

Invitation to the Industrial Workshop on

“Flexibilization and optimization of heat pump systems in existing residential buildings through secondary-side digitalization”

The focus for the restructuring of energy systems is increasingly shifting worldwide towards a more efficient use of energy and an intensified expansion and utilization of renewable energies. This leads to a reduction in greenhouse gas emissions from the energy sector and a decrease in dependence on fossil energy sources and their imports. This is also represented by the United Nations Sustainable Development Goal 7, which focuses on affordable and clean energy. Furthermore, the ongoing revolution in the introduction of digital technologies into all areas of life, including building operations, offers new opportunities to address the challenges ahead using intelligent methods.

The digital transformation of heat pump systems, anchored by robust data integration and real-time control, represents a pivotal step toward a more efficient and sustainable energy future. By blending advanced technological innovations with a rigorous assessment of economic, regulatory, and market factors, this project sets a new benchmark in energy system optimization.

Aim of the Workshop:

- To explore the role of digitalization as a key enabler of the green transition in heating systems.
- To examine the industry perspective on the role of digital applications and AI in optimizing heat pump operations.
- To promote knowledge exchange between stakeholders on the digital transformation of the heat pump and energy sector.

The Workshop is directed towards:

- Housing companies, project developers and building owners
- Other target groups for the workshop are:
 - Planners, installers (HVAC), and system providers
 - Actors from the energy supply business
 - Organizations involved in education, research, and academia

Date: Thursday, 24th September 2026, from 10.00 to 14.00

Address of the venue: Department of the Built Environment, Aalborg University
Copenhagen, A.C. Meyers Vænge 15, 2450 Copenhagen SV, Denmark.

- Building A, 3rd Floor, Room 2.3.044

General info for IEA EBC Annex 98: [Annex || IEA EBC](#)

Teams Link for online participation:

[IEA EBC 98: Industrial Workshop at AAU CPH](#)

Agenda

- 9:45 Coffee and testing of technical connections
- 10:00 **Opening:**
Welcome and Introduction to Aalborg University
(Samira Rahnema, Aalborg University, Denmark)
- 10:10 **Overview and background**
Presentation of the international cooperation activity on “Flexibilization and Optimization of Heat Pump Systems in Existing Residential Buildings through Secondary-Side Digitalization” – IEA EBC Annex 98
(Dietrich Schmidt, Fraunhofer IEE, Germany)
- 10:20 ***Data Integration and interoperability***
(Qian Wang, KTH, Sweden)
- 10:35 ***Interoperable data exchange platforms and standardized data models***
(Peter Hejno Gustafsson, Center Denmark, Denmark)
- 10:55 ***Model Creation and Optimization***
(Chris Caerts, Vito, Belgium)
- 11:10 ***Heat pump optimization in smart grids and energy communities***
(Morten Veis Donnerup, Neogrid, Denmark)
- 11:30 ***Case Studies, Best Practice Analysis***
(Clara Pineau, Fraunhofer ISE & Christopher Graf Fraunhofer IEE, Germany)
- 11:45 ***Aggregation of flexible loads: business models, legal aspects, and policy frameworks***
(Carsten Vammen, SCANGRID, Denmark)
- 12:05 **Open discussion on**
(Moderated by Dietrich Schmidt, Fraunhofer IEE, Germany)
- Barriers of technical equipment in heat pump operation. Where are technical limitations?
 - Business models?
 - Legal issues
 - User engagement
 - Use of AI – advances/challenges
- 12:55 **Short resume and closing**
(Samira Rahnema, Aalborg University, Denmark & Dietrich Schmidt, Fraunhofer IEE, Germany)
- 13:00 **Lunch**