: Aissam Haddad, Alessandra Rivolta, Anthony Lee, Antonieta Duarte, Barbara Primc, Boštjan Okorn, Christiane Boethcher, Carina Isabel Osorio, Cayetana Crespo, Christiaan Doolaard, Christina Woodger, Dan Stefanica, Diogo Gomes, Els Van Crombruggen, Elsa Agante, Fabio Villa, Louise Sayers, Luisa Villa, Mariana Simões, Martina Battocchio, Nicole Bernefeld, Olivier Lesage, Ozkan Calisir, Paco Tomé, Petar Georgiev, Petra Vargová, Philippe Mercier, Robert Malík, Ruth Sanchez, Sílvia Gomes da Silva, Simona Lištiaková, Stefano Casiraghi, Steph Kipling, Tea Žnidaršič, Yvo Verschoor.  
Additionally, 3 laboratory representatives joined the meeting.

The first day focused on air-to-air heat pump technology with general in-depth presentations on the market research and testing process of the ICRT air conditioner test (air-to-air), knowledge sharing on previous publications and the use of the ICRT results in a purchase campaign.

## MEET & GREET AND ICEBREAKER

Nicole Bernefeld (Senior Project Manager, ICRT) welcomed all participants to the ICRT CLEAR-HP Market Research & Testing Workshop. All participants introduced themselves in a quick roundtable.

## INTRODUCTION AND AIM OF THE WORKSHOP

Presented by Nicole Bernefeld (ICRT). The main objective of the workshop is to familiarise participants with the HP technology, the market and testing procedures and to learn and share knowledge from other colleagues and external stakeholders.

The first day of the workshop focused on the air-to-air heat pump technology, including presentations on the ICRT Air Conditioning testing and market research procedures and the use of the results in a purchasing campaign. The second day focused on air-to-water heat pump technology with general in-depth presentations on the market research and testing process of the ICRT heat pump test (air-to-water), knowledge sharing on previous publications and the use of the ICRT results in a purchase campaign.

## INTRODUCTION OF EU FUNDED LIFE PROJECT: CLEAR-HP

Nicole Bernefeld (ICRT) introduced the CLEAR-HP project, designed to encourage the widespread adoption of heat pumps among consumers across seven European countries. The project's goals encompass involving over 40,000 consumers in collective purchase campaigns for heat pumps, triggering 3.5 million euros

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<sup>1</sup> The total count of attendees is 38 people for day 2.

investments toward sustainable energy technologies, producing 3.644 gigawatt hours of sustainable energy, and organizing workshops to educate 1,370 consumers in seven target countries about heat pump technologies and available financing options. Furthermore, the project entails training heat pump installers and retailers.

The project is coordinated by BEUC, and ICRT leads one of the Work Packages which involves 7 partners and focuses on testing and market research. It is funded mostly by the EU, with a budget exceeding two million euros, running for 34 months starting in September 2023.

Key activities include providing information to consumers about heat pump availability and quality, analysing financing opportunities, developing partnerships, launching collective purchase schemes, conducting workshops for installers and retailers, and communicating with consumers.

The project also entails market research and testing, with funding allocated for testing various heat pump models. The testing schedule is planned to start in Q2 and Q3 for air and water heat pumps, respectively.

## PRESENTATION & INTRODUCTION OF EHPA

Dan Stefanica (EHPA) introduced EHPA to the other ICRT members and gave insights into the growth and manufacturing of the heat pump market, product types, market trends and specifications.

Key takeaways:

- Heat Pump manufacturing happens across Europe
- The sale of heat pumps in 2021 and 2022 had a big jump in sales
- EHPA forecasts that HP sales in 2024 /2025 will not be as high as in 2022/2023 (39%). The high sales figures in 2022/2023 were very specific due to the dependence on Russian gas and the start of subsidies and political measures. For 2024/2025, sales figures are expected to remain significant in the future as manufacturers invest in more capacity. Estimated sales is approx. + 10-11% in 2024
- Air- to-Water HP had the highest increase in sales
- France, Italy and Germany have the highest number of heat pumps compared to other European countries due to subsidies. Nordic countries have their own national resources. In the future, the heating demand will go down and more demand for cooling is expected.
- HP technology for heating is more recognised in politics to become independent of Russian gas.
- Heat pump accelerator actions: Make them more affordable, make them more accessible to consumers, upskill installers and retailers.
- Manufacturers must double their capacities, which is being demanded by politicians.
- EHPAs support any projects using HP technology and help with their data expertise and manufacturer network when needed.
- The CLEAR-HP project has synergy effects with [HP Reno project](#).
- Main EHPA events were shared, and participants are welcome to join these if interested.
- EHPA also has data and some manufacturers within their network who specialise in HP technology for multi-family buildings. EHPA is happy to share contact and data if countries are interested.

