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CZECH HEAT PUMP ASSOCIATION



Heat pump market development and their contribution potential towards energy savings and climate protection

The Heat Pump in Europe and the Czech Republic
21.03.2011 | Prague - Praha

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Secretary General | EHPA



Outlook 2010 the basis

- **Sales data from 2009**
- **European policy overview**
- **Contribution of HP to energy use &GHG emission**
- **17 countries + Canada, Japan, USA**
- **Exhaustive description of national markets**
- **Focus on heating and hot water**

OUTLOOK 2010 European Heat Pump Statistics



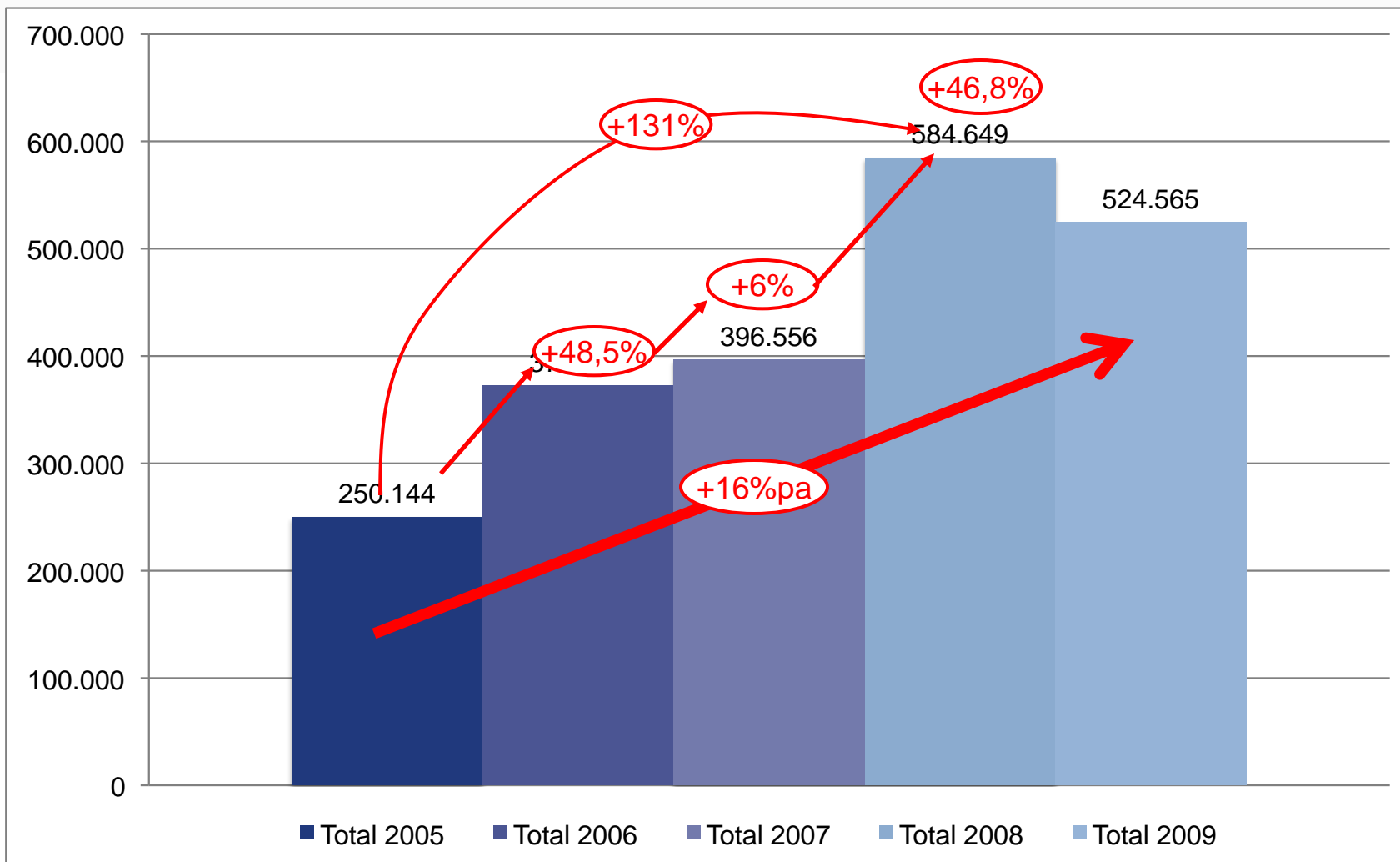
Questionnaire

1.	Space heating (residential and tertiary sector)	Sales Figures 2010			kW installed 2010		
		<20 kW _{th} ¹⁾	>20 kW _{th} ¹⁾	Total	<20 kW _{th} ¹⁾	>20 kW _{th} ¹⁾	Total
1.1	Heating only ²⁾						
1.1.1	Hydronic distribution system						
	air / water			0			0
	water / water			0			0
	brine / water			0			0
	direct expansion / water			0			0
	others ⁵⁾			0			0
	Subtotal 1.1.1	0	0	0	0	0	0
1.1.2	Exhaust air						
	air / air ³⁾			0			0
	air / air + HX ⁴⁾			0			0
	air / water ³⁾			0			0
	air / water + HX ⁴⁾			0			0
	others ⁵⁾			0			0
	Subtotal 1.1.2	0	0	0	0	0	0
	Subtotal heating only	0	0	0	0	0	0
1.2	Reversible (heating and/or cooling) ⁶⁾						
