

More and better CHP for Europe



Euroheat & Power
Congress
18 June 2007

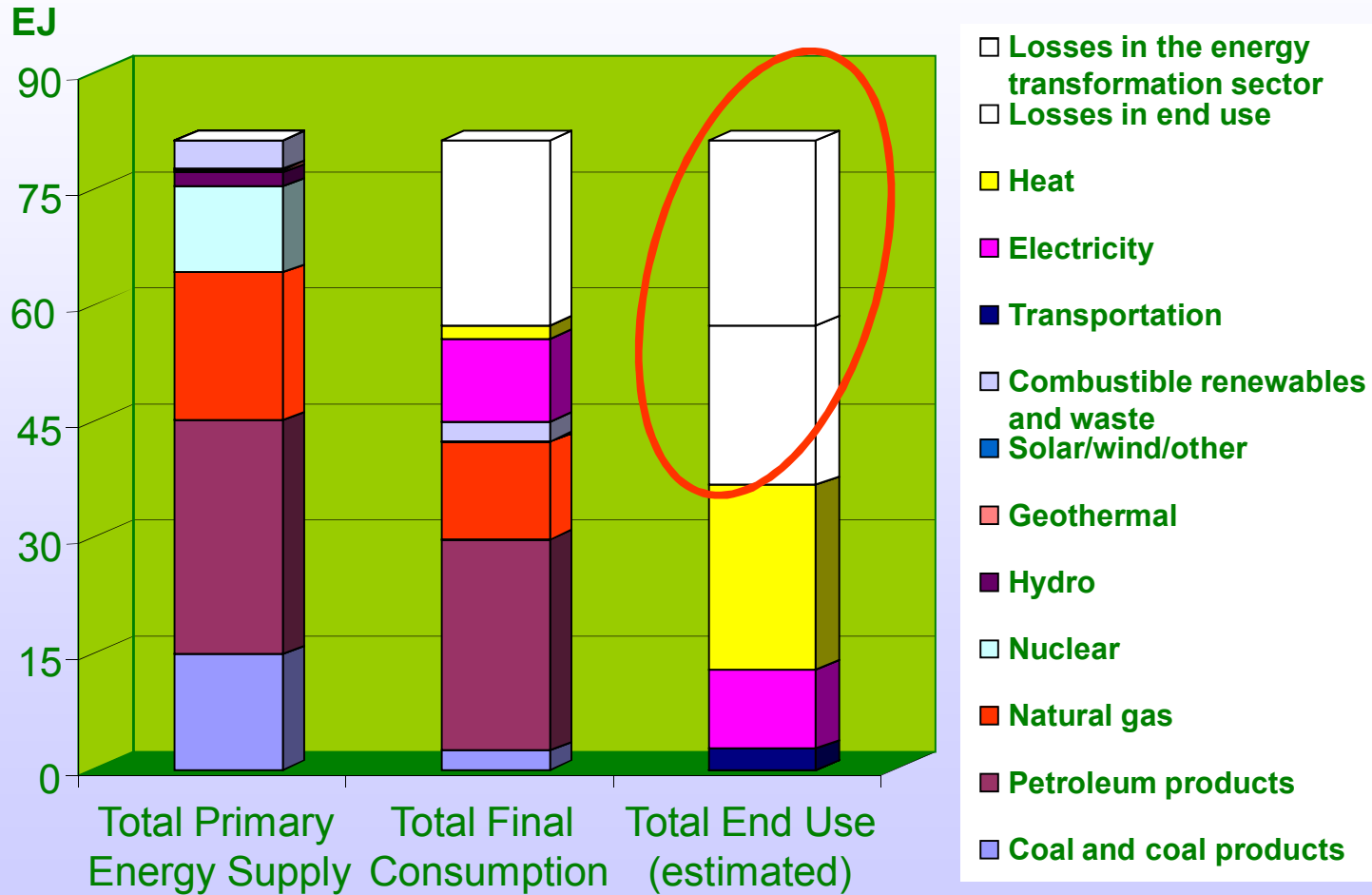
Sabine Froning
Managing Director EHP

Horizon 2020: European objectives

- Reduce CO₂ by at least 20% (possibly 30%)
- Reduce primary energy consumption by 20%
- Increase renewables to 20%
- Increase biofuels to 10%
- Increase CHP to 18% (horizon 2010)

Euroheat & Power

Where does the energy go?