EHPA cannot provide market data for all European countries as they do not work directly with installers and retailers but with manufacturers. If EHPA does not have data for a specific European country, they

recommend contacting the national HP association, which also has data from installers & retailers. EHPA supports the national HP associations and provides a point of contact for capacity building and to obtain all manufacturer contacts and models.

## PRESENTATION FROM IPI

During the presentation, a representative from IPI focused on air-to-air air conditioning, highlighting their extensive experience in conducting both technical testing and market research, including consumer testing.

Air conditioning has been a primary testing area for IPI since 2005, a period during which they have continually expanded their capacity and expertise. Their collaboration with ICRT since 2013 has further enriched their testing capabilities, allowing them to conduct comprehensive evaluations of air conditioning units.

One notable aspect discussed was the distinction between air conditioning, typically used for single-room cooling or heating, and heat pumps, which are designed for whole-house heating and cooling. This underscores the importance of understanding the specific requirements and functionalities of different HVAC (Heating, Ventilation, and Air Conditioning) systems.

IPI mentioned that durability tests are not currently within their scope but are planned. This aligns with the ongoing evolution and expansion of their testing programs to address emerging industry needs and consumer demands.

The presentation emphasised key considerations such as barrier-free operation for user convenience and the importance of avoiding cyclic behaviour for optimal energy efficiency. These factors resonate with their expertise in evaluating product usability and energy efficiency standards, which are essential in guiding product development and regulatory compliance efforts.

There was also discussion regarding potential future trends in air conditioning models, including the emergence of propane as a refrigerant. This reflects the dynamic nature of the HVAC industry, where technological advancements and environmental considerations drive innovation and change.

Efficiency labels were highlighted as needing updating due to the disappearance of Class A and A+ models in testing, prompting considerations for future adjustments. This aligns with their experience in navigating regulatory frameworks and ensuring compliance with evolving industry standards.

During the discussion, there was a consensus on the importance of balancing heating/cooling speed with energy usage, acknowledging the potential contradictions inherent in air conditioning features.

Overall, the insights shared during the presentation underscore the multidimensional nature of air conditioning testing and the ongoing efforts to enhance efficiency, usability, and sustainability in HVAC systems.

# PRESENTATION FROM ICRT AIR CONDITIONER PROJECT

## a. Market Research

The Senior Market Researcher (SMR), Antonieta Duarte, gave an overview of the different types of air conditioners and explained the scope of the current ICRT air conditioner test. The defined scope is Wall mounted mono split air conditioners with inverted systems and cooling capacity near 2,5 Kw (9000 BTU) or 3,5 Kw (12000 BTU). The test programme has been recently updated and there is a new project number and brand list available on ICRT Product Tracker and Project Link (IC24701). Previous tested models are not comparable to the new tested models. Tips were given on how to identify similar models and Antonieta explained how the working process on Product Tracker (PT) works.

It is important to contact manufacturers to obtain market information on new models launched and models to be withdrawn from the market. Each organisation should also review the product catalogues, which are usually published at the beginning of the year. Each organisation must propose models for the brand list on PT and express interest in other models from other organisations.

For air conditioners, there are few similarities, i.e. if the colour is different (identical model) or additional features (similar), mainly with or without Wi-Fi function. Antonieta can help to obtain international market information from manufacturers if there is no national manufacturer contact established. However, national organisations should cross-check the information provided with national contacts. The lab has the capacity to test 40 models until the end of 2024, starting in March on a monthly basis, and one sample per model is required. The cost of the tests is around 3750 euros/model.

## b. ICRT Air Conditioner Test

The presentation, led by Elsa Agante (DECOPROTeste), provided an extensive overview of ICRT's air conditioner testing procedures, focusing on key considerations and changes in testing methodologies. It was disclosed that there would be one batch of testing per month, totalling 40 models per year. Results from these tests are shared with manufacturers, enabling them to anticipate publications from various organisations. Testing is scheduled to commence in February after renovations and program adjustments.

