FIT for 55

THE INDUSTRY IS READY TO DELIVER

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CONTENT

● EU Green Deal – setting the scene
● Heat pumps drive decarbonization
● Heat pumps are a proven solution
● Heat pumps are aNopportunity
● Getting ready as an industry
● Ready to decarbonize heat
EUROPE TO BECOME CLIMATE NEUTRAL BY 2050

**investment**
- EU Green Deal 1T €
- Next Generation EU €750 bn
- Other markets follow

**Decarbonizing**
The heating sector will be key
- HP will be key

**EU commission targets 40% penetration of renewables** in heating and cooling by 2030.
MASSIVE POTENTIAL TO DECARBONIZE HEAT WILL LEAD TO BUILDING SECTOR TRANSFORMATION

36% of CO2 emissions by building stock

50% of energy use for heating & cooling

80% Of it used in buildings

In-efficient building stock 195 million

Buildings date <2000 220 million

Heated with coal & oil > 30 million
HEAT PUMPS DRIVE DECARBONIZATION IN 3 WAYS
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Renewable Energy

Low Carbon Technology

Energy Saving Technology
HEAT PUMPS DRIVE DECARBONIZATION IN 3 WAYS

Thermal energy from the air, the water or the ground.
Different heat pumps systems apply, fitting to different needs.

Heat pump types
Water-based heat emitters Standard
130 million buildings

Air-to-water  Ground-to-water  Hybrid  Air-to-air
HEAT PUMPS DRIVE DECARBONIZATION IN 3 WAYS

**Abundantly available** in Europe; no import needed

EU’s **energy dependency rate** has increased since 2000

- > 50% of the EU’s energy needs are met by net imports.
- reaching 58% in 2018,
- Fossil fuels are exposed to volatile fuel prices and supply disruption.

More use of heat pumps reduce energy exposure

Heat pumps = Secure and resilient energy system

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Share of energy imports by type
(Eurostat)

- Petroleum products: 65%
- Gas: 24%
- Solid fuel: 8%
- Other: 3%
HEAT PUMPS DRIVE DECARBONIZATION IN 3 WAYS

**Carbon impact** is about half of a high efficiency gas boiler.

**Further reduction** thanks to decarbonization of EU electricity production.

- **Gas boiler 95% efficient**
- **Direct electric heating 100% efficient**
- **Heat pump 300% efficient**

**Heat pump carbon intensity comparison: CO2 emission savings** (Carbon Trust).

- **↓ 60-70%** vs. Conventional electric heating
- **↓ 55-65%** vs. Efficient gas boiler
HEAT PUMPS ARE A PROVEN SOLUTION
ALL APPLICATIONS, EVERYWHERE

From small residential to large commercial and industrial plants

Operation ranges down to -28°C
Heat pump to become standard by 2030

20% of all new built HP by 2030

Combination of heat pump types
- In combination with district heating

1 out of 4 are heat pump
- Assume 2x replacement rate

1-2 Family house
- New Built
- Decentralized
- Centralized

Multi Family house
- Replacement

ALL APPLICATIONS, IN RESIDENTIAL

EHPA - market report - 30/6/21 - Daikin Europe
HEAT PUMPS ARE AN OPPORTUNITY
**HYDRONIC HEATING MARKET OUTLOOK**

**New built market**
- Slow reduction of new built housing intensity
- Heat pumps to be standard hydronic heating by 2030

**Replacement market**
**Increased replacement rate drives market growth**
- Coal & non condensing => to condensing
- Renewable heating: move to heat pumps incl hybrid heat pumps

**Meeting EU decarb targets required**
- 20% blending mix gas boilers ?
- 100% Hydrogen boiler ready, though by when?
- Total HP share / Hybrid HP share
GETTING READY AS AN INDUSTRY
READY TO DECARBONISE RESIDENTIAL HEAT ... EUROPE IS READY

European Hydronic Heat pump sector

- highest standard worldwide
- boosts EU economic growth
- employs 225,000 people
READY TO DECARBONISE RESIDENTIAL HEAT ...
WE ARE READY IN EUROPE

Developed in Europe

EDC European Development Centre
Worldwide centre  *  > 220 people
New location  *  140M€ investment
READY TO DECARBONISE RESIDENTIAL HEAT ...
WE ARE READY IN EUROPE

Manufactured in Europe
5 heat pump factories in Europe
Increasing consumer interest

Government support for renewables through incentives

READY TO DECARBONISE RESIDENTIAL HEAT ...
CONSUMERS ARE READY
READY TO DECARBONISE RESIDENTIAL HEAT ...

4 STEPS TO TAKE
4 STEPS TO DECARBONIZING RESIDENTIAL HEAT

1. Strengthen new build rules
2. Increase replacement rate
3. End fossil fuel incentives
4. Renewable heating standard in replacement

2020

2030

2050

40%

100%
Thank you