

FREE LIVE WEBINAR

# **Pumping Up Europe's Energy Future: Heat Pump Trends, Policy & Innovation**



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**12 May, 2026**



**14.00-15.00 GMT**  
**15.00-16.00 CET**



# Pumping Up Europe's energy Future

AEE Ireland Webinar

Paul Kenny  
Director General - European Heat Pump Association

12 May 2026



# About EHPA

## Our vision:

In a fully decarbonised Europe, heat pump technologies are the number one heating and cooling solution. They are a central part of a renewable, sustainable and smart energy system.

More: [ehpa.org](http://ehpa.org)

## Founded in 2000

### 210+ members representing the entire value chain

- Heat pump and component manufacturers
- National associations
- Test labs
- Utilities and consultancies
- Research institutes and universities

### 30 countries

### International cooperation with

Comprehensive Economic Cooperation Agreement (CECA)

**International Energy Agency - Heat Pump Centre (IEA HPC)**

International Renewable Energy Agency (IRENA)

Heat Pump and Thermal Storage Centre of Japan (HPTCJ)

  
Av. de Cortenbergh  
120, 1000 Bruxelles,  
Belgium

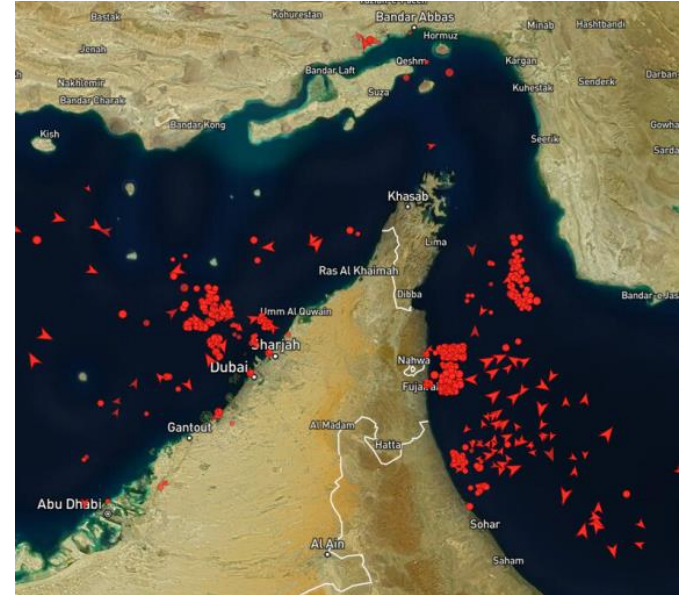


# Current Geopolitical situation

## Energy Security, Sovereignty, and Electrification

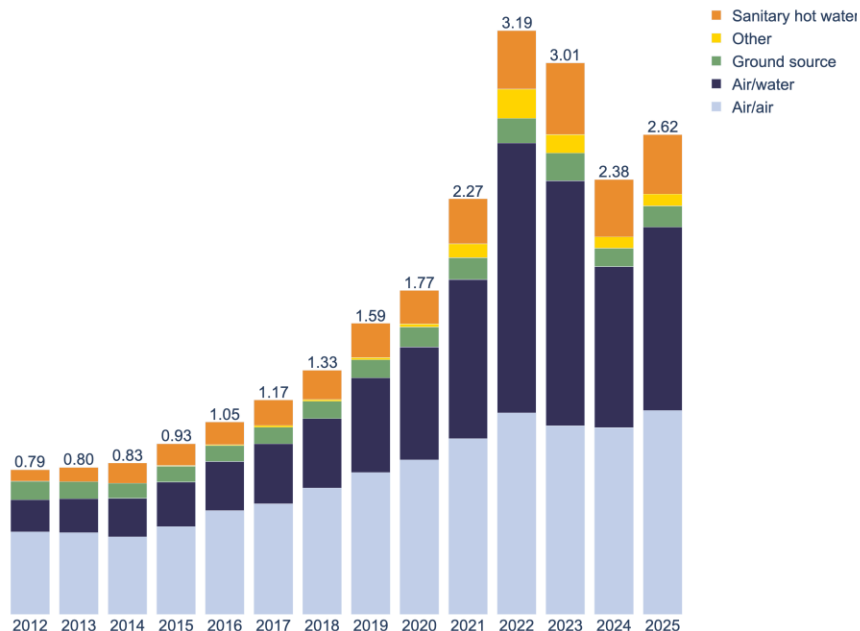
- Geopolitical energy vulnerability
- Accelerate electrification
- Strategic sovereignty and economy