A significant highlight was the revision of the test program due to the introduction of new test chambers. This revision included changes in performance tests, incorporating inspections, convenience, noise levels, and safety checks. Notably, new parameters were introduced to address climate change, with testing now accounting for outdoor temperature extremes affecting cooling performance and extending to lower temperatures for heating evaluation.

The presentation also covered the scope of testing, specifically focusing on air-to-air air conditioners, particularly mono-split systems with one indoor and one outdoor unit. The testing process involves market



analysis, sample collection, laboratory testing, and result analysis. Manufacturers receive results monthly or per batch, allowing them to contest, if necessary, although this is rare.

To date, DECOPROTeste has published 56 models, with an acknowledgment of the typical need for professional installation in most countries. During the discussion, a correction regarding slide 9 was made, adjusting the temperature to  $-7^{\circ}\text{C}$ . A query about the meaning of "DCS" (data checking sheets) was addressed, and concerns were raised about the comparability of new results with previous models. Elsa confirmed that new results would not be directly comparable due to changes in testing methodology.

Consumer communication strategies were emphasised, with test results published on the organisation's website for consumers to compare models based on performance ratings. Additional articles and tips on installation and usage were provided to aid consumers in making informed decisions. Acknowledging customer concerns, including questions about energy consumption, the suitability of different technologies for heating, and the availability of specific models, the presentation underscored the need to continually update testing procedures to adapt to changing technologies and consumer needs. The organisation aims to provide comprehensive information and support throughout the purchasing process, ensuring transparency and consumer satisfaction.

## PRESENTATION: IMPACT OF THE CLEAR-X PURCHASE CAMPAIGN

Barbara Primc (ZPS) presented how the ICRT test results are used in the CLEAR-X project, what a purchase campaign is and what the goal and benefits are for consumers, as well as experiences and consumer reactions to previous purchase campaigns published in 2023.

Key takeaways:

- For HP products it is not only important to have a good quality product but also a good installation.
- Through a purchase campaign, consumer organisations can help consumers to easily purchase and install a quality RES device, independently tested by consumer organisations.
- ICRT test results are used not only to write articles for the magazine and website, but also to communicate with the media – savings calculations to highlight the benefits of buying products/devices with a good rating (press releases, graphics, flyers...).
- In the framework of the CLEAR-X project, ZPS prepared a manual on how to run a collective purchase campaign (CPC) and the main steps were presented at the workshop.

Nicole pointed out that it is important to select the models that are likely to achieve good test results, as these are the models that the organisations would recommend to the end user.

# DAY 2 – 23<sup>RD</sup> JANUARY 2024

**Participants<sup>2</sup>:** Aissam Haddad, Alessandra Rivolta, Antonieta Duarte, Barbara Primc, Boštjan Okorn, Carina Isabel Osorio, Cayetana Crespo, Christiaan Doolaard, Christina Woodger, Dan Stefanica, Diogo Gomes, Els Van Crombruggen, Elsa Agante, Eoin Kelly, Eric Bonneff, Fabio Villa, Louise Sayers, Luisa Villa, Mariana Simões, Martina Battocchio, Nicole Bernefeld, Olivier Lesage, Ozkan Calisir, Paco Tomé, Petra Vargová, Philippe Mercier, Ruth Sanchez, Sara Patrone, Sílvia Gomes da Silva, Simona Lištiakova, Stefano Casiraghi, Steph Kipling, Tea Žnidaršič, Toralf Hainsch, Yvo Verschoor.

## PRESENTATION: EHPA KEYMARK

During the presentation led by Tarik Bellahcene from EHPA, the focus was on the Keymark certification scheme, a voluntary initiative aimed at harmonising the European market through certification. Tarik emphasised that Keymark, as a third-party certification, when a heat pump product has proven compliance with the relevant European standards and the rules of the KEYMARK programme. Conformity assessment can be carried out by 11 selected accredited laboratories and Keymark certification can be granted by 11 selected certification bodies, ensuring geographical spread.

It was highlighted that while some countries have less regulation, impacting the necessity for Keymark certification, it doesn't imply rejection of certification. Communication about Keymark is transparent, aiming to instil consumer confidence in product quality.

