



ehpa
european heat pump association

EHPA Quality Label Committee and Test Center Working Group

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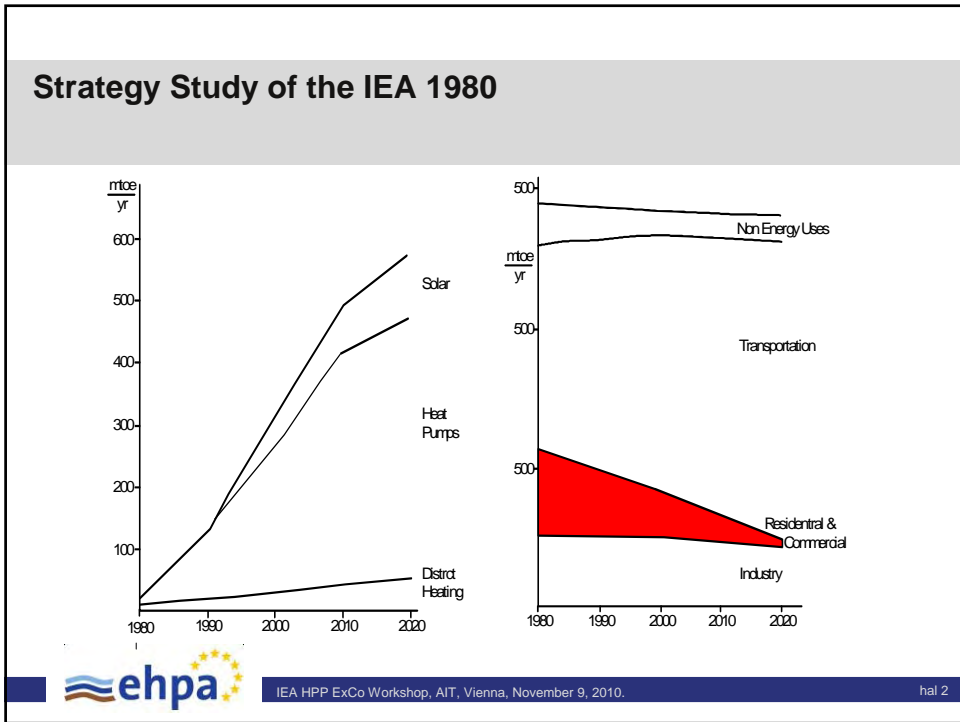


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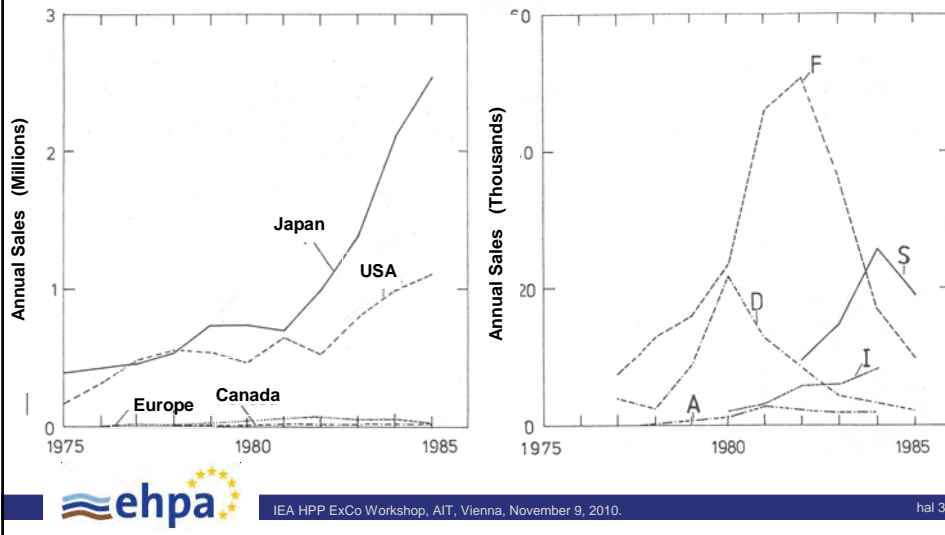
European Quality Label
for Heat Pumps



validity check at: www.ehpa.org/QL



Heat Pump Market Development after the Oil Price Shocks



Development of the EHPA Quality Label

The EHPA quality label for heat pumps originates in activities of the heat pump associations of Germany - D, Austria - A, and Switzerland - CH to create a common set of requirements to ensure product and service quality for heat pumps named

D-A-CH Quality Label for Heat Pumps.