Energy balances for EU25+ACC4+EFTA3 during 2003

Flashback CHP Directive

- 1997: a strategy and an informal target to double the share of CHP to 18% by 2010
- 2004: adoption of Directive
- 2006: deadline for transposition by Member States
- 2007: guidelines for implementation still in the pipeline...
- 2008: the first Commission report/review is due (and the market shares have barely increased...)

Main elements CHP Directive

- Definition of CHP electricity
- Definition of high-efficiency CHP (comparison of CHP to a matrix of reference values for separate production)
- Guarantees of origin
- Determine and exploit the potential
- Remove barriers and support

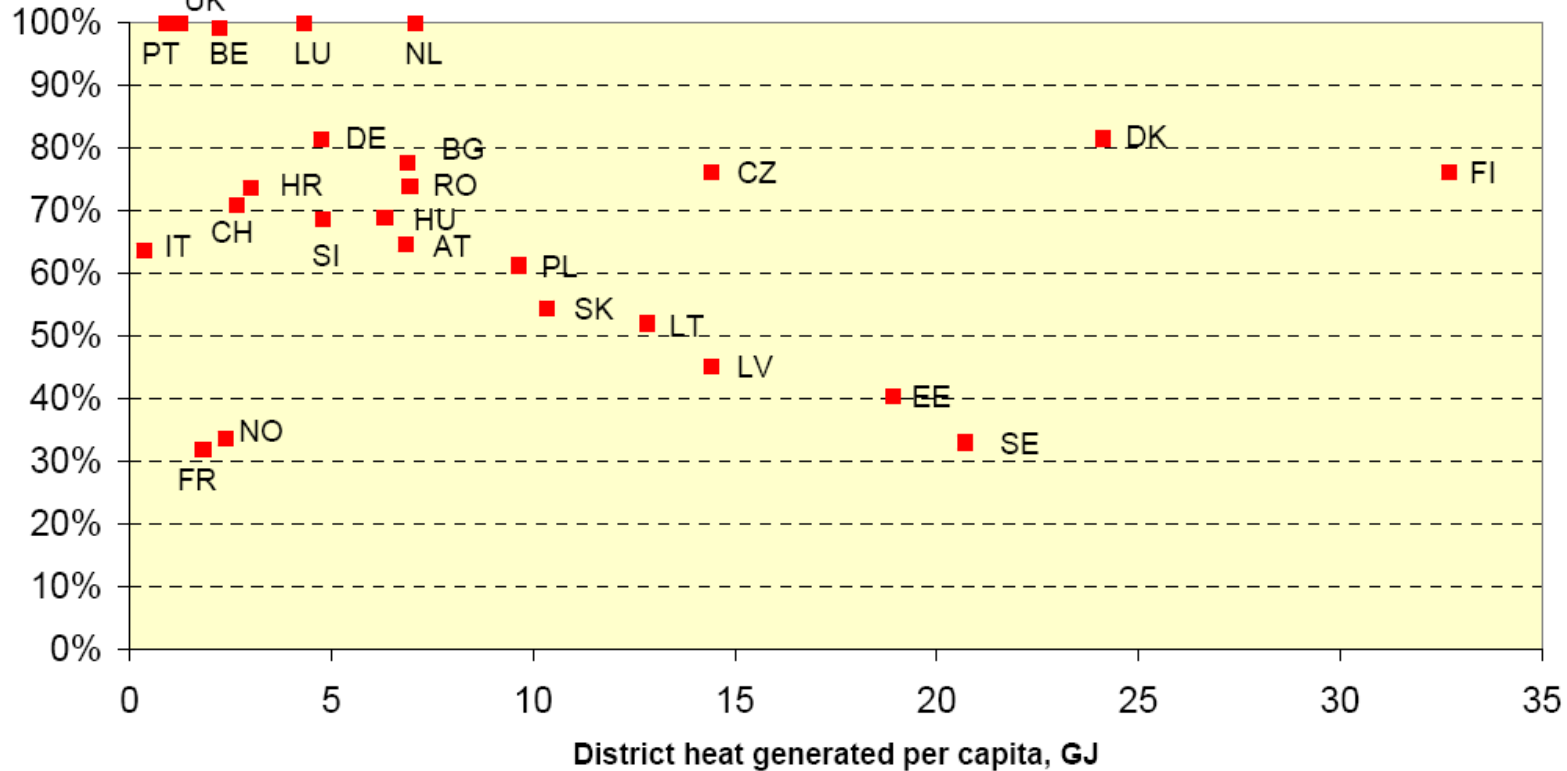
High efficiency CHP with DHC

- Substitution of fossil fuels by supply of low-grade waste heat in the residential, service and industrial sector
- Operational flexibility for a flexible market approach and better economy
- Fuel flexibility for a flexible response to fuel shortage or price hikes
- Optimisation in combination with other sources and fuels

