

# Public Energy Counseling – Rising Technology Awareness

Carlos Lopes, Swedish Energy Agency

*Decarbonisation of the European heating sector*

*Sweden as a role model for how heat pumps could pave the way and RePowerEU*

*Stockholm, 26 may 2023*



# The need to speed up the heating transition

## REPowerEU

- objective to install **at least 10 million additional heat pumps by 2027**.
- phase-out of stand-alone boilers by 2029 under eco-design, a **total additional deployment of 30 million or more heat pumps by 2030 vs 2020**, most of them hydronic (including hybrids).

## JRC, EU challenges of reducing fossil fuel use in buildings:

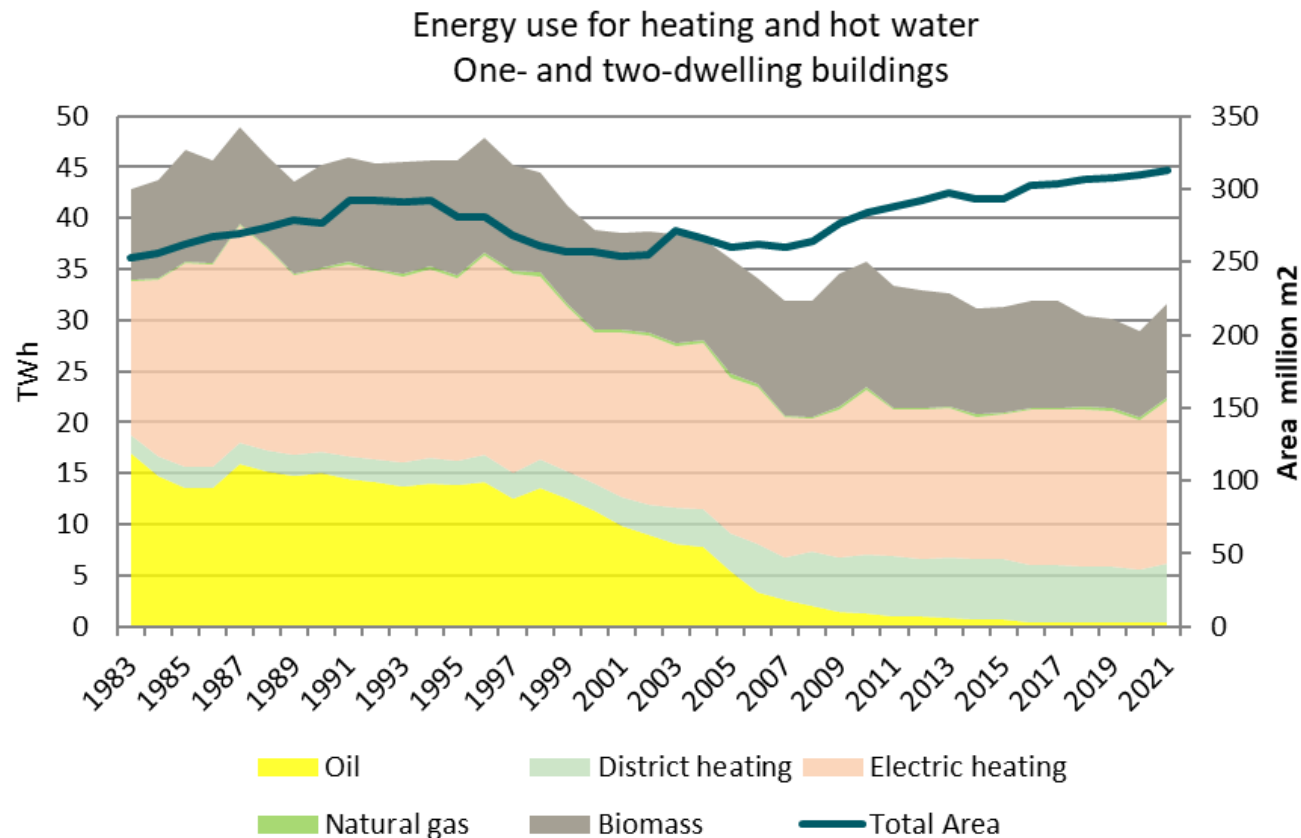
- *“Even when considering state-of-the-art technology, **replacing fossil fuel boilers with newer fossil fuel boilers should be discontinued as soon as possible** for oil and between 2025 and 2030 for natural gas”*

