
Vision 2030 for DHC

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34th Congress of Euroheat & Power, Venice

May 26th 2009, 9am-12am



Speakers

- Introduction: Thinking out of the box
 - Jens Uwe Meyer, Die Ideologen
- Towards 2050: key forces for change
 - Jari Kostama, Finnish Energy Industries, Finland
- Heat market 2030 – the TIMES model
 - Markus Blesl, Germany
- The DHC Vision 2030 and 2050
 - Jan Eric Thorsen, Danfoss
- A joint research agenda
 - Nikolai Pushkarev, DHC+, Belgium
- Discussion

History

- 2020 targets (20% renewable, -20% CO2, 20% efficiency)
- Ecoheatcool \Rightarrow DHC is the best urban tool
- April 2008: Creation of a “Technology Platform for District heating and Cooling”: DHC+
 - Cooperation (Mannheim, October 2008)
 - Vision, Research Agenda
 - 4 living projects
- New members can join next December

Features

- Unity in diversity
- Sustainable (Human, Energy resources)
- Pollution Control
- Efficiency
- Fuel mix flexibility
 - Surplus heat recycling
 - Energy supply security
 - Renewable-proof
- Safety
- Reliability
- Long term competitiveness (high CapEx),
but consumptions might decrease...

Quality Criteria

Figures

- 5000 DHC in EU
- Market share
 - Heat = 9%
 - Cooling = 2%
- 560 TWh, 20 G€ (2005)
- 83% renewable or surplus heat
- Biomass, geothermal, solar, waste: 14% (vs EU average 7%)
- 113 million tons of CO₂/y avoided (2.6% of EU emission)

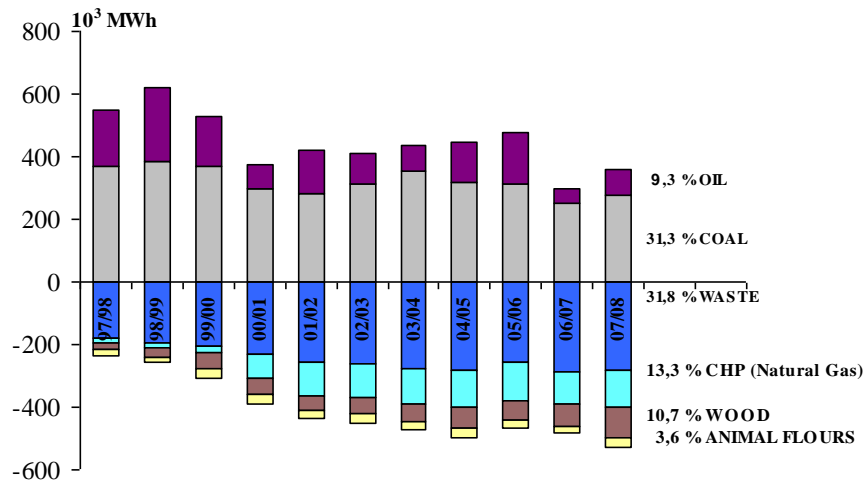
Toward 2020

- High density areas
 - By 2030, urbanization rate around 80%
- Market share to be doubled (Heat) and x10 (Cooling)
 - New generation of technology (Production, pipe, exchanger)
 - Best practice transfer (Both technology and policy)
 - Expansion (Included new DHC)
- 20 & 20 & 20 in 2020 = 100% DHC
 - Primary energy demand reduction (2.5 to 3%)
 - 450 more million tons of CO₂/y avoided (10% of EU emission)
 - 25% renewable
- Import dependency diminution