Euroheat & Power

Share of CHP / District heat per capita

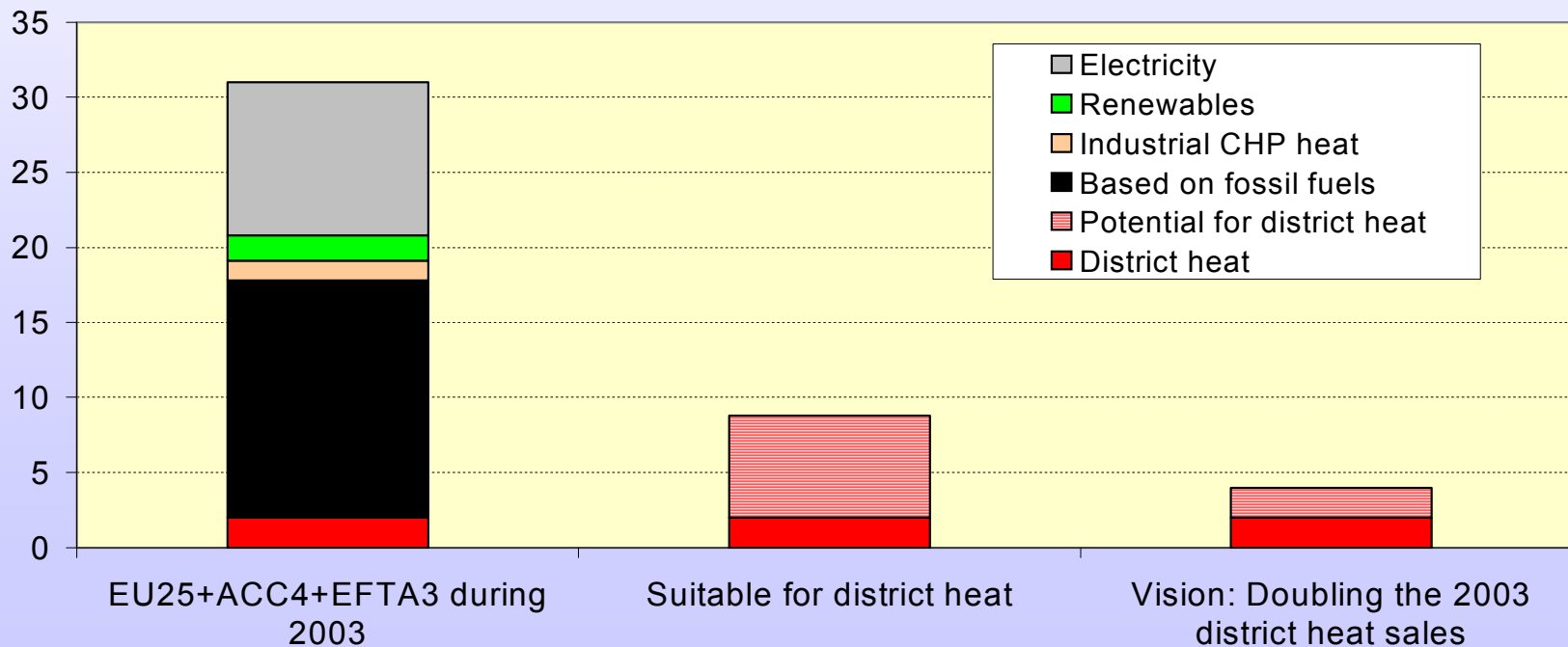
Share of CHP heat in total district heat generation



Market for District Heating

The final end use of electricity and net heat in the industrial, residential, and service sectors, excluding the agricultural and transport sectors

