

# A regional heat pump market example

## Upper Austria

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# THE HP4All Project

- EU Horizon 2020 project, from Sept. 2020 – Feb. 2023
- 7 partners from 5 countries, 3 pilot regions (Upper Austria, Andalucía, Ireland)
- Project aims: enhance, develop and promote the **skills required for high quality, optimised heat pump installations** in residential/non-residential buildings
- 771 actors trained, over 10,200 end-users provided with knowledge and tools, 5 mutual recognition agreements signed
- HP4ALL Competency Framework, HP4ALL Knowledge Hub, HP4ALL Benchmarking Tools, Policy Recommendations



# The region of Upper Austria



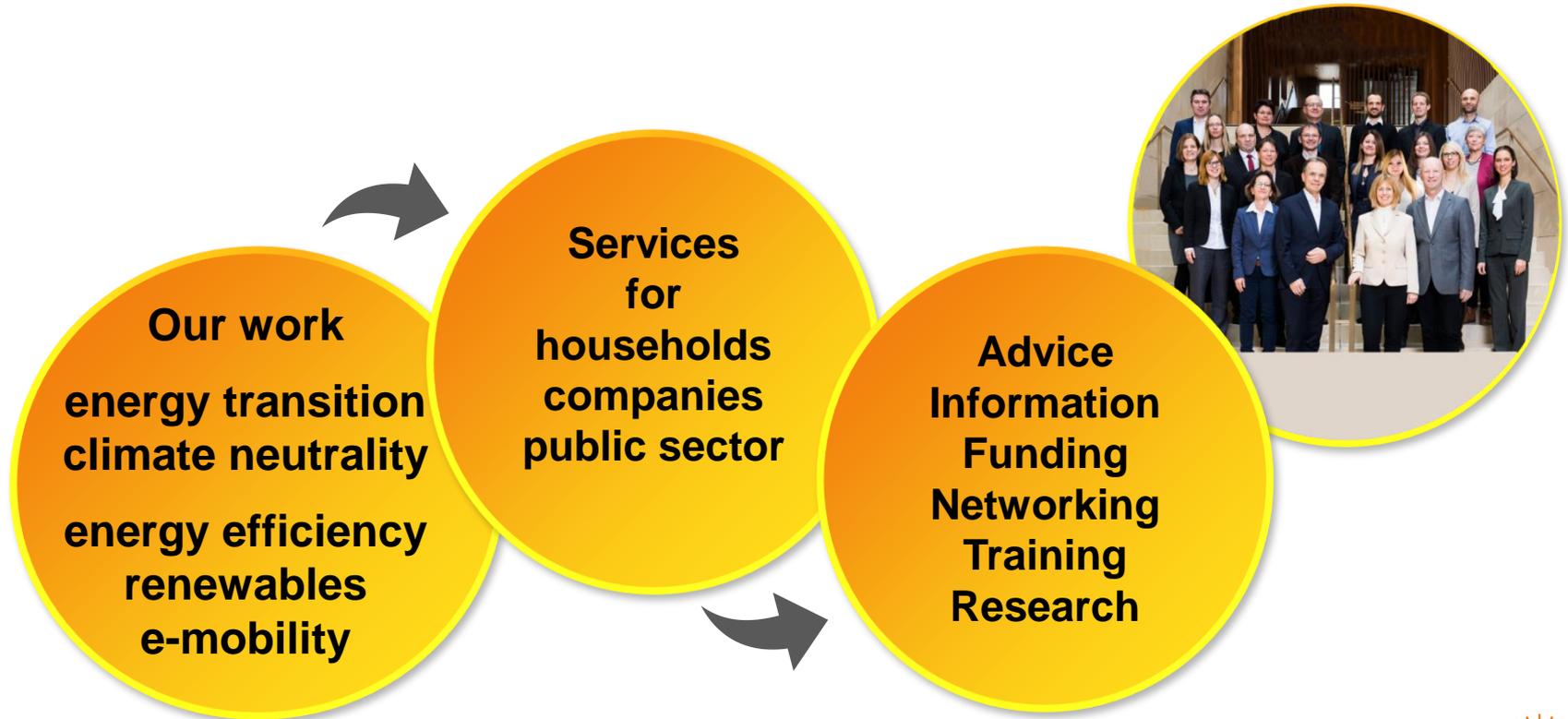
**Capital: Linz**  
**Population: 1.5 million**