The idea has been further developed in the European Heat Pump Association by the founding countries and Sweden.

The country scope is currently extending, and in order to reflect this development, the name D-A-CH quality label has been replaced by

EHPA Quality Label for Heat Pumps.





- Several national labelling or incentive programmes for heat pumps already exist or are developing



Scandinavia :
Nordic Swan



Germany / Austria / Switzerland :
D-A-CH Gütesiegel



France :
Promotelec +
'07 : NF Pac



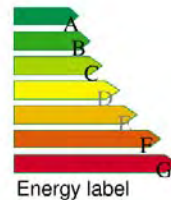
Germany :
Blauer Engel



UK : ECA Enhanced Capital
Allowance



Ireland : greener homes scheme



Energy label



EHPA quality label: status-quo



- National label with a common set of requirements throughout Europe
- Available: AT, BE, CH, CZ, DE, FI, FR, SE, SK
- Planned: the rest of Europe
- Coordination via EHPA
 - Maintenance of regulation
 - database
- Execution of certification via national heat pump associations
- Mandatory independent third party testing



Member of the EHPA Quality Label Committee

- **Austria** established by Bundesverband Wärmepumpen Österreich BWP and Leistungsgemeinschaft Wärmepumpe LGWA
- **Czech Republic** established by the Czech Heat Pump Association CHPA
- **Belgium** established by Renewable Business Facilitator and WarmtePompPlatform Vlaanderen
- **Finland** established by Finish Heat Pump Association SULPU
- **France** established by French Heat Pump Association AFPAC
- **Germany** established by Bundesverband Wärmepumpe BWP e.V.
- **Slovakia** established by Slovak Association for refrigeration and air-conditioning equipment SZ CHKT
- **Sweden** established by SVEP- Swedish heat pump association
- **Switzerland** established by Fördergemeinschaft Wärmepumpen Schweiz FWS



Test Centres of the EHPA Quality Label

Austria:	Austrian Institute of Technology (Heinrich Huber)
Germany:	HLK Stuttgart (Bernd Klein) ILK Dresden (Ralph Noack) TÜV Rheinland Immissionsschutz und Energiesysteme GmbH (Ansgar Pomp) TÜV Süd Industrie Service GmbH (Peter Schnepf) VDE Prüf- und Zertifizierungsinstitut GmbH (Stephan Richter)
Sweden:	SP (contact: Ulla Lindberg)
Switzerland:	NTB (contact: Michael Eschmann)
Pending	CETIAT, France BSRIA, UK MCQ, Italy CEIS, Spain



Scope

EHPA rules and regulations can be found on EHPA homepage

- Air/Water
- Brine/Water and Water/Water
- Direct exchange ground coupled/water heat pumps

Under development

- Air/air heat pumps and
- domestic hot water heat pumps

HPs up to 100 kW

- certified heating mode only
- capacity and COP rating
- acoustic performance



The key requirements are (list not exhaustive):

- a) Conformity of all main components and compliance with the national rules and regulation (CE marking)
- b) Minimum efficiency values (operating points - required COP):
 - Brine/Water B0/W35 4.0
 - Water/Water W10/W35 4.5
 - Air/Water A2/W35 3.0
 - Direct exchange ground coupled to water E4/W35 4.0
- c) Declaration of sound power level.
- d) Sales & distribution, planning, service and operating documents in the local language of the country where the heat pump is distributed.
- e) Existence of a functioning customer service network in the sales area that allows for a 24h reaction time to consumer complaints.
- f) A two year full warranty which shall include a declaration stating that the heat pump spare parts inventory will be available for at least 10 years.



