Policy and regulation in Europe

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EU cornerstones for energy

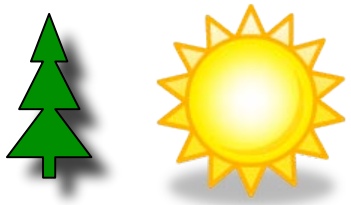
1. Reduce CO2 emissions
   Kyoto undertakings, and more!

2. Security of supply
   Have all (?) strategic resources coming from within the union

3. Competitiveness
   Should not lead to less jobs

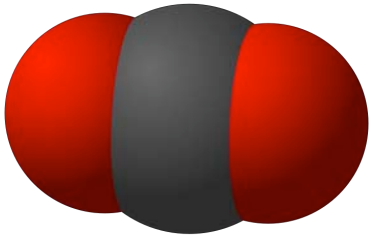
Comprehensive EU targets for 2020

- 20% Renewable energy



- 20% Primary energy savings by efficiency improvements

- 20% Reduction of CO2 emissions



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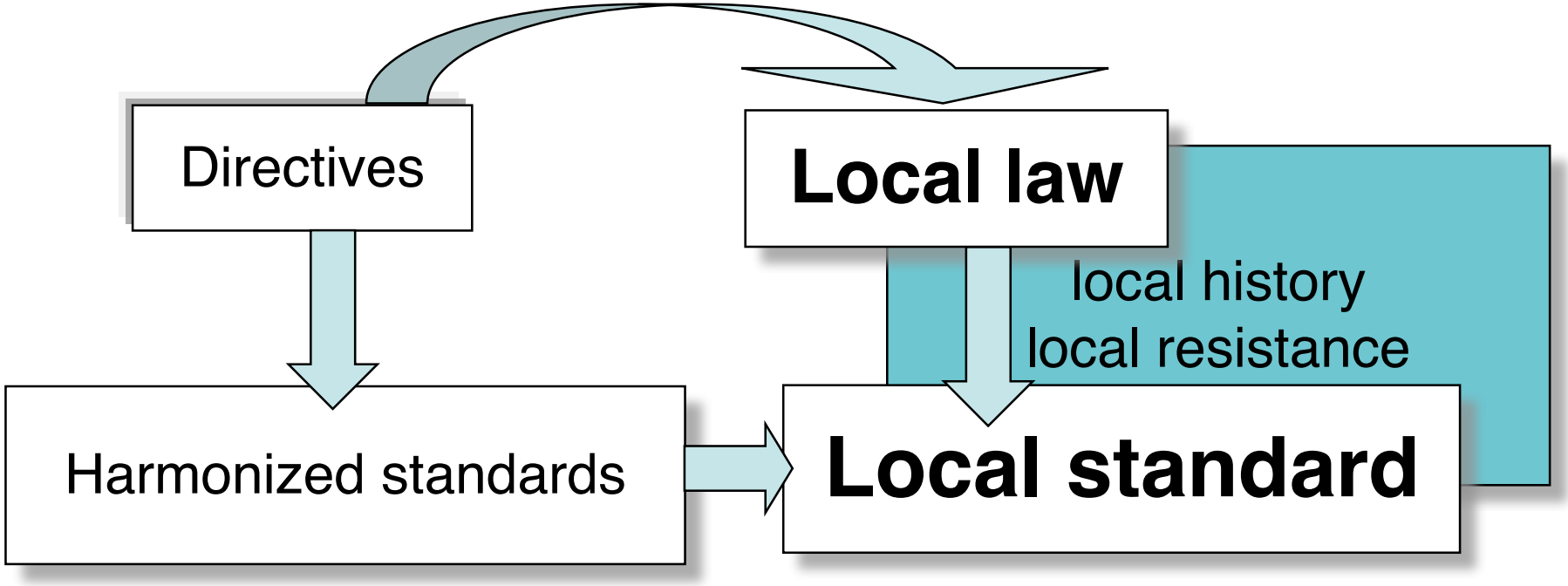
EU - national legislation



Existing policies and policies under way

F-gas regulation (August 2006)