**Industrial & rural:**  
**25% of Austrian industrial exports**  
**50% live in small municipalities**

# OÖ Energiesparverband

## The Energy Agency of Upper Austria



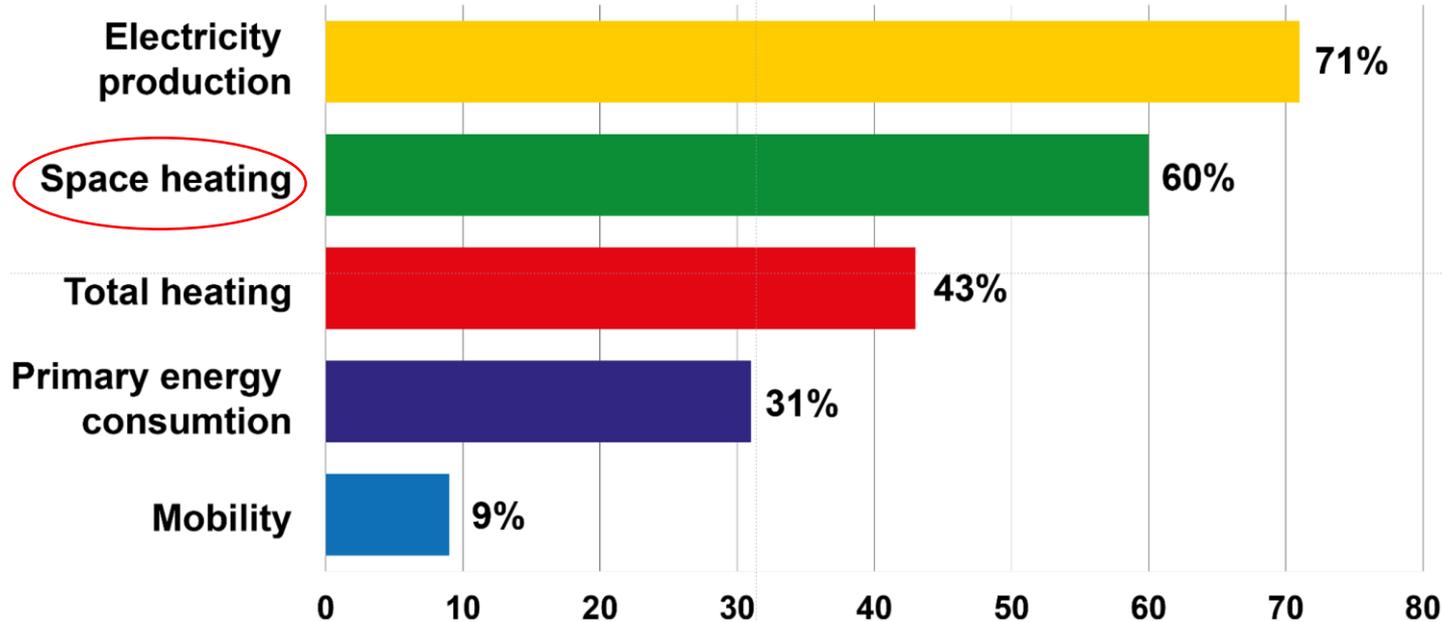
# The Cleantech-Cluster Upper Austria (CTC)