	air / air ⁷⁾			0			0
	air / water			0			0
	brine / water			0			0
	VRF/VRV ⁸⁾			0			0
	others ⁵⁾			0			0
	Subtotal reversible	0	0	0	0	0	0
	Total space heating	0	0	0	0	0	0
2.	(domestic) Hot water only						
2.1	Heat pump water heaters			0			0
2.2	Exhaust air			0			0
	Subtotal hot water	0	0	0	0	0	0
3.	District Heating ⁹⁾						
4.	Industrial Heat Pumps						
	air-source						
	ground-source						
	water-source						
	Subtotal industrial heat pumps			0			0
5.	Thermally driven heat pumps						
	sorption heat pumps						
6.	gas/motor compression units						
	All Heat Pumps			0			0

Market segments for heat pump sales

	New building	Renovation
Residential: single/double family house	Mass market currently developing	Increasingly recognized market (France, Germany, Sweden, Switzerland), importance of domestic hot water units increasing
Residential: Multi-family residency	Small; market developing	Initial steps are made
Non-residential (commercial)	Minority share in currently sold heat pumps. Several demonstration projects available, potential for heating and cooling projects by far not exploited.	Increasingly important with owners that value low operating cost. Special application in sewage systems, subways and tunnels.

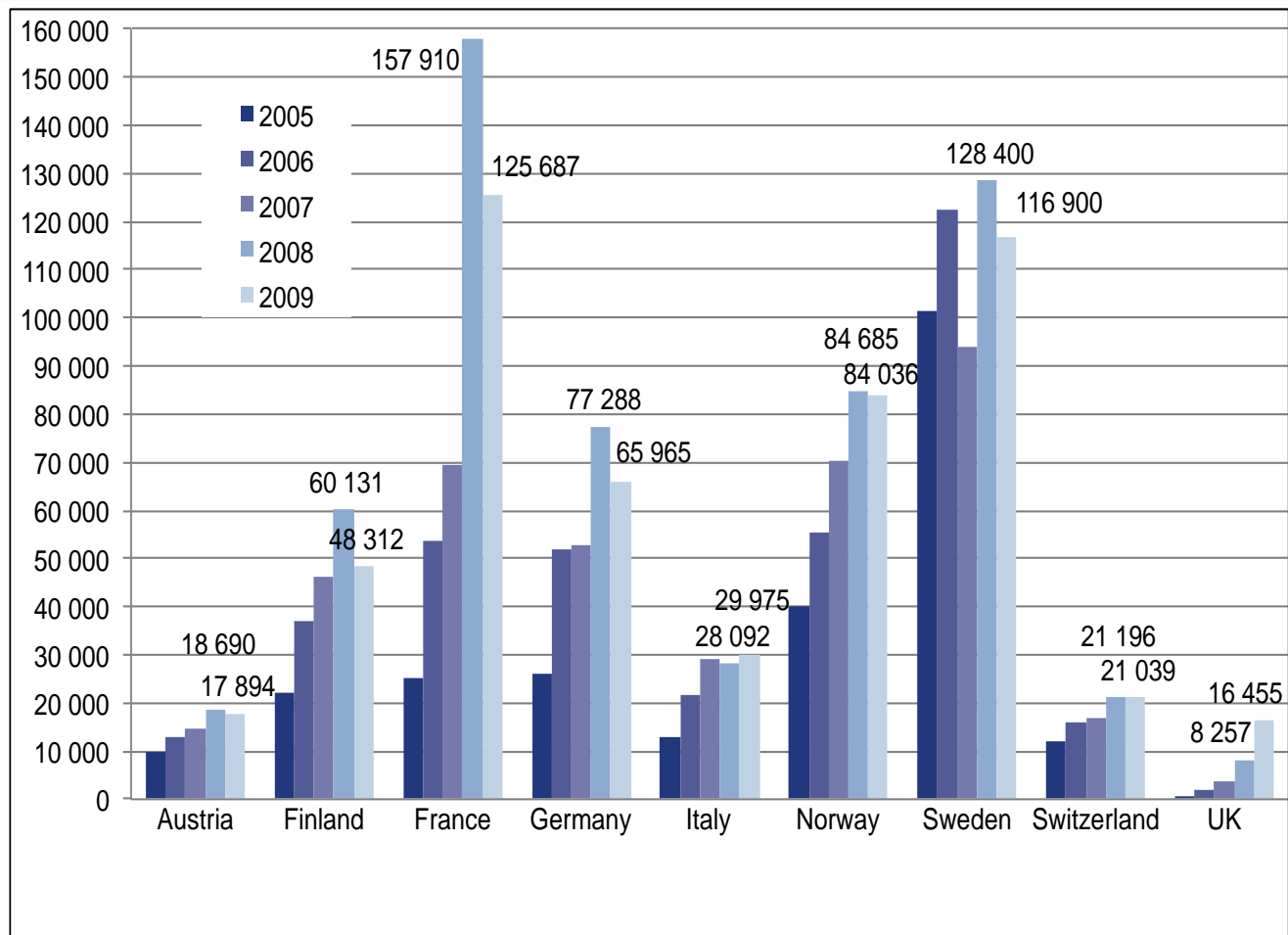
The market: total sales 2005-2009 - 2.098.959 units