Eco-design of Energy using Products (EuP) 2005/32/EC

Promotion of End Use Efficiency and Energy Services, 2006/32/EC

Energy Performance of Building Directives, EPBD 2002/91/EC

The European Eco-label 2007/742/EC

Renewable energy sources directive

EN Standards:

EN 14511, Heat pump capacity and efficiency

EN 255-3, Heat pump tap water efficiency

EN 378, Safety issues

F-gas regulation (August 2006)

Measures to prevent leakage of F-gases (HFC) > 3kg filling

Leakage control and equipment

Registration of discovered leakages

Safeguarfing/disposal

Certification personnel and company

Promotion of End Use Efficiency and Energy Services, 2006/32/EC

1. Decrease final use of energy by 9% from baseline years 2001-2005 until 2016 (voluntary)

2. Give an account for an action plan for each member state

3. 20% decrease in *primary energy* 2020

Paves way for heat pumps

Performance of Building Directives, EPBD 2002/91/EC

Demands on tighter building envelopes

In many countries demands on maximum installed electricity for heating

Energy conservation improvements in buildings, which will most likely favour heat pumping technology

Will result in lower heat demands → smaller heat pumps

Could postpone investment in heat humps for insulation and windows

The European Eco-label 2007/742/EC

Demand on mass produces products in order to:

Lower the energy demand, primarily electricity

Decrease CO2 load

Decrease energy demand from states outside EU

Requirement on heat pump COP: 4.3 @ 0/35
3.5 @ 0/45

(http://ec.europa.eu/environment/ecolabel/pdf/heat_pumps/criteria_en.pdf)

Energy using Pruducts (EuP) 2005/32/EC Groups of importance for heat pumps

Elektric motors 0,5-200(360) kW
Circulators (hermetisc circulation pumps)
Computers
Printers, Copy machines
Pumps
Ventilation fans
Smaller air conditioning units
Office illumination
Stand by and off mode losses

Less internal loads in commercial buildings
Better components for heat pumps

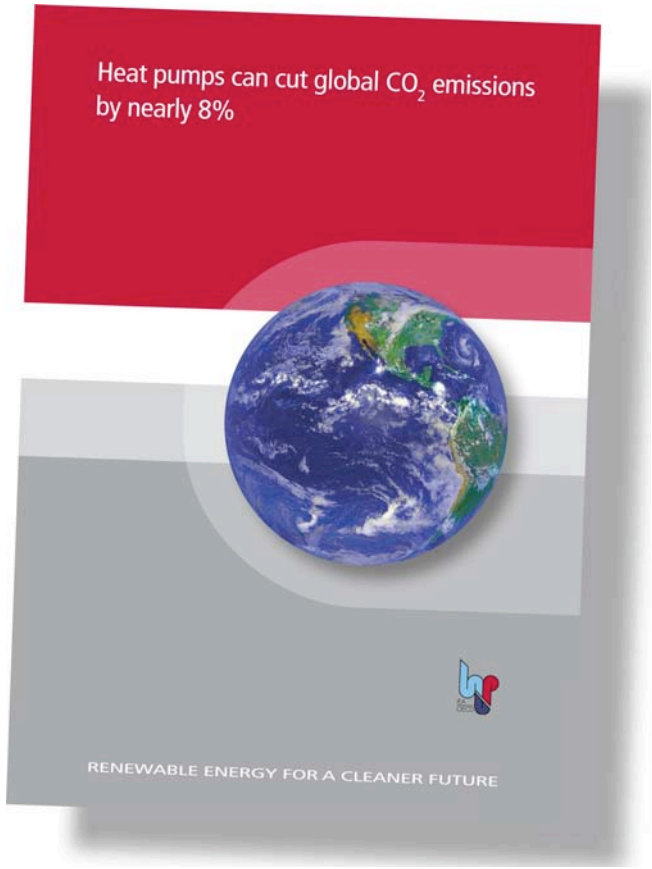
Renewable energy sources directive

20% of all energy supplied by renewable by 2020

Aerothermal, hydrothermal and geothermal positively regarded (2w ago)

→ May give immense influence in favor of GSHP's

Thank you for listening!



www.proheatpump.eu
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