Heating consumes nearly  
**50% of EU energy**



# Annual sales and heat pump stock as of end 2025

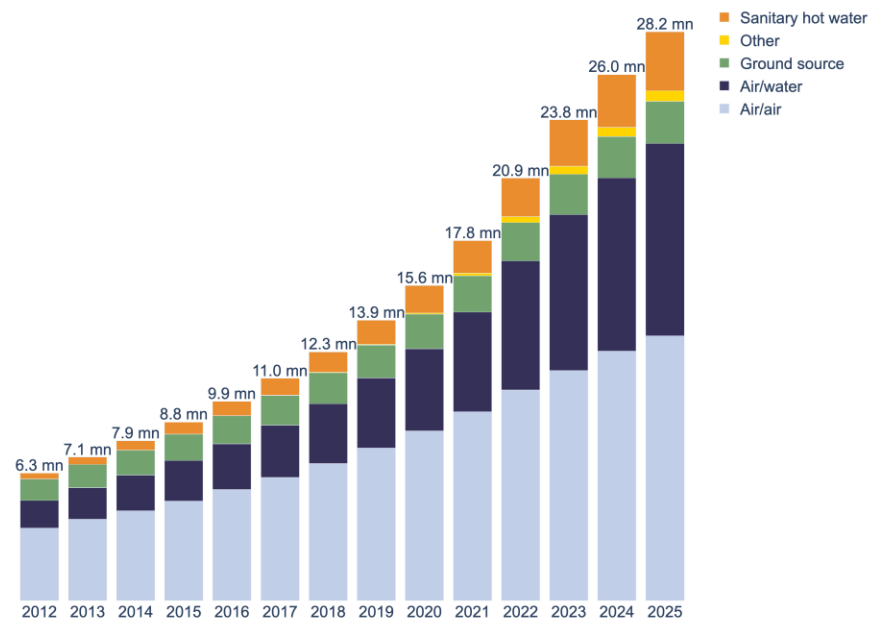
Annual sales of heat pumps in 16 European countries (millions)



Source: European Heat Pump Association  
Countries: AT, BE, CH, CZ, DE, DK, ES, FI, FR, IT, NL, NO, PL, PT, SE, UK



Annual stock of heat pumps in stock in 16 European countries

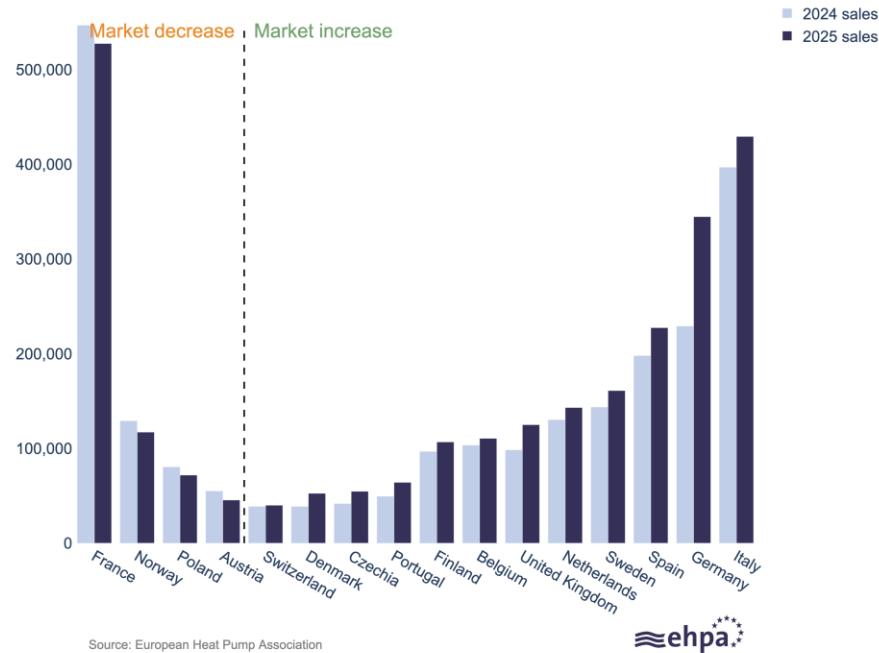


Source: European Heat Pump Association  
Countries: AT, BE, CH, CZ, DE, DK, ES, FI, FR, IT, NL, NO, PL, PT, SE, UK



# In 12 out of 16 European countries sales went up in 2025

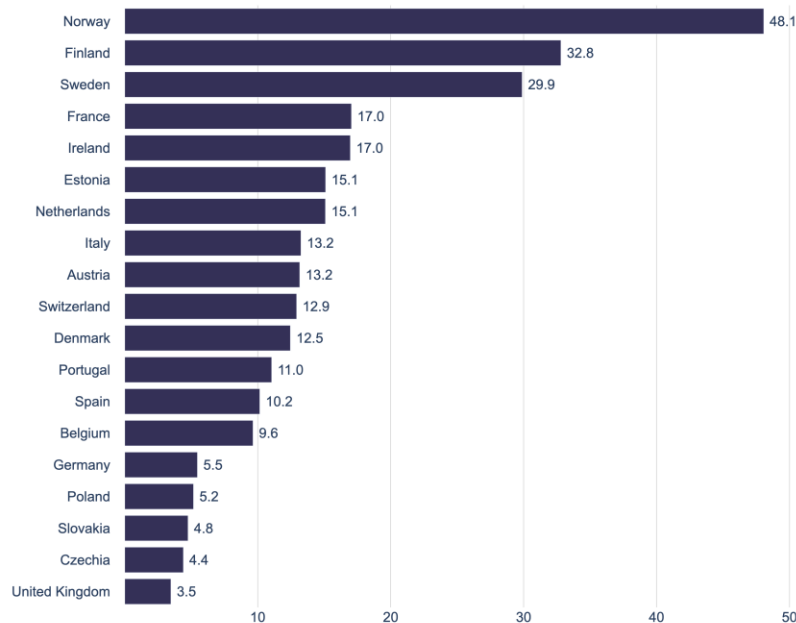
Heat pump sales comparison (2024 vs 2025)