- **IEA, Net Zero by 2050:**

- *“2025 no new sales of fossil fuel boilers”*



# Sweden: Fossil fuels for heating (almost) phased out



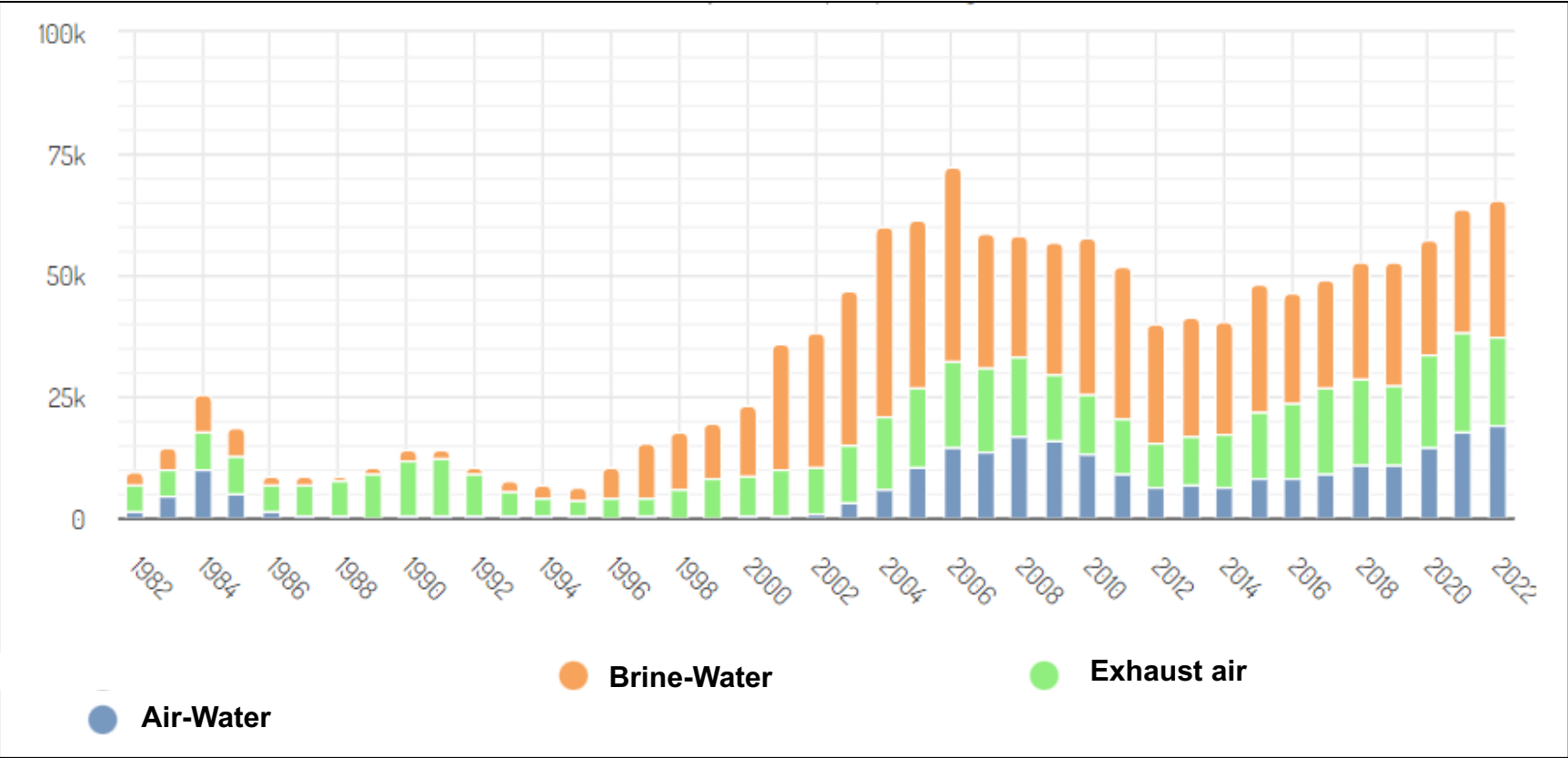
Heating oil (almost) phased out

District heating has more than tripled (biomass, waste, HP)

Heat pumps keep consumption stable although electricity heated buildings increase

