

Energy Research in Austria

Sabine List

Federal Ministry of Transport, Innovation and Technology

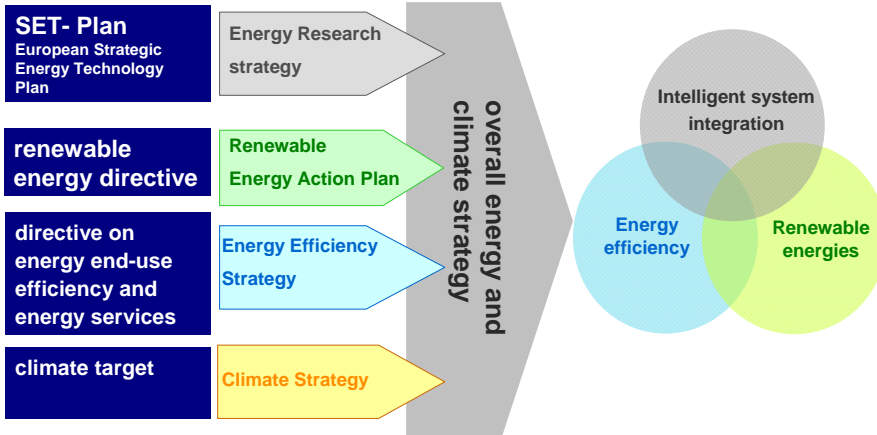
Heat Pump Workshop

Vienna, 9th November 2010

Comprehensive Energy Strategy

EU → **National**

20-20-20 targets



Strategy Process „e2050“



Objective:

- development and evaluation of longterm energy-options (technology paths)
- definition of innovation strategies and set up of RTD-programmes
- formulation of basics for an Austrian energy research strategy
- formulation of input for an overall energy and climate strategy of the Austrian Government

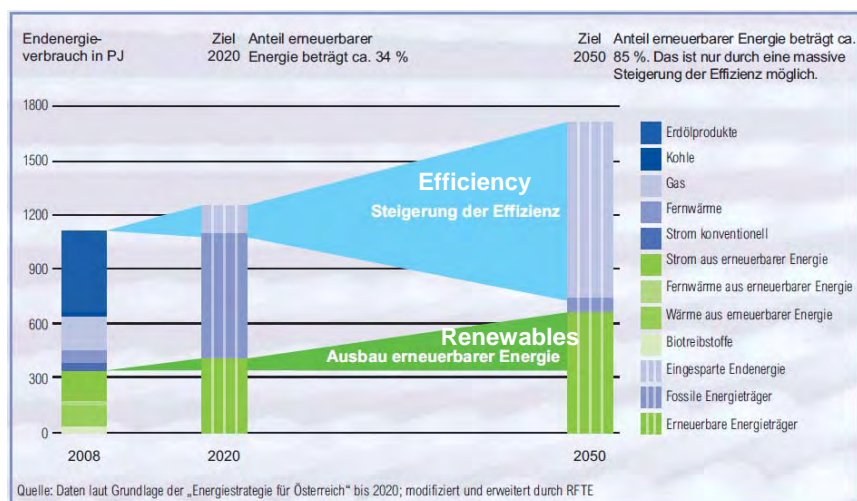
Results:

- expert's report on thematic priorities
- technology roadmaps for Austria (PV, Solarthermal, Grids ...)
- Austrian Energy Research Strategy



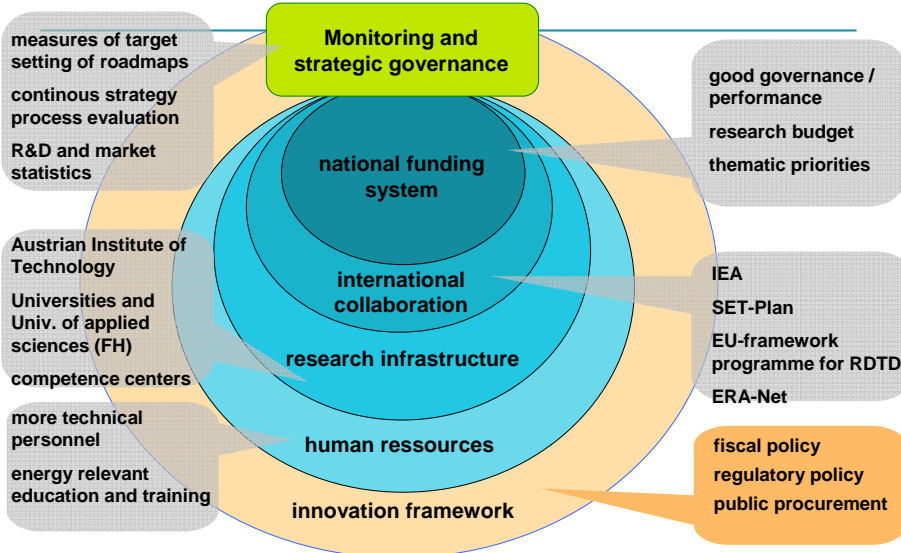
Seite 3

Making the Zero Carbon Society Possible!