# Residential conclusion

- New build rapidly closing out remaining fossil heating
- Scandinavia dominant market position
- Rapidly growing in most markets
- Key issues remain:
  - Business case (E/G ratio)
  - Mixed messaging & subsidy roller-coaster
  - Sustained narrative against heat pumps

Sales per 1,000 households in 2024, by country

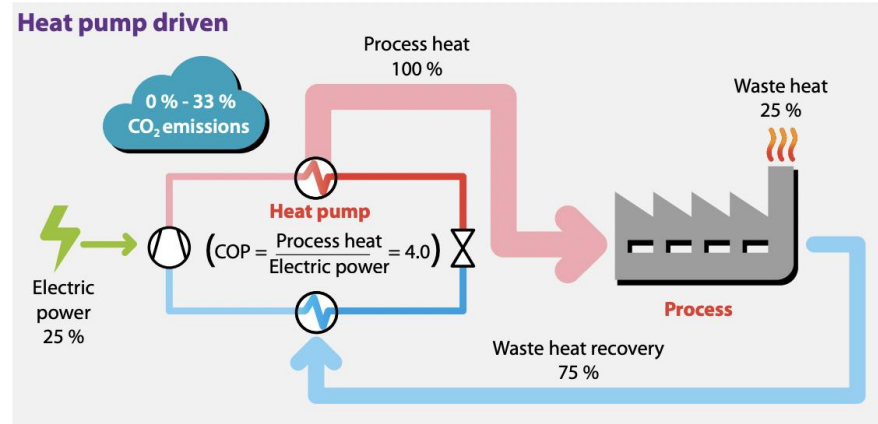
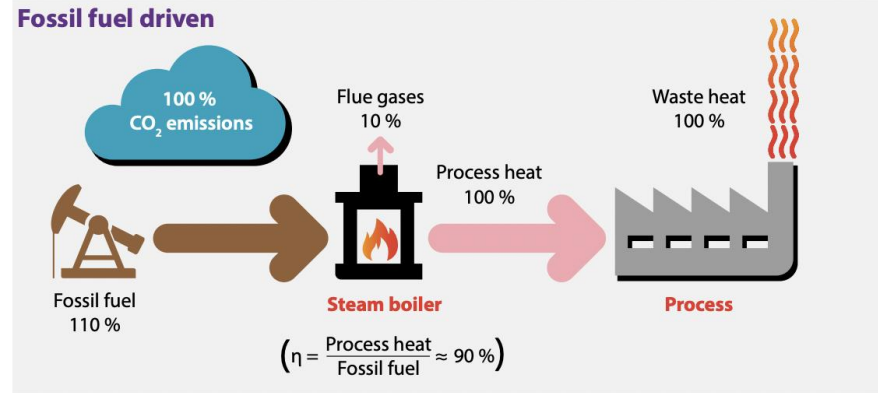




# Industrial heat pumps: the low hanging fruit to decarbonise Europe's industry

# Electrification with industrial heat pumps

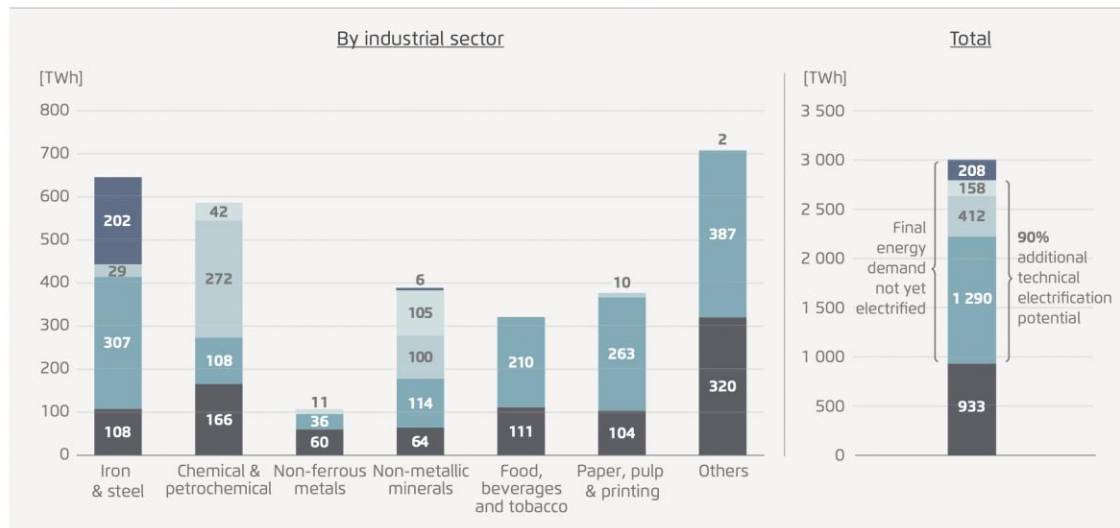
- + Efficiency
- + Energy security
- + Competitiveness