Network of energy & environmental companies  
with 250+ partners



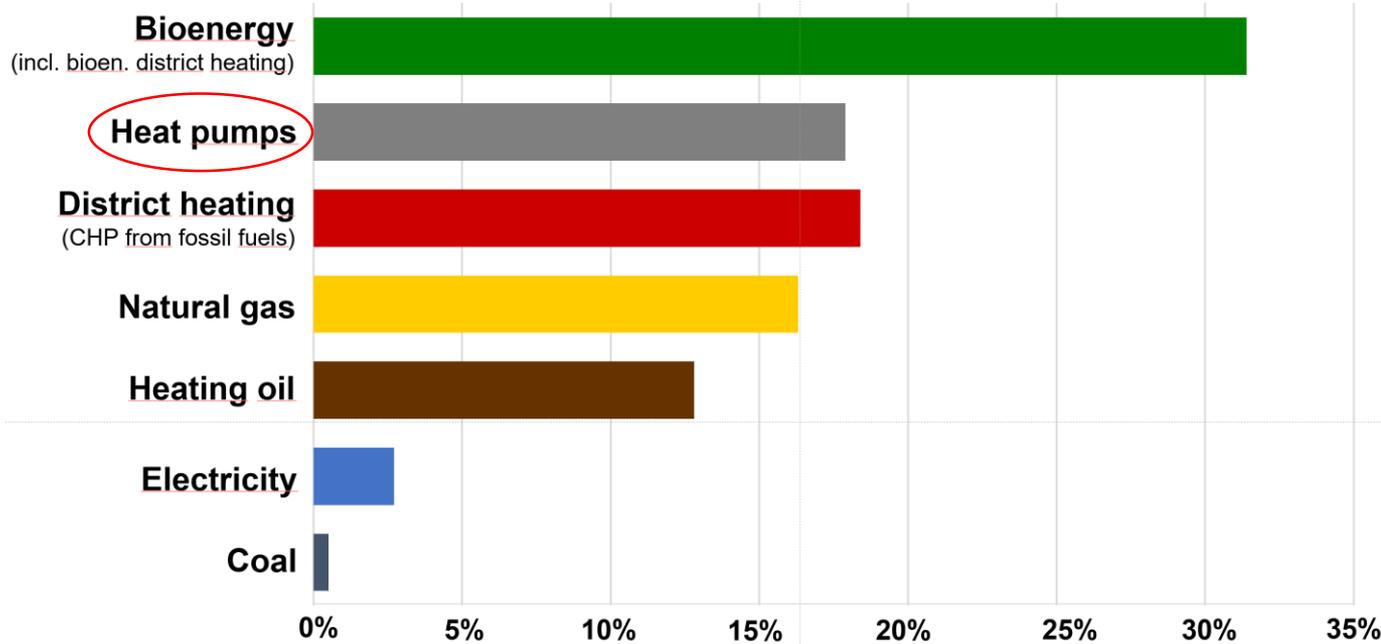
# Market data **Upper Austria**

Renewable shares in different sectors  
60% clean space heating



# Market data **Upper Austria**

## Heating in Upper Austria % of all dwellings





# Goodbye fossil heating, **hello renewable heating**: Our policy package

**Funding programmes** for renewable heating, linked to strict quality criteria

**Dynamic & ambitious standards** for building envelopes & technical equipment (regularly updated)

## **Energy advice**

10,000 face-face sessions/a (technical/organisational/funding guidance)

**AdieuÖl** large-scale awareness raising, multiplier programme

**Training programmes** for actors along the value chain

**Innovation support** for businesses (e.g. product development, joint market development, "early adopter" programmes)



**Banning oil (and gas) heating** in new buildings and phase-out in existing buildings (under preparation)

# Policy package for heat pumps one-family homes in Upper Austria

- **Carrots:** Heat pump subsidy for replacing fossil fuels and direct electric heating, joint funding national and regional governments:
  - examples: 10 kW air source HP 10,200 Euro (from oil), 10 kW ground source HP 12,300 Euro (from gas), max. 50 %
  - up 100 % for low income households (max. 22.188 Euro for air source, 32.563 Euro for ground source HP)
  - strict quality criteria
- **Sticks:** Progressive building and equipment standards
- **Tambourines:** Awareness, information & training for citizens and professionals, including 10,000 face-to-face energy advice sessions every year (energy advisers come to into the home and support decision making)
- **Skateboards:** Market and innovation support, e.g. company network Cleantech-Cluster Energy, working across the whole value chain



# Quality is king:

## Criteria in funding programmes for heat pumps

- joint database of HPs meeting the criteria (managed by the regions)
- performance requirements, based on a seasonal efficiency calculation ( $\eta_s$ )
- strict noise limits for air-source heat pumps (35 dB at the property line)
- refrigerant GWP below 1,500
- max. flow temperature of heat distribution system
- separate electricity and heat meters (to enable homeowners in checking performance)
- must be combined with either 3 kW PV or 4 m<sup>2</sup> solar thermal or green electricity supply contract
- certificate from an accredited certification body, Austrian EHPA quality seal (professional association)

On-the-spot checks by ESV (sample)!