Including: Austria, Finland, France, Italy, Germany, Norway, Sweden, Switzerland, UK

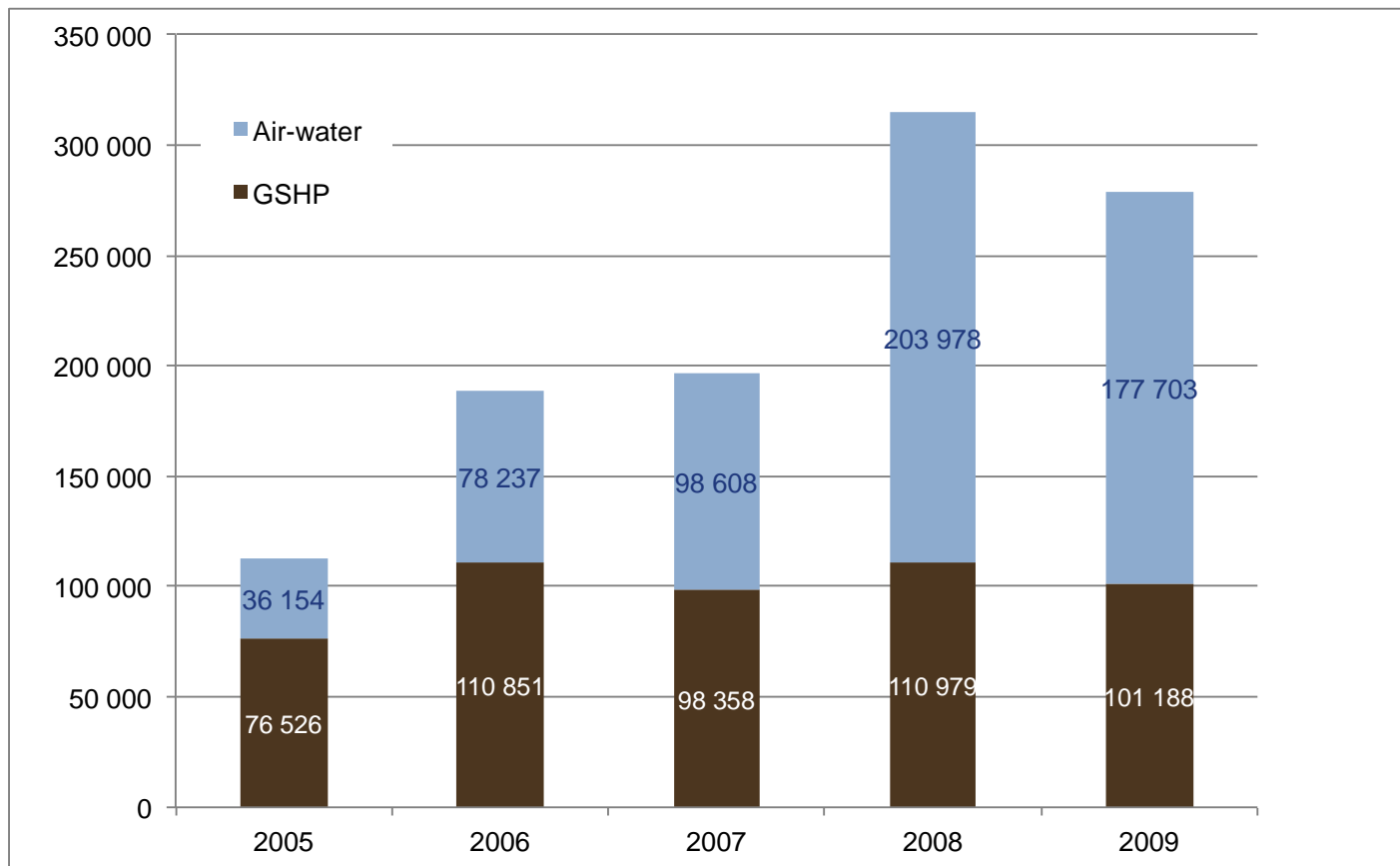
