



Joint workshop on green skills
**Initiatives and challenges on
green skills for heat pumps in Spain**

Marta San Román
AFEC – Spanish Association of HVAC Equipment Manufacturers

Joint workshop on green skills



Content

- **AFEC and heat pumps**
- **Context for HP in Spain**
- **Challenges for green skills**
- **Initiatives for green skills**



AFEC and heat pumps



After 47 years of activity,
the **PRESTIGE** of **AFEC**
has acquired great relevance,

both for the **MANUFACTURERS** and the **COMPANIES**
that make up the Spanish **HVAC and HEAT PUMPS sector**,
as well as for other associations, legislators, institutional
and standardization and certification bodies.

AFEC's strategic plan guarantees to continue contributing to
DRIVE a continuous **ADAPTATION** of the **SECTOR**
in the context of a changing environment.

87 members + 7 honor members



HVAC sector in Spain



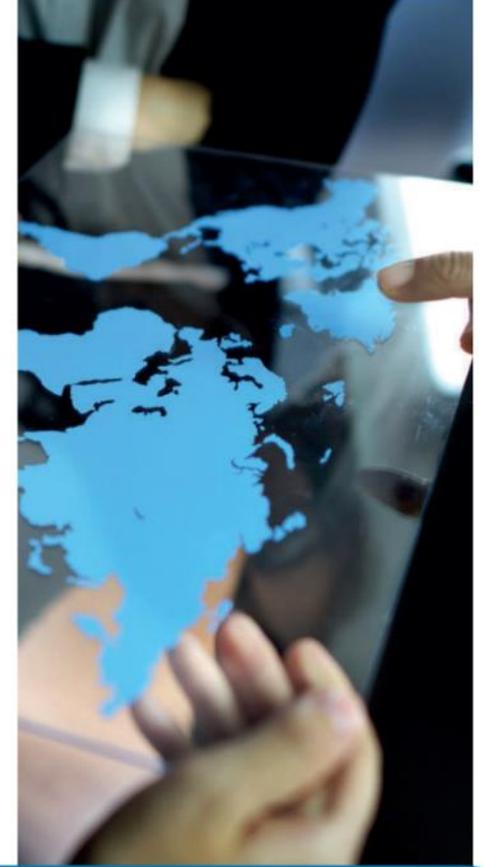
Employment
> 13.500



> €2.000 mill



Domestic
80%



Export
80%

Regulatory context

CAES
Energy savings certificate
RD 36/2023



RITE and safety
Industry law

Subsidies and funding
Taxonomy

Refrigerants
Spanish tax
FGas review
Air-to-Air !

EPBD
Energy performance of buildings directive

EED
Energy efficien. directive
Ecodesign
Energy label

RES
Renewable energy directive

ETD
Energy taxation directive

... and more ...

Challenges

for green skills in the heat pump sector

Main challenges

Lack of generational replacement

No interest.

The installer is not familiar with heat pump technology and does not need to obtain such knowledge to have a steady income.

Negative perception of a professional career in the HVAC sector

Not appealing, no glamour

Intrusiveness and unfair competition

The chicken and egg story

Education+training adaptation:

- Skilling / Upskilling / Reskilling
- Train-the-trainers programs

Many skills needed

*Plumbing
Hydronics
Electrical
Safety*

*Regulation & Control
Digital skills
Waste management
Testing*

*Regulatory issues
Standards
Etc.*

“A network of skilled, certified installers across countries would also be useful to exchange experience and best practices.”

Regulatory issues
Language

The chicken and egg story

1. The problem

Qualified technician = €€
 Unqualified technician = €
 User

Priority 1
Safety and robustness
 System works
 System works

Priority 2
Energy efficiency
 Safety and robustness

Priority 3
System works
 Energy efficiency

3. The chicken and the egg

Attracting qualified technicians

BUT

Not possible to increase salaries
 Low cost competitors for low-expectations customers.

Improve skills and certification

BUT

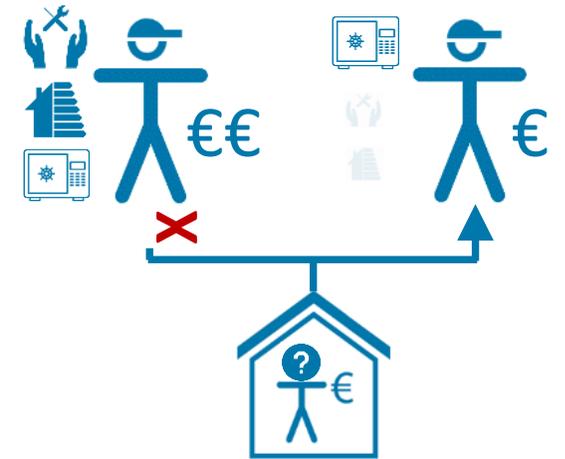
This means creating entrance barriers,
 and there is already a labor shortage.