Questions arose about the evaluation process for certification, with Tarik explaining categorization based on types and subtypes, each adhering to specific conditions and definitions. While past round-robin<sup>3</sup> tests were conducted among labs, current plans involve reinstating them in the future.

Addressing a query regarding the superiority of Keymark over other marks like NF<sup>4</sup>, Tarik explained that both certification schemes, NF certification and Keymark certification, assess the conformity of the certain standards and have therefore similar criteria.

Martina Battocchio from EHPA suggested organising a separate technical meeting for interested parties to delve deeper into technical aspects, with interested partners including Christiane Boettcher (Stiftung Warentest), Yvo Verschoor (Consumenten Bond), and Steph Kipling (Which?).

→ Keymark Website: <https://keymark.eu/en/products/heatpumps/heat-pumps>

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<sup>2</sup> The total count of attendees is 36 people for day 2.

<sup>3</sup> A round robin test or interlaboratory comparison (ILC) is a type of performance test for accredited calibration laboratories. It is a method of external quality assurance for laboratories and their measurement procedures.

<sup>4</sup> <https://evaluation.cstb.fr/en/certifications-products-services/mark/nf/>



# PRESENTATION: IMPACT OF THE CLEAR-HP PURCHASE CAMPAIGN

Petra Cakovska from SOS presented their experience with the HP air-water CPC, which they ran in 2023 using the first ICRT HP test results. SOS is a small organisation, and it has been a challenge to promote this complex technology to consumers, but it has been worth it. The challenge has been to communicate information for and to consumers.

The main purpose of a collective purchase campaign (CPC) is to offer tested from trustworthy installers at a guaranteed competitive price.

Some Slovakian consumers were sceptical about registering a CPC as it was very new, but SOS emphasised the benefits for consumers which are:

- 25% discount on the appliance - but the up-front price for the investment is still deterring some consumers;
- Providing a guarantee of the installation cost;
- No waiting times to get a HP installed considering the current high demand;
- The suppliers also appreciated the contracts with the consumers being managed via SOS.

Main challenges:

- Selecting a product with good results and clarify the kWh requirement per household;
- Evaluation of complex product group and communication of results to consumers;
- Timely delivery of test results;
- The HP performance depends on the climate zone in which a household is located.

The majority of consumers were satisfied with the CPC and found the information on tested HP very useful. In total 10 HP systems were installed in Slovakia through the CPS.

## PRESENTATION: ICRT HEAT PUMP PROJECT

### a. Market Research

During the online presentation led by Ozkan Calisir from UFC, various aspects of HP air-water testing, and market research were discussed. The test cost was estimated at around 5,000 Euro, and it was highlighted that heat pumps can also be utilised solely for producing hot water. Sales of heat pumps have notably increased in recent years, with France, Germany, and Italy being the prominent countries for their usage.

The importance of selecting the right model for a project and conducting thorough market research was emphasised, with contact with manufacturers being crucial for availability and launch dates. It was mentioned that no tests on hot boiler heat pumps have been conducted yet, and batch planning will be shared with partners once confirmed by the lab.



Issues such as transportation challenges and the shelf life of heat pumps were discussed. Despite innovations being relatively slow in the heat pump market, slight improvements in IoT<sup>5</sup> and software were noted. Specific products for heating, excluding sanitary hot water, were scheduled for testing in the batch.

There was an agreement to share batch planning with ICRT, and previous testing results can be utilised for publication by other ICRT partners. It was also noted that having CLEAR-HP models in a single batch improves invoicing efficiency, due to cost sharing processes within the organisation.

## b.ICRT Air-to-Water Heat pump test

Aissam Hadad (UFC), the supervising project officer (SPO) of the ICRT heat pump air-to-water test, presented a summary of the main aspects of the ICRT test programme, the different HP types, the evaluation and communication of the results to consumers.