# Industrial heat: Focus on the easy to electrify segments

Technical potentials for direct electrification in the EU-27  
based on 2019 energy demands

→ Fig. 1



● Electricity demand in 2019 ● Electrification potential from 2025 ● Electrification potential from 2030  
● Electrification potential from 2035 ● Remaining fuel demand

Fraunhofer ISI (2024)

62% of the process heat demand could be electrified with existing technologies

37% <200 Degrees

**=> Need to start with the easy to abate sectors: low and medium heat**

# Commercial facilities have huge unseen waste

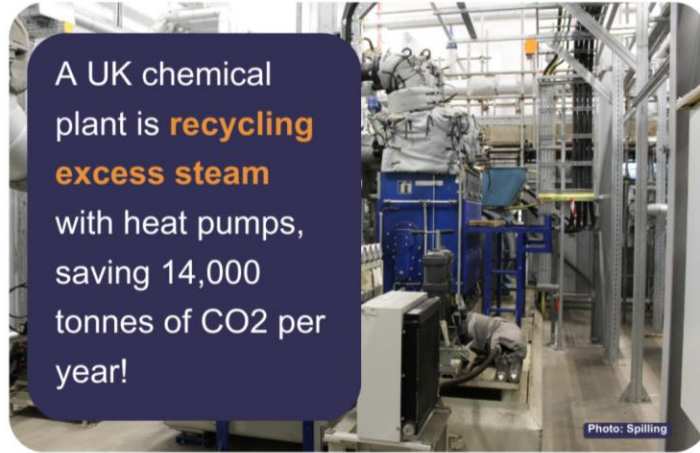
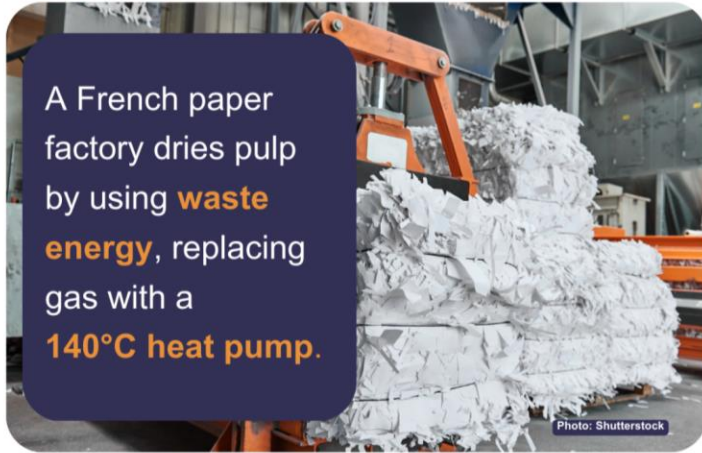


Typical Chiller 50-200kW  
Ubiquitous  
Usually located near heating plant  
Unseen waste



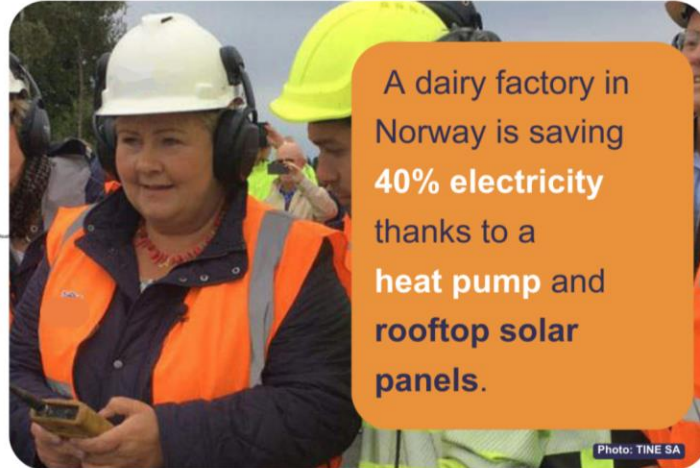
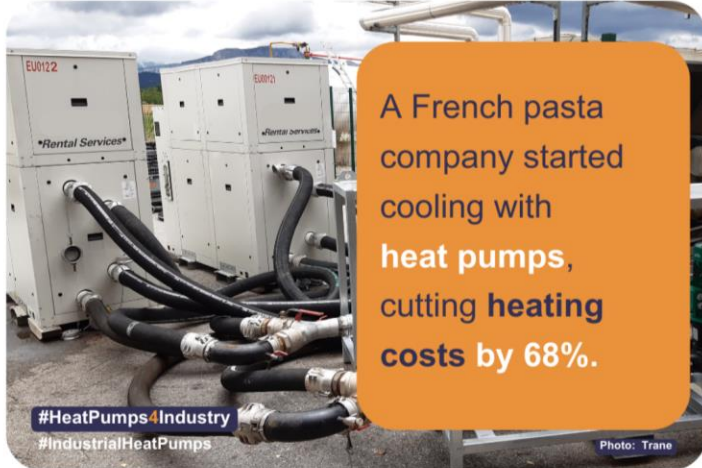
Spot the difference?  
Extra set of ports for hot water  
Recovers waste heat from cooling