GHG emissions reduced by more than 90% vs 1990

# Heat pump market in Sweden in the last 30 years

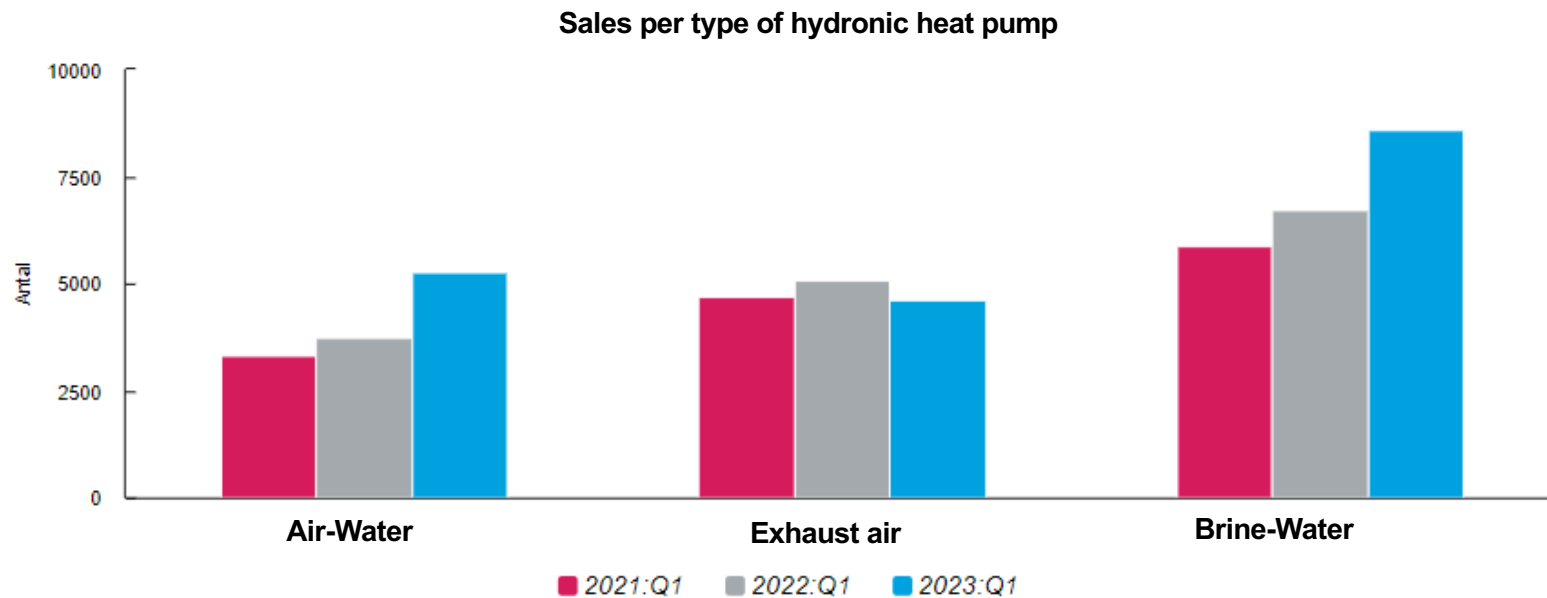


Ca 40% of houses with heat pumps for hydronic central heating

Ground source heat pumps are the most common space heater, they equip more than a quarter of houses

Source: SKVP Svenska Kyl & Värmepumpföreningen

# Sales accelerating: Q1-2023



Source: SKVP Svenska Kyl & Värmepumpföreningen

Earlier delivery problems improved

Expected growth: 5% per year

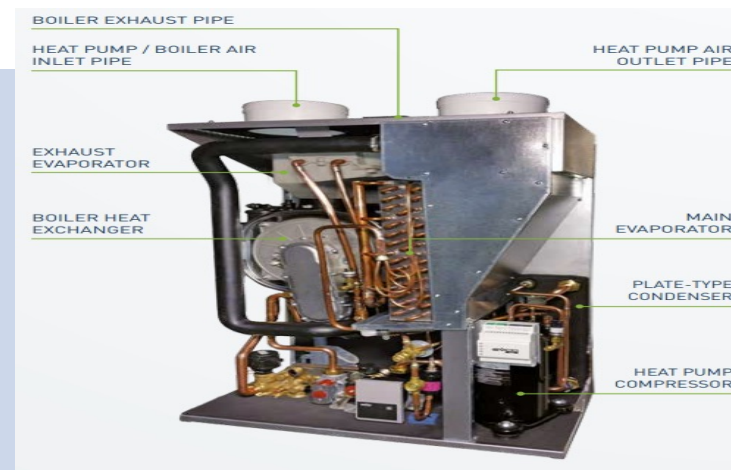
# Factors for the development of heat pumps in Sweden 1/2