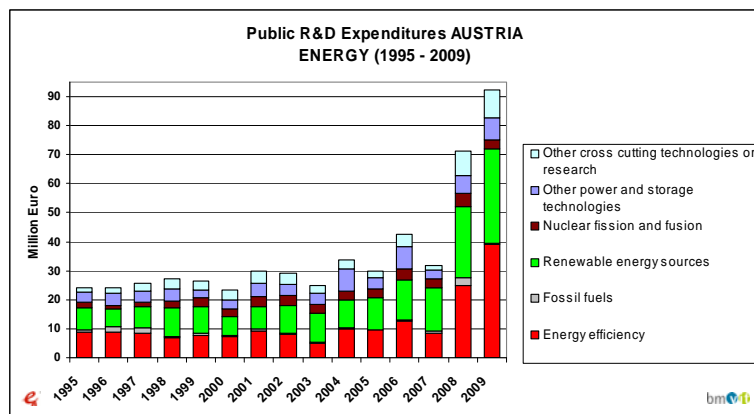
Seite 4

Energy Research Strategy Operation levels and measures



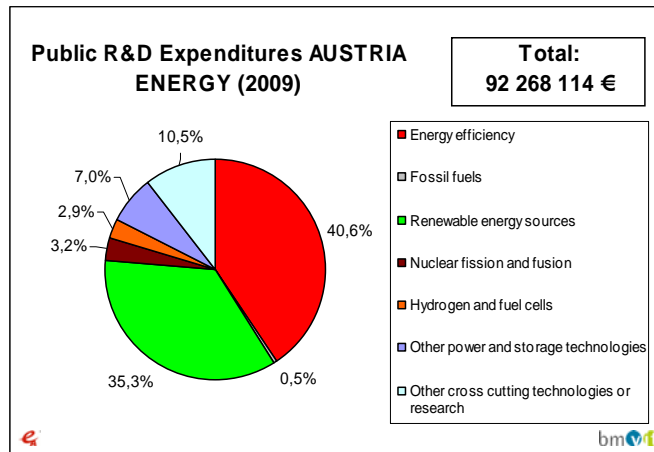
Seite 5

Public Energy R&D Expenditures Energy sectors



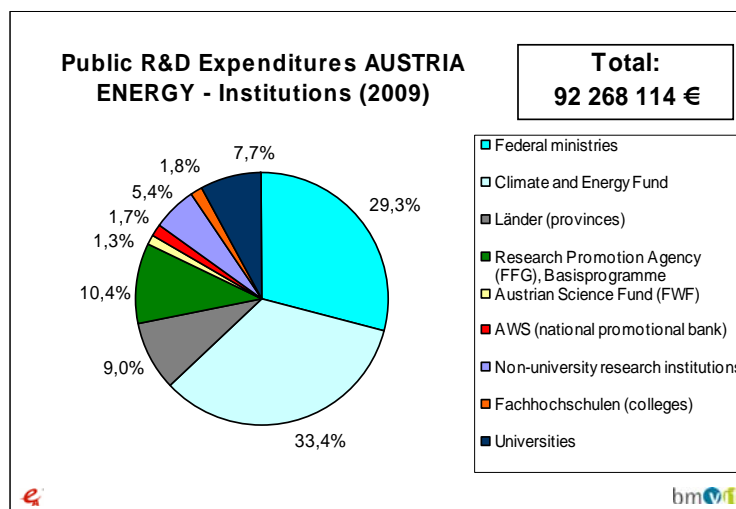
Seite 6

Energy Sectors



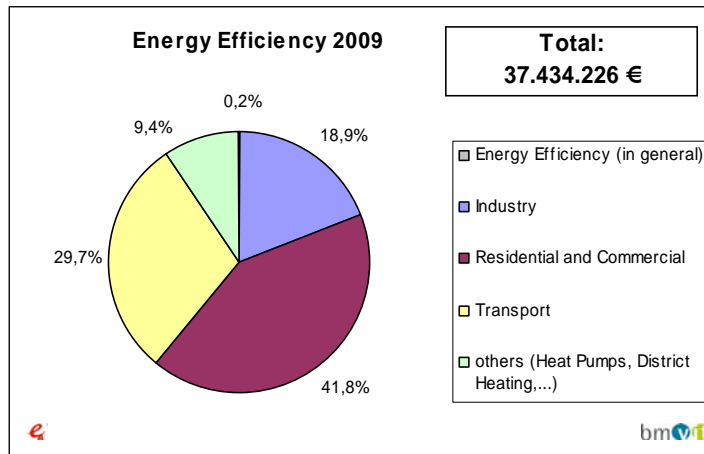
Seite 7

Institutions



Seite 8

Energy Efficiency



Seite 9

International Cooperation



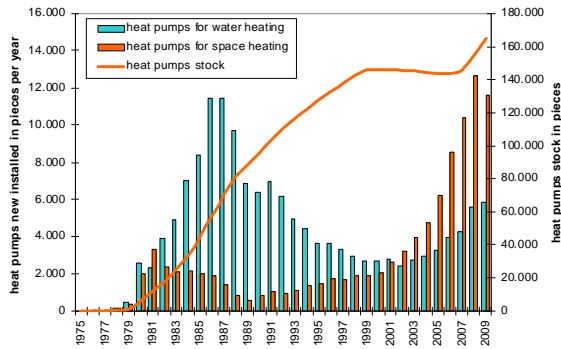
- active involvement of Austrian experts in the implementing agreements and expert groups of the International Energy Agency (IEA)
- Austrian participations in the EU Framework Programme for Energy
- increasing participations in European Technology Platforms and PPP (Renewable Heating and Cooling, Smart Cities)
- Joint calls within energy relevant ERA-Nets (Bioenergy, ...)
- participation of Austria in „European Energy Research Alliance“

Seite 10

Heat Pump Market in Austria



development of home market 2009



Source: Faninger (2007), EEG

2009 installed (pieces):