Direction of market – 100% chillers in 2018; will be 100% HP in time



## Industrial heat pumps

Real, readily deployable and available today



More heat pump stories:  
<https://www.ehpa.org/heat-pump-stories/>

Collaboration with end-users: targeted meetings to raise awareness, share best practices & match making

CIRFS



EUROPEAN MAN-MADE  
FIBRES ASSOCIATION

Cepi RENEWABLE  
RECYCLED  
RESPONSIBLE  
EUROPEAN PAPER

P&G

ehpa Cepi

### THROUGH PUMPS TO PULP: GREENING THE PAPER INDUSTRY'S HEAT

A joint paper by the European Heat Pump Association (EHPA) and  
the Confederation of the European Paper Industries (Cepi)

Already today, heat pumps are enabling energy savings for many industries. They generate about 12% of their industrial energy demand in Europe, and help to lower industrial emissions across many sectors. A recent development is that commercially available large heat pumps and steam compressors can now heat up to 200°C, meeting the pulp and paper industry's needs. A joint EHPA-Cepi working group calculated potential energy savings in paper drying of more than 10%.



Cepi

ehpa

### HEAT PUMPS

#### Solutions for the decarbonisation of the pulp and paper industry

With the contribution of



The pulp and paper sector is committed to achieving climate neutrality in Europe by 2050. This requires reducing emissions in our production processes by the implementation of energy-efficient technologies and the effective use of heat-free energy sources.

Cepi's Energy Efficiency Forum (EEF) aims to accelerate the development and implementation of groundbreaking technologies and solutions to our sector, supported by the EHPA, which is the leading association for energy efficiency technologies, as well as providers of heat-free energy.

Among these technologies providing energy efficiency are heat pumps.

Heat pumps can significantly reduce the energy required for paper drying. The efficiency of a heat pump is defined by its Coefficient of Performance (COP), which is the relationship between the power input and the useful heat output of the heat pump or group of heat pumps.

A joint working group of EHPA and Cepi members calculated that COP of heat pumps is 3-5% energy savings is achievable both with standardised and engineered heat pumps, for the

combination of the heat pump, the steam compressor and an improved paper production process. Close cooperation between suppliers of paper machines and of heat pumps can lead to energy reduction with heat pumps in the highly demanding tissue production processes. The paper describes how:

| Year                           | 2020 | 2025 | 2030 | 2035 | 2040 | 2045 | 2050 |
|--------------------------------|------|------|------|------|------|------|------|
| CO <sub>2</sub> emissions (Mt) | 1.0  | 0.8  | 0.6  | 0.4  | 0.2  | 0.1  | 0.0  |
| Energy efficiency (kWh/t)      | 1.0  | 1.2  | 1.4  | 1.6  | 1.8  | 2.0  | 2.2  |
| Energy savings (kWh/t)         | 0.0  | 0.2  | 0.4  | 0.6  | 0.8  | 1.0  | 1.2  |
| Energy savings (%)             | 0.0  | 2.0  | 4.0  | 6.0  | 8.0  | 10.0 | 12.0 |