# Setting performance requirements – Review of ecodesign regulation – (Commission’s working documents from Mars 2023)

## Ecodesign requirements

- **New space heating categories, e.g. hybrid heat pumps**
- **Ban on stand alone fossil products in 2029**
- Keep requirements level for heat pumps to allow affordability
- Specific requirements for medium- and low-temperature heat pumps
- Third party conformity assessment (TPCA) for space heating efficiency
- Revised heat pump sound power settings
- Self-monitoring and reporting of in-use energy efficiency for installed space heaters
- Extended resource-efficiency requirements
- Scope extension up to 1 MW

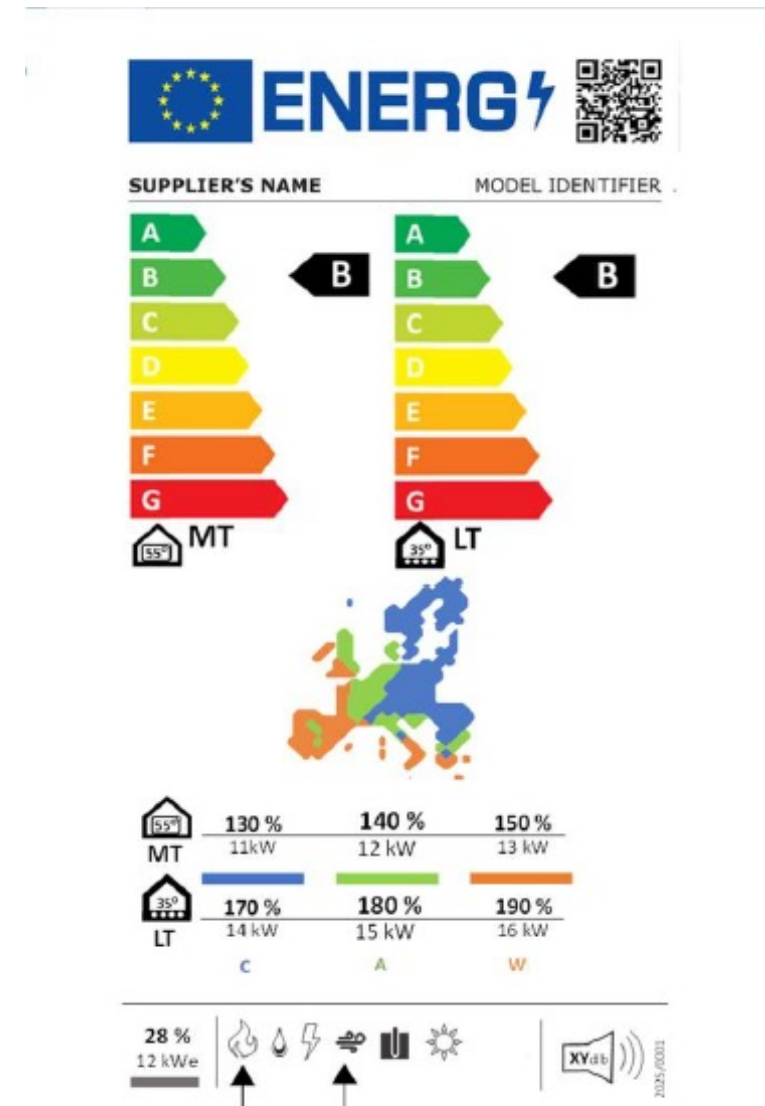




# Review and rescaling of the label to A-G

(Source: Commission's working documents from Mars 2023)

Space heating						
Today (at CC 2.5)			Proposed (at CC 1.9)			
class	MT	LT	class	MT	LT	
A <sup>++</sup>	150	175	A	260	360	Heat pumps
A <sup>+</sup>	125	150	B	200	250	Heat pumps
A	98	123	C	165	205	Heat pumps
B	90	115	D	140	175	Hybrid gas HP
C	82	107	E	120	150	Hybrid gas HP
D	75	100	F	90	115	Gas, oil boiler
E	36	61	G	<90	<115	Gas, oil boiler
F	34	59				
G	30	55				
	<30	<55				





# *Energimyndigheten*



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