Common ground

- Independent third party certification
- Test requirements based on existing standards
- Test Center group is working with test regulations and performances of tests.
- Round Robin test within the test centers
- Certified heatpumps are listed in a Database on the EHPA homepage

Manufacturer	Model	Type	Technical Data
Alpha-InnoTec GmbH	Siemens SIC 6H/K, SIC 7H/K, SIC 8H/ K, SIC 10H/K, SIC 12H/K, SIC 14H/K, SIC 17H/K, SIC 23/ K	Brine/Water	
Bosch Thermotechnik GmbH	STE/STM 60, STE/ STM 75, STE/STM 90, STE/STM 110, STE 140, STE 170	Brine/Water	
CTA AG	Optiheat Duo 42e, Optiheat Duo 48e, Optiheat Duo 55e, Optiheat Duo 65e, Optiheat Duo 85e	Water/Water	
geosolar Gösselsberger GmbH	Scroll 8, Scroll 12, Scroll 14, Scroll 16, Scroll 18	Direktexpension HP	
Glen Dimplex Deutschland GmbH	SI 5TE, SI 7TE, SI 9TE, SI 11TE, SI 14TE, SI 17TE, SI 21TE, SI 30CS, SI 70CS SIK 7TE, SIK 9TE, SIK 11TE, SIK 14TE, SI 5BS, SI 7BS, SI 9BS, SI 11BS, SI 14BS	Brine/Water	



Changes in effect 01.01.2011

- COP values:
 - equal to those from Ecolabel
 - 15 % Bonus for refrigerants with a GWP < 150
- NEW VALUES
 - A/A - 2.9 (new)
 - A/W 3.0 - 3.1
 - B/W 4.0 - 4.3
 - W/W 4.5 - 5.1
 - DX/W 4.0 - 4.3
- Validity of existing labels:
All labels that were granted before 1.1.2011 are valid for three years with the old conditions. All renewals from 1.1.2011 onwards will have to fulfil the new COP values.



Changes in effect 01.01.2011

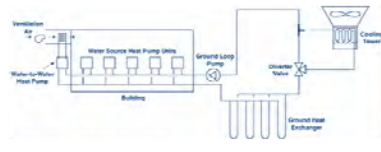
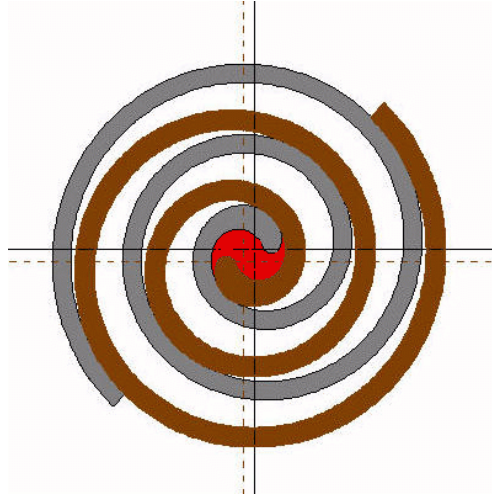
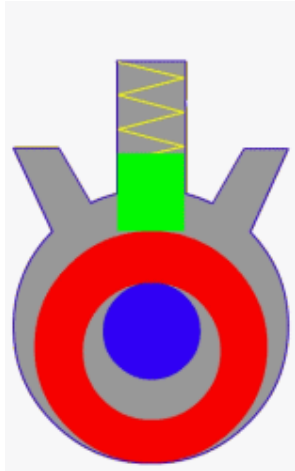
- Definition of model range approach
- Definition of application approach
(apply with nat. commission, they pick the models to be tested)
- Change of rules and regulations
 - Membership in national HPA/EHPA no longer necessary
 - Online publication of COP values must be accepted by parties that receive the EHPA quality label (! **National quality label commissions: update contracts**)
 - Documentation of refrigerant used and GWP on the label (! **National quality label commissions: update label design**)
- Communication:
 - Database active (www.ehpa.org/QL)
 - Wording on label: tested according to the rules and regulations of the EHPA quality label in compliance with the requirements of EN 14511, 1-3
 - Communication package under preparation