Increase customers' expectations

BUT

There are not enough qualified technicians
 to meet expectations.

2. The user's choice



Based on an article by Andy Pearson for ASHRAE magazine: "Fistful of dollars"

The background features abstract, overlapping shapes in various shades of blue. A large, dark blue shape dominates the lower right, while a lighter blue shape is visible on the left. A white paperclip graphic is also present at the bottom right, mirroring the one at the top right.

Initiatives

for green skills in the heat pump sector

Initiatives for green skills: HP

Foster HP
technology

Contribute
to industry
growth

Impulse
training &
education

Make it
easier to all
professionals

Attract
talent

**Business and long-term
employment oportunites**



Heat pump promotional plan: 8 years



- Dissemination of HP technology
- Reach out all sector agentes
- Generate awareness
- Promote benefits
- Create (PERCEIVED) value for (future) technicians



“La aerotermia está de moda”

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AFEC
asociación de fabricantes
de equipos de climatización

Red Bomba
de Calor

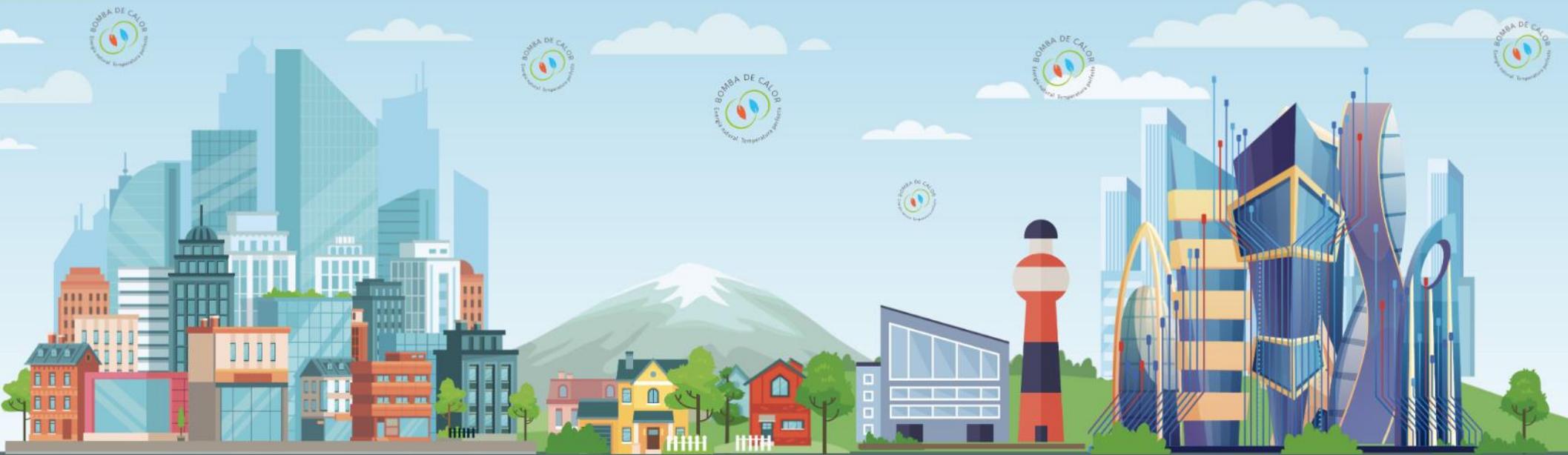
Material
técnico

Blog de
expertos

Entorno y
tendencias

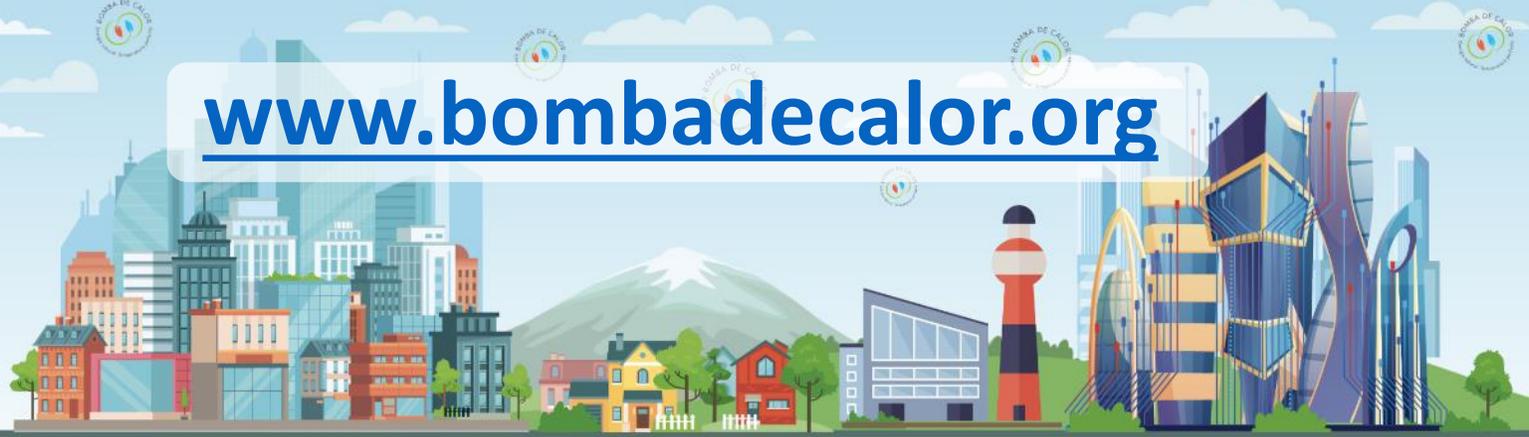
Siempre
al día

#AFECresponde





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1kWh



25%



Material técnico
Inicio / Material técnico

Casos prácticos

Libros y documentos



Impulso a la formación

Conocimiento compartido



Support to legislators / Remove trade barriers



AFEC - member of EHPA

Acelerador de la UE de bombas de calor

Un plan conjunto para impulsar el despliegue de bomba de calor y cumplir los objetivos del REPowerEU



- CAEs
- Subsidies & Funding
- Taxonomy
- Standardization Organization
- Ministries
 - Ecological transition
 - Industry and safety
 - Environment
 - Economy
 - Health
 - Buildings