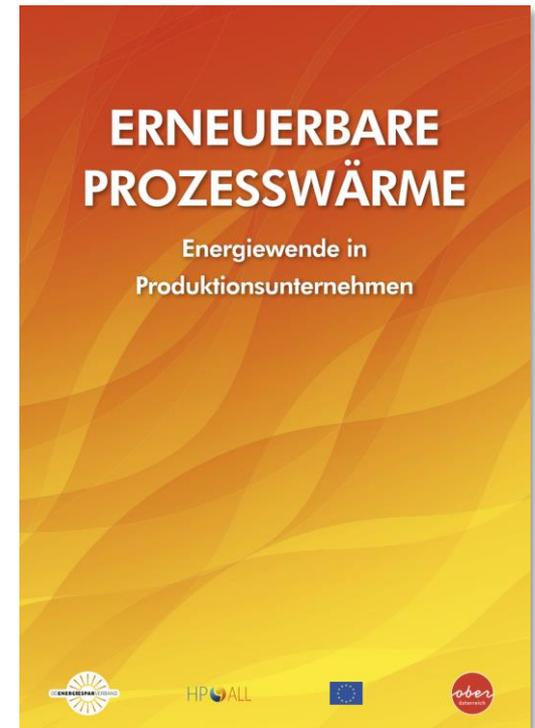
# Our tambourines:

## Awareness and information for citizens

- the regional energy agency as a trusted information source!
- 2022: **10,000 face-to-face energy advice sessions** (onsite), **10,000 telephone or digital advice sessions** plus hotline with 50,000+ calls
- 20+ information **campaigns** (e.g. AdieuÖl, Upper Austria Saves Energy)
- Regular information stands at **tradeshows and fairs**
- **50-100 information talks/year** at events
- **Information materials** on a wide range of sustainable energy topics
- Also extensive information activities for **municipalities and businesses**



# Publications: Renewable Heat Guides and case studies (HP4All)



[www.energiesparverband.at/broschuere](http://www.energiesparverband.at/broschuere)

# Training Programmes

## Upskilling building professionals (HP4All)

OOENERGIESPARVERBAND  
*Energy Academy*

Lehrgang  
**Zertifizierter Wärmepumpen-  
Installateur/-Planer**

16. - 19. November 2022  
26. November 2022

OOENERGIESPARVERBAND AIT WÄRMEPUMPE AUSTRIA ober österreich

OOENERGIESPARVERBAND  
*Energy Academy* ONLINE

ONLINE-TRAININGSSEMINAR  
**Wärmepumpen  
für Baufachleute**

1. Februar 2022  
9.00 bis ca. 12.30 Uhr, online

OOENERGIESPARVERBAND ober österreich

- **Certified HP installers training course** (in cooperation with AIT and national HP association): 4-days, trained installers  
key contents: planning, dimensioning and installing residential HP, funding programmes, practical exercises
- **HPs for building professionals**  
0.5 day training, construction companies, installers (new staff, "late adopters")  
key contents: interaction building/heating system, heat distribution systems, combination with PV
- **Renewable process heat**  
0.5 day training, energy managers from industry, companies offering solutions
- **285 people trained**, plus 110 after project end

# Training Programmes

## Working with vocational school for heat installers



- **dual training system for heat installers** (80 % in companies as apprentices", 20 % in vocational schools)
- already in 2001, a **new apprenticeship programme for "renewable heat"** established in Upper Austria (taken up in the rest of Austria)
- **vocational school** is equipped with workshop with many current models
- ESV organizes **site-visits** in cooperation with vocational schools
- ESV's training offers often used by **teachers and company-internal apprenticeship trainers**

# A few lessons learnt from the ground



- **Policy packages** (carrots, sticks, tambourines and skateboards)
- **Market segmentation:**
  - residential sector: single/multi-family, owned/rented, low/mid/high incomes
  - companies: energy profile, processes, size and sector
  - public sector: small percentage of all buildings, potentially strategically interesting
  - **quantification (how much of which type)** critical!
  - which market segment is most likely to be activated? which instrument works best where?
  - start with "easier" groups! (quicker impact, gets things moving)
  - **also not all installers are the same** (early adopters to laggards)
- **Market intelligence** (empirical vs anecdotal evidence) - also regarding availability of installers, real prices in the market etc.
- **Technology portfolio for renewable heating:** heat pumps, clean bioenergy boilers, district heating from renewables and CHP
- **Energy advice:** free, product-independent and reliable by the regional energy agency to guide investment decisions
- **Ongoing support to market structures:** training and information across the value chain, company networking

# European Energy Efficiency Conference 2024

7 – 8 March 2024

Wels, Austria

- **Conferences**
  - Energy Efficiency Policy Conference
  - Industrial Energy Efficiency Conference
  - Smart E-Mobility Conference
  - Young Energy Efficiency Researchers
- **Large tradeshow on sustainable energy**

**Call for Papers: 10 October 2023**

[www.wsed.at](http://www.wsed.at)



# Goodbye fossil fuels hello renewables



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