### Key Takeaways:

- All heat pumps follow the physical law of thermodynamic for heating and cooling.
- The 4 main HP types are air-to-water, air-to-air, geothermal and water-to-water (the current lab can test water-to-water, but the appliances are very expensive and the installation even more expensive due to the drilling and groundwork and it depends whether your house is suitable for it.).
- The main chapters of the test programme are:
  - Assessment of COP (Coefficient of Performance)
  - Noise
  - Ease of Use
  - Environmental Impact
  - Installation (assessment by the lab)
  - Manual (assessment by the lab)
- The general evaluation with weightings of each test programme chapter is in the EvalDB and the different weightings can be adjusted by each partner, e.g. if they want to give more weight to a certain climate zone.
- The test programme was slightly amended in late 2023, i.e. maximum power conditions and IOT testing. However most other chapters are the same as the previous test programme. That means that previous tested models are still comparable.
- Other HP types that UFC is testing are:
  - Domestic hot water boiler (monobloc systems) will be publication in 03/2024
  - Portable air conditioner (monobloc)
- A link was shared to understand better the [HP system](#).
- A good inverter will not consume too much electricity. Between models there can be a difference of about 20% in electricity consumption. The water law should react the same in all European countries.
- In the UK manufacturer claim that the models are different compared to other European models due to a different water law

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<sup>5</sup> Internet of Things

- There was a discussion about the term “water law” or “weather compensation curve” which seems not to be a standard term in all countries. It was suggested to address this question to EHPA and ask them whether this is a common term for manufacturer and if so what the definition is.
- Manufacturers mentioned that there are different specifications and small different technical differences in the HP. The supervising market researcher from W will share more details as soon as she share more information as soon as she gets them from the manufacturer

## ANY OTHER BUSINESS

### a. Readers and manufacturer reactions from other partners publications

Presented by Christiane Boetcher (SW). The online presentation delved into discussions about reactions and feedback concerning heat pumps, acknowledging the diverse range of consumers with varying needs and knowledge levels. Christiane highlighted the importance of tailoring information to different consumer groups, such as technically inclined engineers, time-constrained families, inexperienced beginners, and retired homeowners with budget constraints. Various inquiries and concerns were raised by consumers, including questions about COP (coefficient of performance), the impact of flow temperature, the absence of lifetime information, and the oversight of the warm-up water function. Criticism was also directed towards the lack of mention of propane as a refrigerant due to its inflammable and toxic nature. Manufacturer comments regarding sound power levels and discrepancies between manufacturer claims and SW publications were noted. Additionally, challenges in purchasing and questions about test validity for certain brands were raised, indicating ongoing issues in the testing process. Eric Boneff (UFC) provided further insights, emphasising the significance of energy topics and the growing market for heat pumps. Despite challenges, the success of the publication and positive feedback underscored the importance of continued investigation and testing in this area.

### b. Wrap up & Closing

Nicole Bernefeld (ICRT) thanked all presenters and participants for all their contributions and insights about the complex heat pump market. It was great to have this exchange with all involved project partners and learn from experts about the heat Pump market and ICRT testing procedure. Nicole Bernefeld emphasised that it is important to establish a good manufacturer contact to get the best market data and select the most relevant models for testing. The supervisors from DECOPROTeste for the Air conditioner project and from UFC for the Heat pump project or the EHPA contacts can be consulted if partners need support in getting manufacturing contacts or information.

The next steps of the CLEAR-HP project is to create the market pictures by the participating CLEAR-HP partners and confirm the batch planning for the Air Conditioner and Heat pump CLEAR-HP test models. Partners can make use of previous CLEAR-X models and publish them free of charge.



ICRT will arrange a separate meeting session with the EHPA keymark steering committee to discuss more technical details of the heat pumps such as:

- Changes to the standards for heat pumps and air conditioners were published at the end of last year (2023). Could the EHPA spokesperson perhaps make a short slide on this? Significant changes and how do the significant changes possibly affect our test? Here are the standard numbers: DIN EN 14825:2023-10, DIN EN 12102-1:2023-11, DIN EN 14511- 1 to 4, DIN EN 16147:2023-12.
- Definition of “Water law” term.