Source: EHPA and Cepi

FOODDRINK  
EUROPE

Uisce  
Éireann  
Irish Water

cefic

# Heat Pumps in Shrimp Cooking

## CONCEPTUALIZATION OF HEAT PUMP INTEGRATION INTO THE SHRIMP COOKING PROCESS

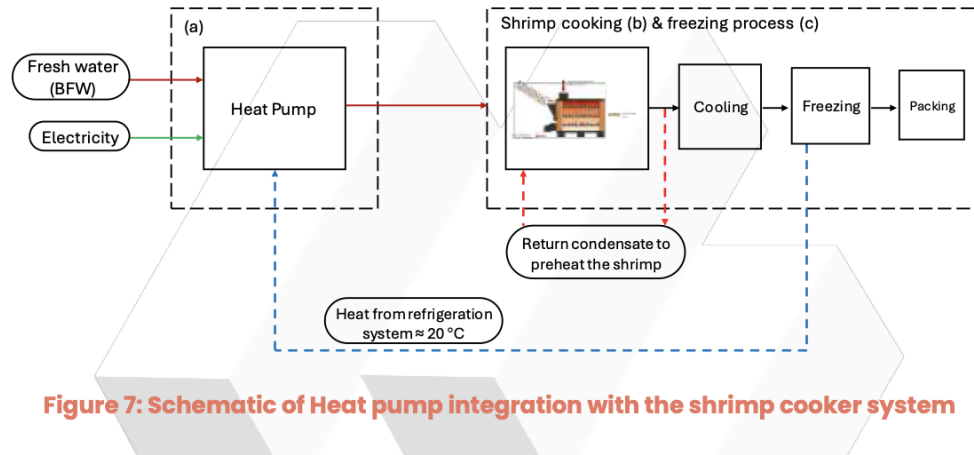
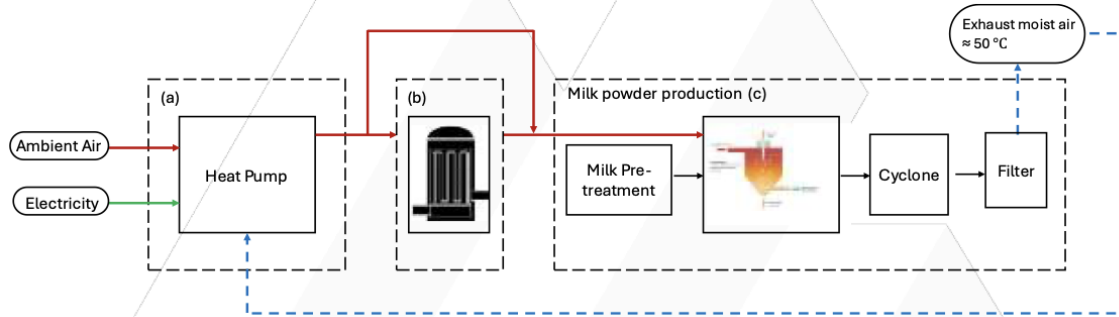