The market development 2005-2009

9 countries, total sales - 2.098.959 units



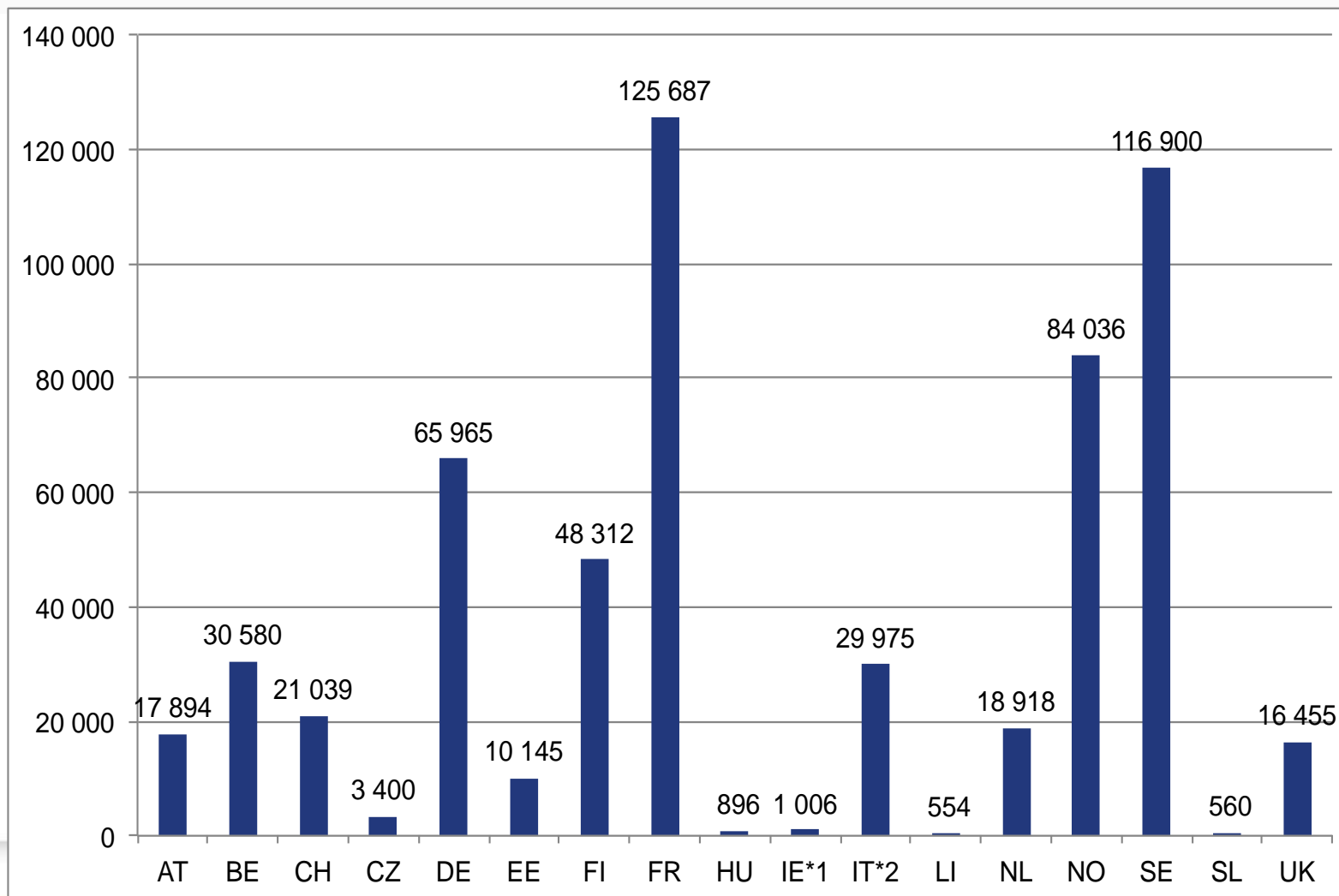