Promoting certainty messages

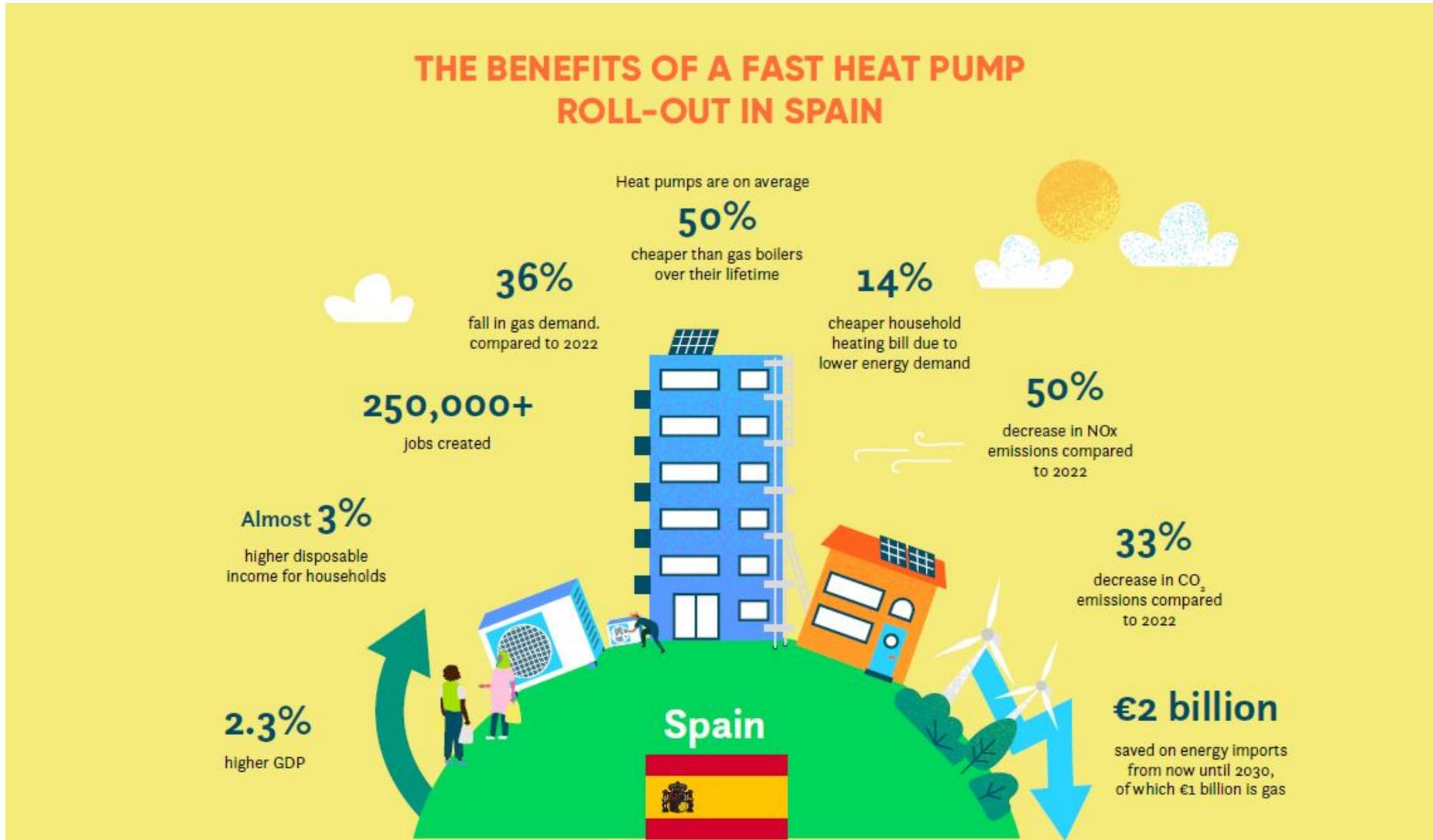


Figure 11: Illustration showing the main socio-economic and climate benefits of the transition to heat pumps in the Spanish building stock by 2030, compared to the business as usual scenario (or 2022 when specified)

Spanish market

AC + HP + DHW (mill €)	2022	2021	2022 vs 2021
Residential	739,12	595,73	24%
Commercial	300,61	250,34	20%
Industrial	188,67	144,78	30%
TOTAL	1.228,40	990,85	24%

HVAC market (mill €)	2022	2021	2022 vs 2021
AC + HP + DHW	1.228,40	990,85	24%
Rest (ventilation, air tech.)	64,74	277,28	12%
TOTAL	1.539,75	1.268,14	21%



Organization of industrial HP forums



AFEC
 asociación de fabricantes de equipos de climatización

20 años
BOMBA de CALOR
 Oportunidad para la formación y el empleo

AFEC
 IBERDROLA

II FORO BOMBA de CALOR
 Oportunidad para la formación y el empleo

2022

Informe de conclusiones
2º FORO BOMBA de CALOR
 Oportunidad para la formación y el empleo

Organizado por:
AFEC asociación de fabricantes de equipos de climatización
BOMBA DE CALOR Oportunidad para la formación y el empleo

En colaboración con:
AFAR Asociación de Fabricantes de Aire Acondicionado Radiante
IBERDROLA

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 Mayo 2023

Collaboration initiatives

CERTIFICATION

TRAINING ONSITE/ONLINE

GAMIFICATION



Manufacturers and installers

Installers and manufacturers
Technical academy
Online training

Installers across-countries
training

APPRENTICESHIP

ACADEMIA



Manufacturers and young
potentials

Training and certification
programs

Building and energy sectors

AFEC - Collaboration initiatives