Figure 7: Schematic of Heat pump integration with the shrimp cooker system



# SPIRIT Report – Heat Pumps Milk Spray Drying

## HEAT PUMPS CAN BE INTEGRATED INTO THE SPRAY DRYING PROCESS

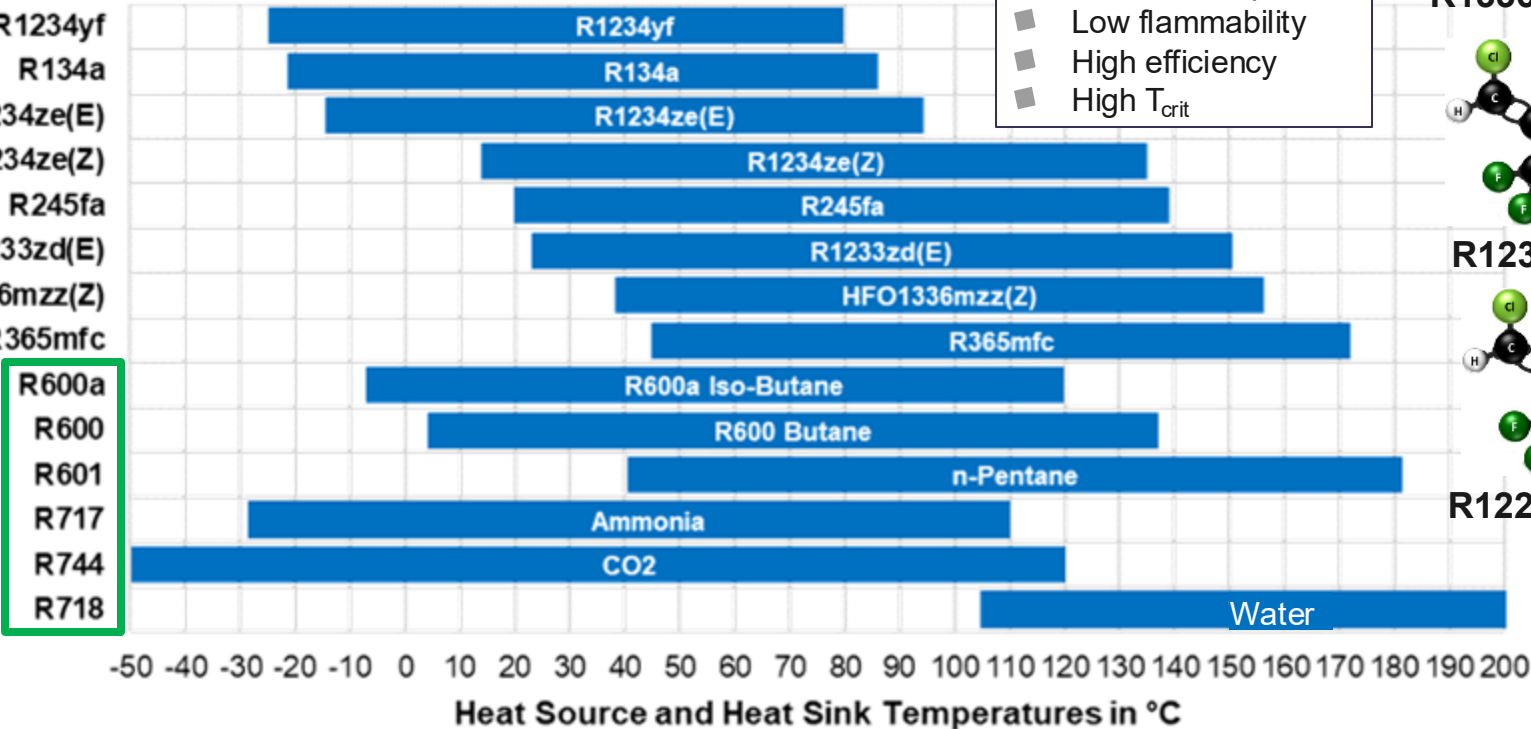


**Figure 2: Schematic of Heat pump integration with spray dryer system**

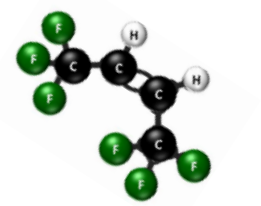
# Commercial High-Temperature Heat Pumps for Supply Temperatures > 100 °C

HFO R1234yf  
HFC R134a  
HFO R1234ze(E)  
HFO R1234ze(Z)  
HFC R245fa  
HCFO R1233zd(E)  
HFO R1336mzz(Z)  
HFC R365mfc

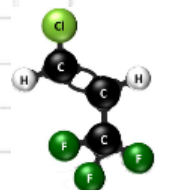
Natural Refrigerants



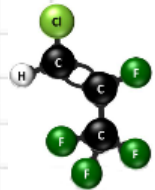
- Selection criteria :**
- Low GWP
  - Short atm. lifetime
  - No ozone depletion
  - Low flammability
  - High efficiency
  - High T<sub>crit</sub>



R1336mzz(Z)

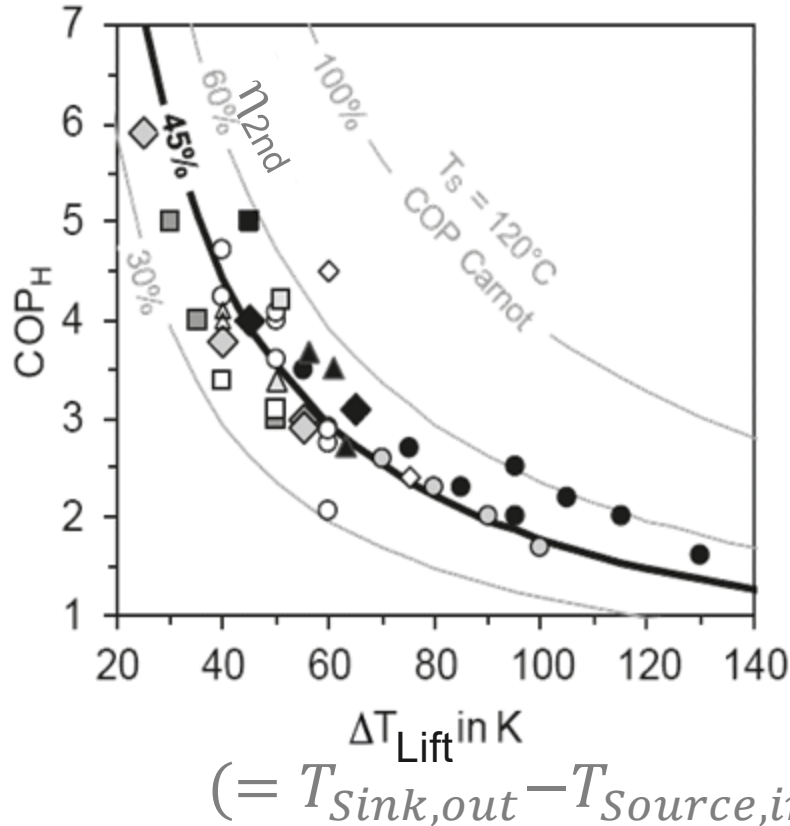


R1233zd(E)



R1224yd(Z)

# Efficiency Vs Direct Electric



Main drivers of economics:

- Process integration costs
- Electricity to gas (oil) price ratio
- Thermodynamic lift required (waste heat availability)
- Scale/ usage rates