The market development 2005-2009

9 countries: by energy source, heating only

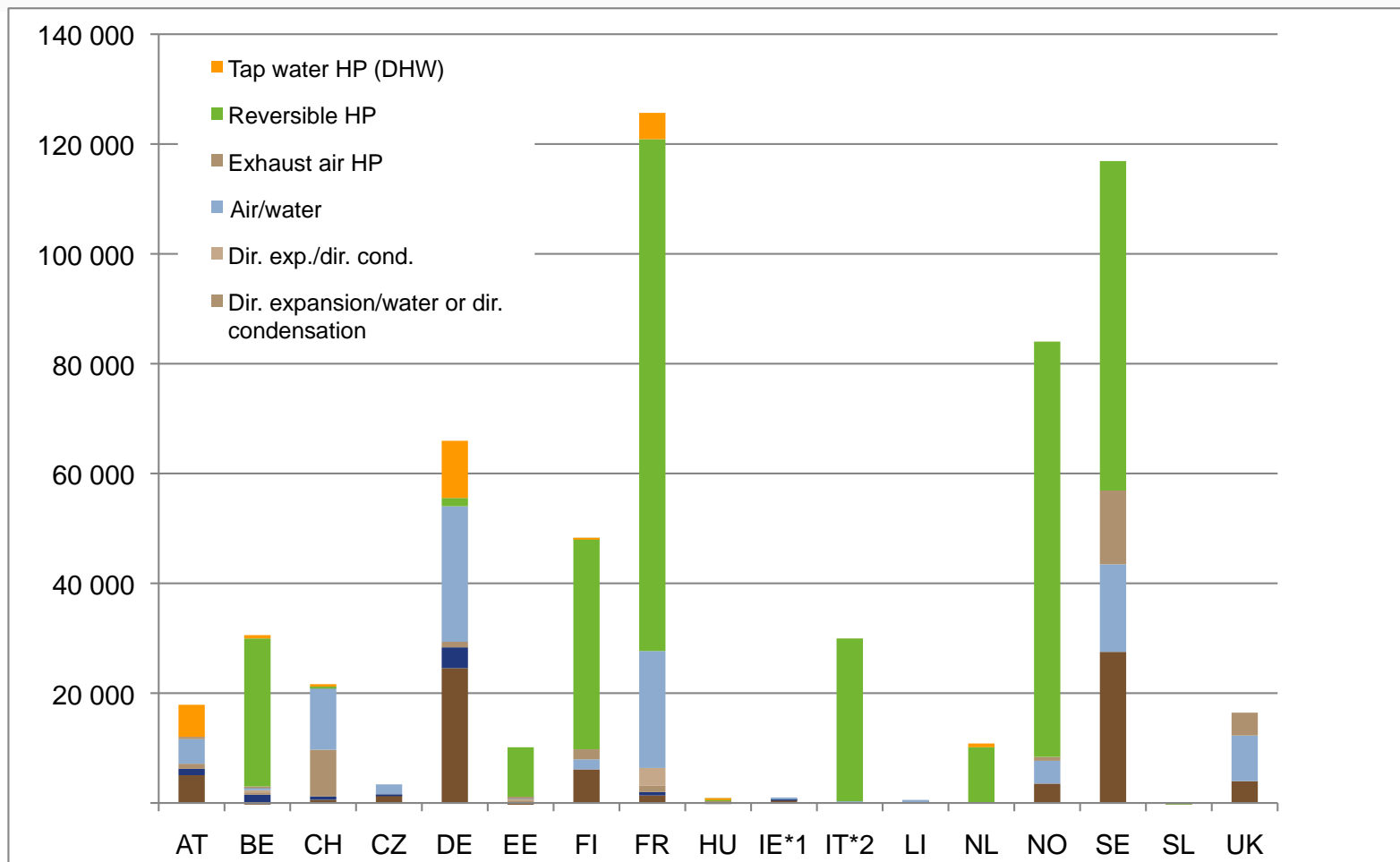


