50% renewables in buildings by 2030 and the heat pump ramp-up: success factors and must-win opportunities
Context

(1) Close to 50% of Russian gas is used to heat buildings.
(2) Global emissions must decrease by 50% by 2030 vs 2019 to meet the 1.5°C goal.
(3) 30% of global emissions come from buildings.

Outcome

Reducing natural gas (and oil) demand in buildings becomes the nr1 policy priority.

Objectives

Phase out fossil fuels Phase in renewables
Buildings are part of the solution.
How does this materialize in our business?
We are a 105 years old family owned company

Johann Viessmann
1917–1947

Dr. h.c. Hans Viessmann
1947–1991

Prof. Dr. Martin Viessmann
since 1979

Maximilian Viessmann
since 1979

With one purpose: We create living spaces for generations to come!
Viessmann has climate targets in line with the 1.5°C goal.

The investment we made in renewable solutions - in line with our purpose - increased our resilience to the tectonic changes arising from the war in Ukraine.
-40%

Sales Quantity Heating Units

Residential Gas

MTD June 2022 vs. 2021
+45% Sales Quantity Heating Units

Residential Heat Pumps

March - May 2022 vs. 2021
Net Sales PV & Electric Storage
March - May 2022 vs. 2021

+140%
Once in a century

**CHALLENGE**

>49% renewables in buildings by 2030

>65% renewables in new heating systems from January 2024

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**OPPORTUNITY**

- Doubling the installation rate of heat pumps over the next 5 years
- Additional **10 million** heat pumps in Europe within the next 5 years
- In total **30 million** new heat pumps until 2030
- **60%** heat pumps, **40%** district heating/biomass/solar thermal/etc.
- **400 thousand** new homes per year, also boosted by sustainable serial construction

Accelerated independence from fossil energies =
Accelerated expansion of renewable energies

**Once in a century**
But we are facing unprecedented turmoil so we need smart policies to support the energy transition.
What do we need at **policy level** to succeed?
3 recommendations:

1. Scale renewable solutions
2. Activate prosumers
3. Bring people along (affordability and jobs)
Hydronic Heat Pumps is THE opportunity of the decade

EU policy goals:

+10 mln by 2027

+30 mln by 2030

(vs 1 MM installed in 2021)
Keyword: Heat pump
The Viessmann 5S strategy for a successful heat pump ramp up made in Europe

**Speed**
- Number of installers
- Low installation time
- Energy services

**Scale**
- Ramp up of production
- Installation in *existing* buildings
- Resilient supply chains

**Skills**
- Upskill installers & partners
- Raise awareness of end-users
- Reskill employees

**Customer Satisfaction**
- Affordability
- Efficiency & low noise
- Prosumers

**Sustainability**
- Environmental friendly refrigerants
- Energy system efficiency
- Circular economy

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The solutions exist

- Heat Pumps
- Hybrid Systems
- Biomass Systems
- Solar Heat
- Condensing Boilers
- Electric Direct Heating
- PV modules
- Battery storage

With the right renewable energy source

New data-driven opportunities in demand-side-flexibility
Bring People along

34 million Europeans live in energy poverty

People’s acceptance is sine qua non for success

Real danger of eroding support of the transition if climate measures lead to hardships & financial burdens
Bring People along

What do we need to do?

Use **carbon pricing revenues** directly in the sector.

Provide **flexible range of options that fit different lifestyles**.

Secure financing and scale new business models such as **heating as a service**.
How to reach 50%:

1. Scale renewable solutions with Heat Pumps, PV, DSF
2. Activate prosumers
3. Bring people along
How to safeguard EU competitiveness and industrial footprint?
How to safeguard EU competitiveness and industrial footprint?

#1 Legal certainty

#2 Holistic approach

#3 Financial support
Historic Challenge

Strong alliance between policy makers, industry and skilled trades.