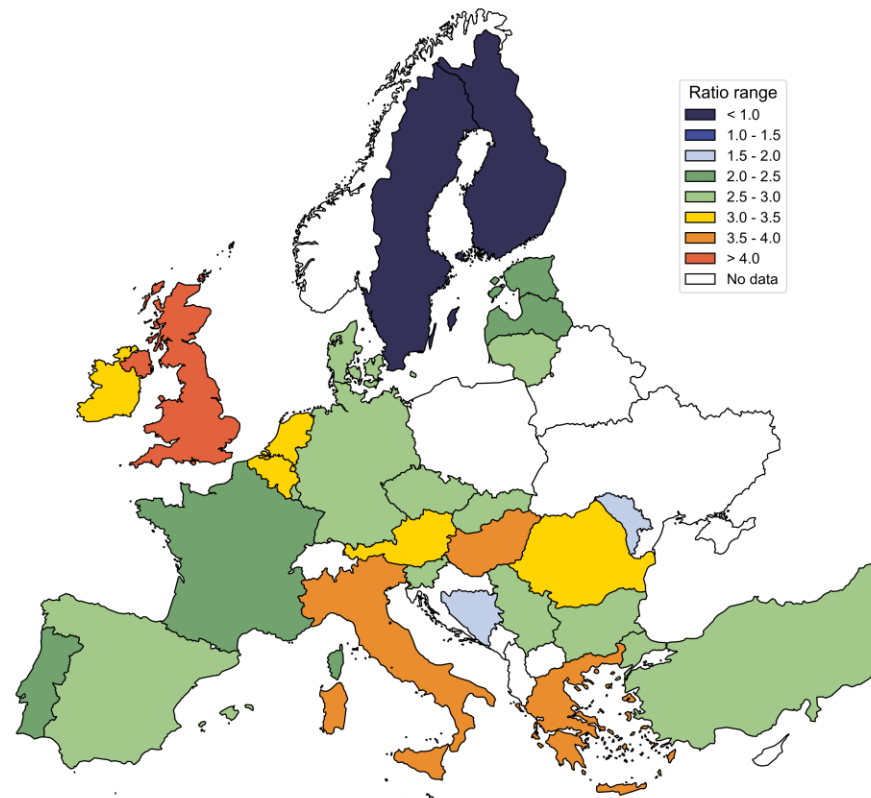
Source: Arpagaus C., Bless F., Uhlmann M., Schiffmann J, Bertsch S.S.  
 (2018): Review on High-Temperature Heat Pumps,  
<https://doi.org/10.1016/j.energy.2018.03.166>



# EU: Challenges & Policy

# Electricity to gas price ratio

- VAT
- Levies
- Taxes



Source: Eurostat (nrg\_pc\_203 ; nrg\_pc\_205).  
These electricity to gas prices apply to the industrial and commercial sectors.

# Innovation Fund Auction on Industrial Process Heat Decarbonisation – European Commission

- Unlike regular grants, projects that meet the qualification criteria will compete on price only, allowing **faster evaluation and disbursement**
- **€1 billion Auction:** pilot for the **Industrial Decarbonisation Bank**, announced for 2026 and which aims to mobilise €100 billion
- **December 2025:** open the auction for receiving bids
- **Spring 2026:** selection of bids

# EHPA Overview subsidies for industrial heat pumps



## Subsidies for industrial heat pumps in Europe



- Subsidies available in **25 European countries**
- Different subsidy scopes: directly targeted at heat pumps or broader scope (decarbonisation of the industry, support for the energy transition)
- Different types of financial support: grants, loans, tax incentives, energy saving certificates



Scan the  
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the report

# HEAT BIG – The large heat pumps webinar series



## HEAT BIG

The large heat pump webinar series

Implementing industrial  
and district heating solutions

Online on Microsoft Teams



Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or CINEA. Neither the European Union nor the granting authority can be held responsible for them.



# Danish Technical University – Industrial HP summer School

**Industrial high-temperature heat pumps for decarbonization of industrial process heating.**

**SPIRIT Summer School 2026. June 1-12<sup>th</sup> 2026**

**Advanced technical course**





# Q&A

# Planned Webinars & Events

**MAY 12**

2026

## **Pumping Up Europe's Energy Future – Heat Pump Trends, Policy & Innovation**

Paul Kenny, European Heat Pump Association

**SEP 8**

2026

## **World Green Building Week Panel: Exploring EPBD's Implications for Energy Professionals and the Built Environment**

Marion Jammet, Director of Policy and Advocacy, Irish Green Energy Business Council (IGBC)  
Georgina Molloy, Programme Manager, SEAI for EPBD

**OCT**

2026

## **Zero Emissions Heating (District heating, heat pumps, biomass)**

Speaker TBC

**NOV**

2026

## **Commissioning**

Speaker TBC

**CONFERENCE — MAY 2027** Details to be confirmed

# Have Your Say

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What topics matter to you? Help us shape the chapter's agenda.

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<https://forms.cloud.microsoft/e/qe0zedtTZ>

## Check the Upcoming Events

Browse our full events calendar and register for webinars



<http://www.aee.ie/events>

# AEE Ireland Chapter Membership

*Join the climate action professionals*

## Membership Types

|            |                    |
|------------|--------------------|
| Student    | €1 one-off         |
| Individual | €30 recurring      |
| Corporate  | 4 levels available |

## Benefits

- Access to events & webinars
- **25% discount on trainings organised by chapter**
- AEE Ireland recognised by SEAI, Engineers Ireland, eHeat, Solar, Wind, CIBSE, BER Assessors Association of Ireland, Law Society and many others

## Join AEE Ireland



[aee.ie/membership](https://aee.ie/membership)



**Ireland**  
Chapter

Thank you for being here  
with us today