* excludes air-air units

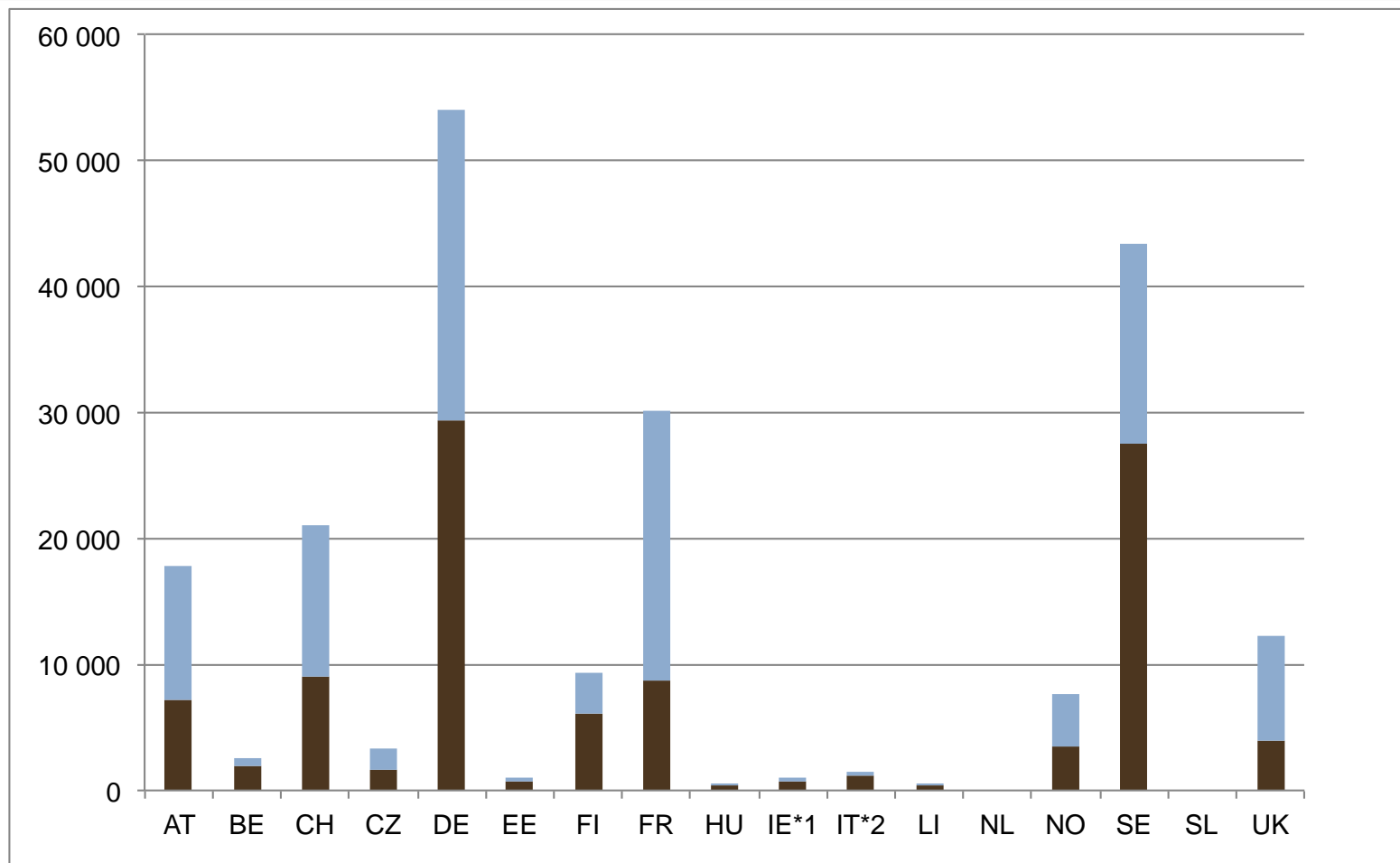
Heat pump market 2009: 17 countries, 592 322 units