water heating: 5.837
 space heating: 11.637
 ventilation: 523

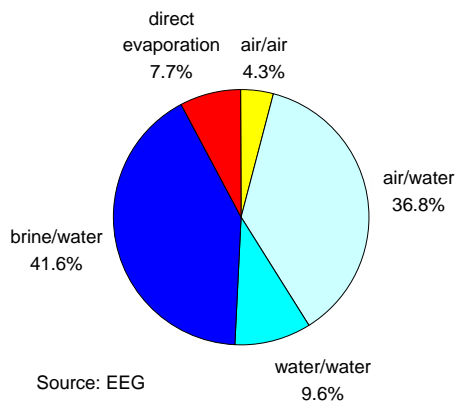
total: 17.997
 total: -3,8%

cumulated: 166.894 Stk.

Heat Pumps



home market 2009: types of heat source



Source: EEG

changes 2009:

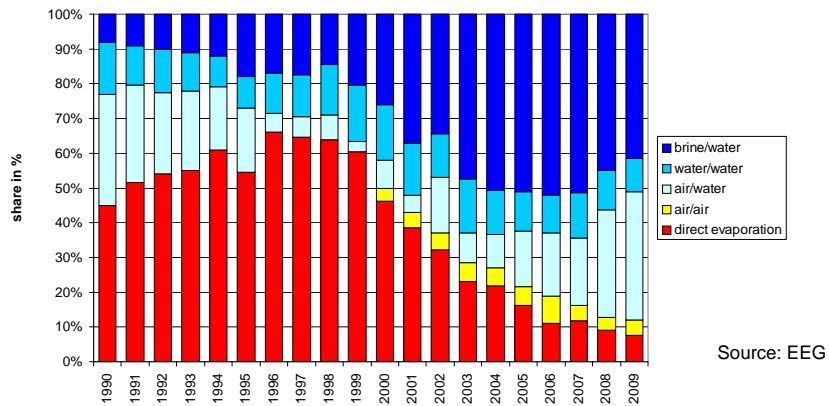
(refer to pieces 08/09)

air/air: +7%
 air/water: +4%
 water/water: -22%
 brine/water: -11%
 direct evaporation: -20%

total: -7%

Heat Pumps

development of the share of heat sources (home market)



Seite 13

ENERGY Base Vienna



- passive house office building
- 4500 m² offices
- 1500 m² laboratories
- 100% heating and cooling based on Renewables
- 400 m² PV-plant => ca. 42.000 kWh/a
- Solarthermal heating and cooling
- heat pump
- plants moisturisation
- reduction of energy consumption by 80 %
- 100 % supply with daylight by light control

Seite 14

Thank you for your attention!

Download of workshop presentations

www.nachhaltigwirtschaften.at/iea

**Information about “Building of tomorrow”
programme**

www.hausderzukunft.at