Vocational education schools



State professional schools



Employment agencies



National qualifications institute



Universities / technology centers



Books and training material

AFEC - Collaboration initiatives



Architects



Technicians and engineers



Distributors



Media

Communication

Communication

Communication

Bring talent to industry events

Climatización & Refrigeración – International HVAC Exhibition - Madrid



- Plenary sessions on green skills for HVAC sector
- HP dedicated booth and activities

2023 edition - “Young Friday”

- Dedicated to students
- Universities and profesional schools
- BS and technicians
- Workshops, games, manufacturers equipment
- IA, digital, combination of renewable technologies
- CV market place
- Introduction to ODS and sustainability
- Etc



Not only about the “green” skills

HAVC technician - installation and maintenance of thermal systems: heating, cooling, DHW production, ventilation.

Competencies

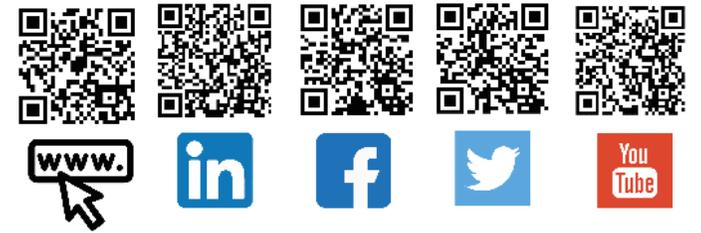
- HVAC
- Safety
- Technologies/hybridation
- Measuring
- Regulation&Control (BAC)
- Electricity
- Assembly
- Calculation programs
- Budgeting
- Waste management
- etc.

Skills

- Team work
- Time management
- Communication
- Empathy
- Creativity
- Flexibility
- Autonomy
- Digital culture
- Willing to learn
- Decision taking
- etc.

AFEC is#HeatPumps
asociación de fabricantes
de equipos de climatización

www.afec.es
www.bombadecolor.org



Thanks!

Marta San Román
msanroman@afec.es

#AFEC responde

Previsión de oportunidades de empleo



■ 2021
■ 2025

Previsión oportunidades de empleo

Fuente: Estadística de Población Activa (1T2021) y Cedefop