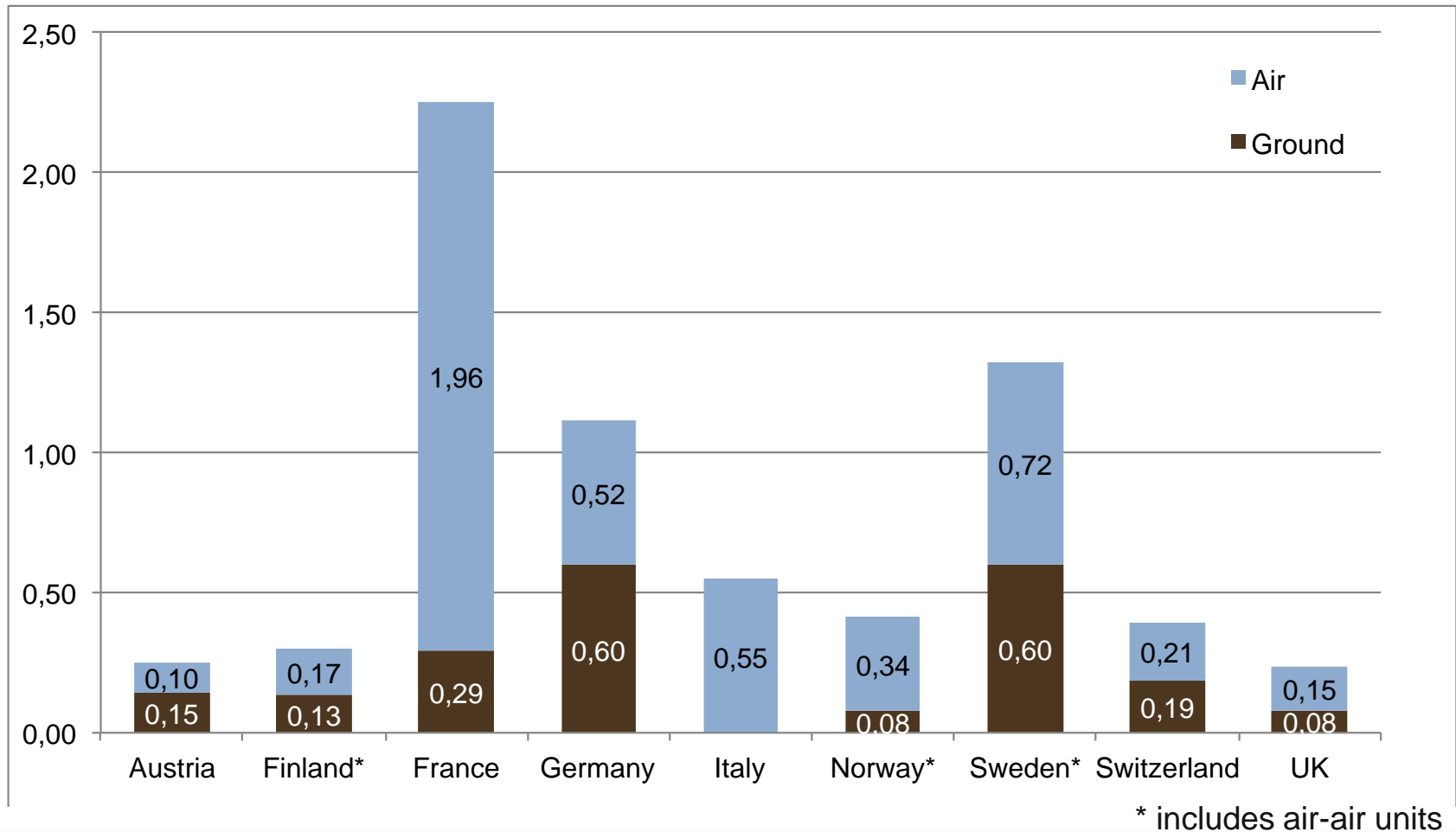
Heat pump market 2009: 17 countries, 592 322 units - by type -