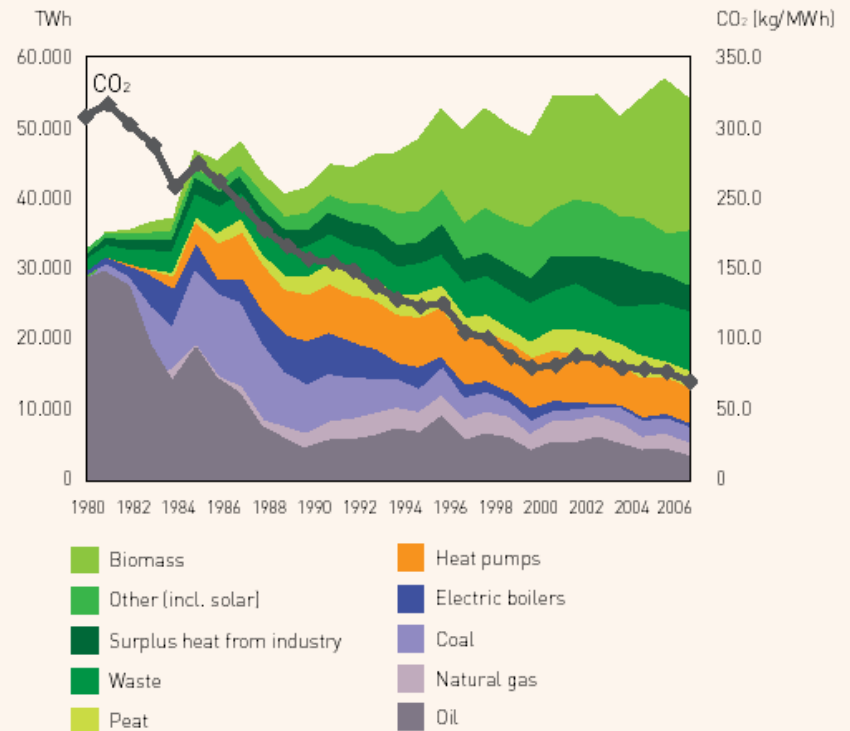
Urban Planning

Global and local examples

- Sweden from 1980 to 2005
- Grenoble (F) from 97/98 to 07/08



Energy mix In Swedish district heating



By 2030

- Intelligent energy exchange network
 - Sustainable energy mix diversification
 - Real-time smart metering
 - Plug-and-play intelligent substations
 - Regulation
- New uses
 - Electricity transfer

Two-way DH

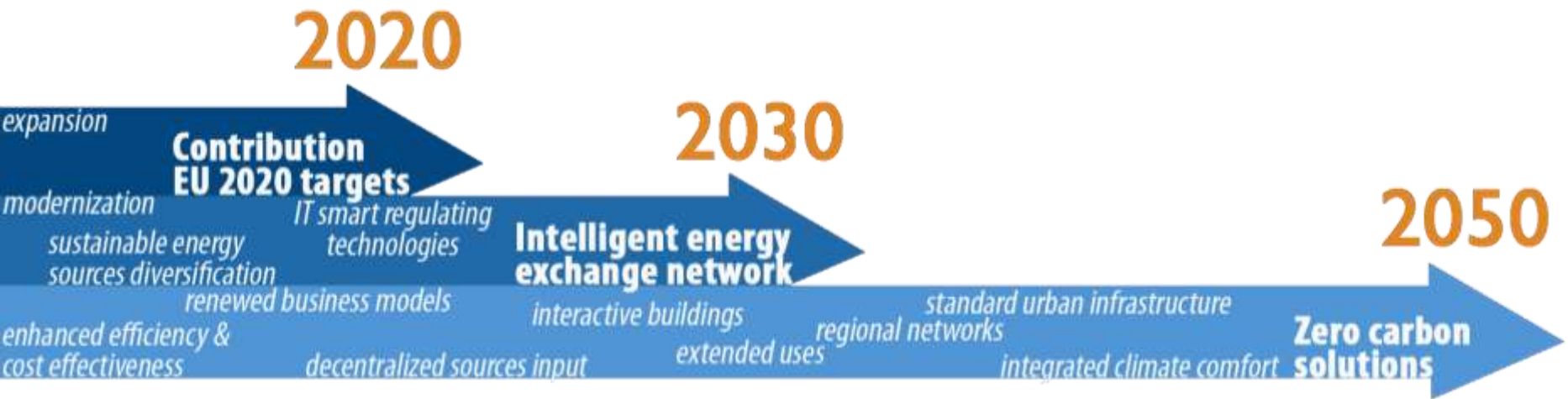
Heat Market 2030

In 2050

- Regional networks
- Zero carbon solution
 - Carbon abatement technologies
 - Carbon Capture and Sequestration
- Integrated climate comfort
- New 20-20-20 DHC contribution
 - 80% CO2 reduction
 - 50% energy efficiency improvement
 - 60% renewable

Schedule

- Target and processes



- Research agenda to be done
- Link with RHC-ETP to be build