# ANNEX 1 – WORKSHOP PROGRAMME



## Agenda

### CLEAR-HP Workshop on the heat pump market & tests

22nd & 23rd January 2024 - Virtual

| Day 1 – 22nd Jan – Air-to-Air Heat Pumps |       |          |   |
|--|-------|----------|---|
| Start                                    | End   | Duration | Topic   |
| 10:00                                    | 10:15 | 15       | Meet & Greet: Ice Braker  |
| 10:15                                    | 10:20 | 5        | Introduction & Aim of Workshop  |
| 10:20                                    | 10:25 | 5        | Introduction of EU funded LIFE project: CLEAR-HP  |
| 10:25                                    | 10:45 | 20       | Presentation & Introduction: <a href="#">EHPA</a><br>Heat pump market growth and manufacturing, product types, as well market tendencies and specifications   |
| 10:45                                    | 10:50 | 5        | Q&A   |
| 10:50                                    | 11:00 | 10       | Virtual Coffee Break  |
| 11:00                                    | 11:20 | 20       | Presentation: <a href="#">IPI</a><br>Lab presentation explaining the heat pump product, details of the ICRT Air-to-air testing procedure and product trends   |
| 11:20                                    | 11:30 | 10       | Q&A   |
| 11:30                                    | 11:35 | 5        | Virtual Coffee Break  |
| 11:35                                    | 11:55 | 20       | Presentation: ICRT Air Conditioner Project<br><br><b>Market Research</b><br>Air conditioners market in Europe, Overview and scope of the current ICRT AC project, Tips & tricks for MR, identification of similarities and planning   |
| 11:55                                    | 12:00 | 5        | Q&A   |
| 12:00                                    | 12:20 | 20       | <b>ICRT Air Conditioner Test</b><br><br>Summary of the main aspects of the test programme, queries from the manufactures, the evolution of test results, evaluation and communication of the results to consumers                     |
| 12:20                                    | 12:25 | 5        | Q&A   |
| 12:25                                    | 12:30 | 5        | Virtual Coffee Break  |
| 12:30                                    | 12:45 | 15       | Presentation: Impact of the CLEAR-HP Purchase Campaign<br><br>How are ICRT test results used in CLEAR project, what is a purchase campaign and why do we need it, experiences and consumer reactions with previous purchase campaigns |
| 12:45                                    | 12:55 | 10       | Q&A   |
| 12:55                                    | 13:00 | 5        | AOB & Closing of Day 1  |
| End of Day 1                             |       |          |   |



## Agenda

### CLEAR-HP Workshop on the heat pump market & tests

22nd & 23rd January 2024 - Virtual

| Day 2 – 23rd Jan Air-to-Water Heat Pumps                 |       |          |   |
|--|-------|----------|---|
| Start  | End   | Duration | Topic   |
| 10:00  | 10:05 | 5        | Welcome to the Workshop   |
| 10:05  | 10:25 | 20       | Presentation: <a href="#">EHPA Keymark</a><br>The HP Keymark certification – Process and Criteria   |
| 10:25  | 10:35 | 10       | Q&A   |
| 10:35  | 10:45 | 10       | Virtual Coffee Break  |
| 10:45  | 11:05 | 20       | Presentation: Impact on the CLEAR-HP Purchase Campaign<br><br>How are ICRT test results used in CLEAR project, what is a purchase campaign and why do we need it, experiences and consumer reactions with previous air-to-water purchase campaigns  |
| 11:05  | 11:15 | 10       | Q&A   |
| 11:15  | 11:25 | 10       | Virtual Coffee Break  |
| 11:25  | 11:45 | 20       | Presentation: ICRT Heat Pump Project<br><br><b>Market Research</b><br>Air-to-Water market in Europe, overview and scope of the current ICRT HP project, Tips & tricks for MR, identification of similarities, purchasing of test samples & transport and planning   |
| 11:45  | 11:50 | 5        | Q&A   |
| 11:50  | 12:15 | 25       | <b>ICRT Air-to-Water Heat Pump Test</b><br><br>Summary of the main aspects of the test programme, how is the lab testing done, test set up, what is a good and bad heat pump, reasoning for changing the test programme, queries from the manufactures, the evolution of test results, evaluation and communication of the results to consumers |
| 12:15  | 12:25 | 10       | Q&A   |
| 12:25  | 12:35 | 10       | <b>AOB</b><br><br>Readers and manufacturer reactions from other partners publications   |
| 12:35  | 12:45 | 10       | Virtual Coffee Break  |
| 12:45  | 13:00 | 15       | Wrap up & Closing<br><br>Main take aways, planning for CLEAR-HP, next Steps and What to look out for  |
| 13:00  |       |          |   |
| End of CLEAR HP Workshop on the heat pump market & tests |       |          |   |