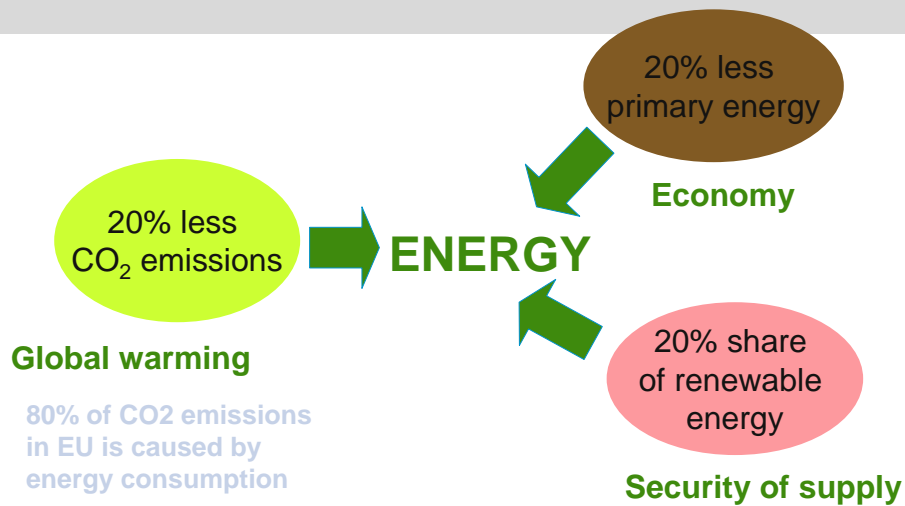
Future Activities

- Testing Regulations for air/air Units
- Testing Regulations for inverter-driven heat pumps (SPF ?)
- Testing Regulations for domestic hot water heat pumps
- Testing Regulations for heat pumps with heating capacities higher than 100 kW.
- Centralising the data base of tested heat pumps
- The increase the number of participating countries





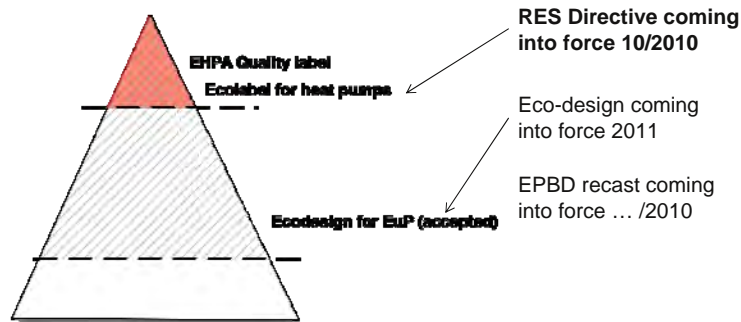
EU Targets by 2020



Situation

- **RES Directive** (Art. 14; para 6: “In the case of heat pumps, Member States shall promote those that fulfil the minimum requirements of eco-labeling ... (2007/742/EC))
- **Eco-design** for energy using products (under development)
- **EPBD** recast: in implementation
- National legislation (non exhaustive)
 - MCS (UK)
 - Greener Homes (IR)
 - EEG, MAP (DE): third party, EHPA-Q accepted, VDI 4650
 - RT 2010/RT 2012, NF PAC
 - ...
- Other labelling programs: Eurovent, Nordic Swan, P-Mark ...

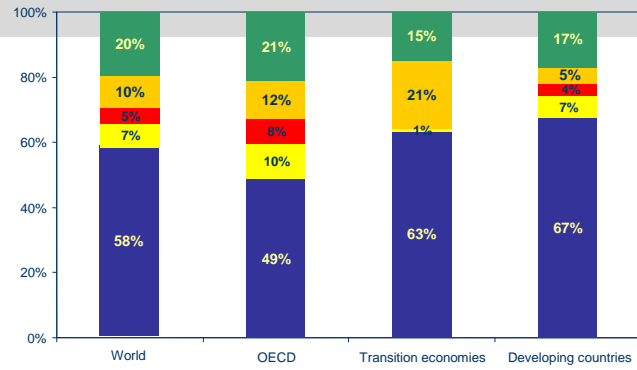
Influencing factors



Key questions

- How will RES-D, article 13 be implemented in MS?
- How will EPBD be implemented in MS
 - Methodology to calculate energy performance
 - Requirements on energy performance
 - Methodology to calculate cost optimal levels
- Will EuP require 3rd party certification, if so, which module?
- How will all these affect the market needs of an EHPA quality label?
- How will EHPA and members develop the Quality label further?
 - Additional value to users (one stop shopping, reporting GWP)?
 - Certification authority?
 - Alone or with others?

Contributory factors in CO2 reduction, 2002-2030



Improvements in end-use efficiency contribute for more than half of decrease in emissions, and renewables use for 20%