Historic Opportunity
THANK YOU
Back-up:
More than half of the currently installed 105.7 million space heaters in the EU are old and inefficient.

European installed heating stock, ehi 2019

- **Gas non-condensing boilers**: 41.2 Mio.
- **Gas condensing boilers**: 33.8 Mio.
- **Oil boilers** (condensing and non-condensing): 16.9 Mio.
- **Heatpumps**: 4.2 Mio.
- **Biomass boilers**: 4.2 Mio.
- **Other**: 5.3 Mio.

**European heating stock has massive potential for decarbonisation.**

- Increasing replacement rate of old and inefficient heaters.
- Incentivise the roll-out of renewable heating technologies.

Quellen: ehi, BDH, BDEW (2019)
## Viessmann views: Key measures to enable the transition at EU level

<table>
<thead>
<tr>
<th>Category</th>
<th>Measures</th>
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| **REPowerEU**  | 10 mio heat pumps by 2027 / 30 mio by 2030 & heat pumps ‘made in EU’ = key technology  
                  + 35 bcm biomethane target and 10 mio t H2 domestic production by 2030  
                  + 600 GW PV by 2030 and focus on integration with renewable heating systems  
                  × focus on production ramp-up should be even stronger (IPCEI not useful because of time delays) |
| **EPBD**       | mandatory rooftop PV → improve integration with heating electrification  
                  + hybrids must be flexible option during transition for parts of building stock  
                  + potential of smart heating technologies should be leveraged even more  
                  + roll-out of sustainable heat pumps should be specifically supported  
                  × data exchange rules must be fine-tuned to protect intellectual property |
| **RED & EED**  | 45% renewables share and 49% in buildings, - 13% energy use (vs 2020)  
                  + broad toolbox to meet targets via heating replacement (heat pumps, hybrids), DSF (demand side flex)  
                  × distinction btw. fossil fuel phase out and combustion technology to be improved |
| **ETS & CBAM** | support ETS for households starting 2026- if Social Climate Fund secures sufficient re-distribution of costs  
                  × CBAM: risks distortion of competition for finished goods & raised costs for dom. production |
| **Refrigerants** | ambitious F-Gas regulation with clear pathway towards HFC phase-out  
                  + ambitious REACH/PFAS because HFOs are not a valid sustainable alternative |
Wärmepumpen benötigen Kältemittel

‘Geltungsbereich’ für die Aussagen heute

Außeneinheit:
hermetisch versiegelter R290 Kältekreis ‘Monoblock’

Inneneinheit:
Hydraulik, Anschlüsse an Heizkörper oder Fußbodenheizung, Regelung

Kältekreis „pumpt“ Umgebungswärme ins Heizwasser

Kältemittel: natürlich oder F-Gas

1 Verdampfer
2 Kompressor
3 Verflüssiger
4 Ausdehnventil

UMGEBUNGSWÄRME
NUTZWÄRME
2: Activate prosumers

50% of people could become active prosumers

A no-regret move - Active buildings:
- maximise system efficiency via demand response
- reduce the need to fall back on fossil energy during peak times
- reduce energy costs for occupants
- enable direct participation of people in the energy transition

What we need to do:
Make distributed prosumer resources attractive and reward demand-side flex, integrate on-site RES elec via “fair” self-consumption, and “firm” mCHP.

Take a holistic response to system performance of buildings beyond mere reduction of energy consumption in EPBD.

Increase training capacities and skilled workforce capabilities.
2: Bring people along

34 million
Europeans live in energy poverty.

x2
Share of wallet spent on energy by low-income households in the last 20 years.

People buy-in is sine qua non for success

450 million stakeholders
Direct impact on people’s everyday lives
Potential for erosion of support for the transition

What we need to do:

Use carbon pricing revenues directly in the sector.
Mitigate increasing energy prices
Provide flexible range of options that fit different lifestyles.
Find financing instruments to support high upfront costs
Secure financing and scale new business models such as heating as a service.