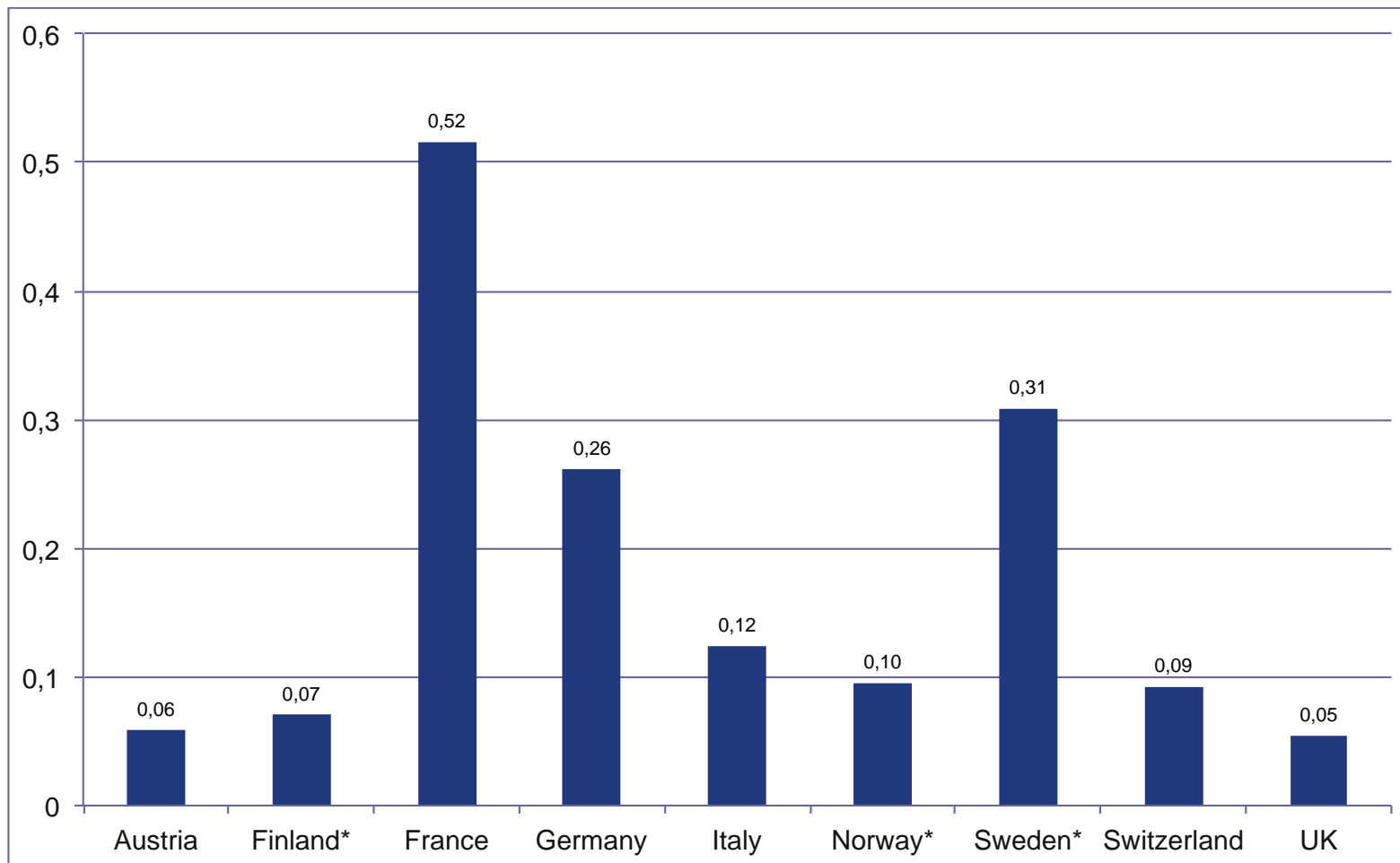
Heat pump market 2009: 17 countries, 592 322 units heating only: by energy source



Renewable contribution 2009, 9 countries: 6,83 TWh



Greenhouse gas emissions savings 2009, 9 countries: 1,58Mt



* includes air-air units

Contribution of heat pumps to 2020 targets (EU-9)

	2009	Cumulated 2005-2009	Cumulated 2005-2020 (est)
Renewable energy production	6,83 TWh	25,96 TWh	101 TWh
CO2 savings	1,58 Mt	6 Mt	23 Mt

Contribution to targets from **business as usual scenariao**

RES production: 4% of target
CO2 savings 2% of target

What about 2010/2011

- **2010: market bottoms**
 - Low energy prices / tense economic situation
 - Positive legal framework not yet implemented
- **2011: silver line on the horizon**
 - Revision of subsidies (RES integration)
 - manufacturers report increasing demand
 - strong focus on renovation segment (hybrid HP solutions, domestic hot water)
 - integration: Apps, networks, smart meters, smart grids



Summary

- EU heat pump market maturing in many countries
- Heat pumps do contribute **a triple dividend** to all EU energy savings and GHG reduction goals.
- Improvements in the efficiency of the heat pump system and the efficiency of electricity production increase this potential.
- Improvements in the energy demand of buildings (as of EPBD implementation) improve the applicability of heat pump technology.
- Huge potential of heat pump technology in the renovation and commercial sector.

The European Heat Pump Association History

EHPA was established in the year 2000 as a European Economic Interest Group to promote awareness and proper deployment of heat pump technology in the European market place for residential, commercial and industrial applications. EHPA aims to provide technical and economic input to European, national and local authorities in legislative, regulatory and energy efficiency matters.

EHPA coordinates the **Quality label for heat pumps** as well as the **EUCERT** training and certification scheme for installers and compiles the annual European **heat pump statistics**.

All activities are aimed at overcoming market barriers and dissemination of information in order to speed up market development of heat pumps for heating, cooling and hot water production.

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