EJ/year



Summary of possibilities

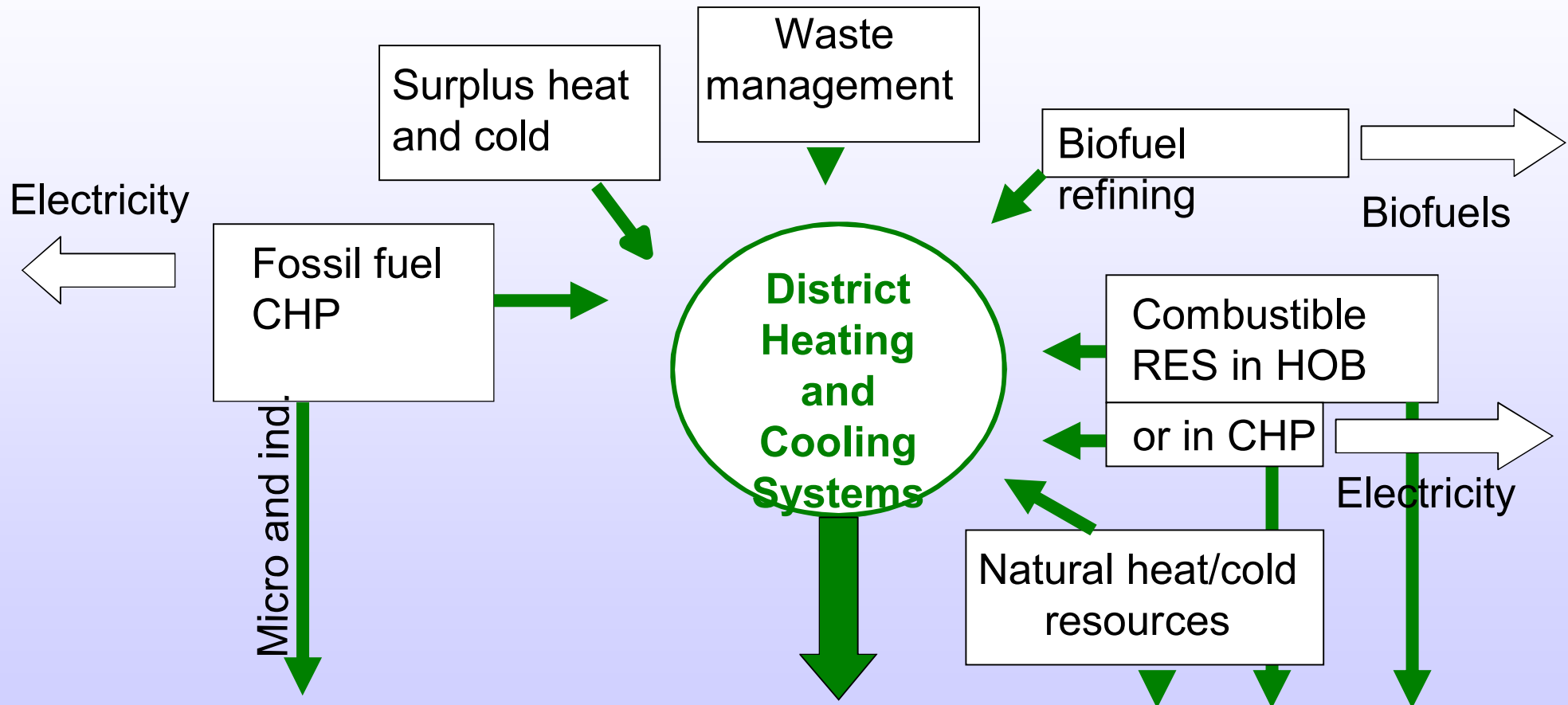
- The CHP share in district heating should increase from the current share of 68 % to about 80 %
- The current overall average power-to-heat ratio should increase from the current level of 0,33.
- An increase with 40 % would give a new average power-heat-ratio of 0,46.
- The sales of district heat (incl. for absorption cooling) should double at the horizon 2020

Challenges

- It's not all about electricity. CHP has a strong heat market dimension.
- DHC is key to enable larger market penetration of CHP. Not only small is beautiful.
- CHP/DHC can turn even existing buildings into low or zero carbon buildings.
- CHP/DHC replaces energy by capital investment. The infrastructure is more than competitive, in particular from a national economy perspective.
- DHC is a collective system which needs collective decision-making.

Euroheat & Power

Synergies



Heat and cold demands
in the industrial, residential, service and agricultural sectors

Related legislation

- Cogeneration Directive
- Energy taxation and VAT
- Energy efficiency in buildings Directive
- Energy services Directive
- Emissions trading – allocation rules
- Renewables in the heat market / biomass action plan
- Biofuels targets
- Competition/state aid rules

To make the change, policy needs to



Think in terms of energy systems and infrastructures

Recognise and address the heat market as a market in its own rights

Evaluate efficiency throughout the system from source to user

Prioritise reduction of emissions over storage

Seek maximum synergies

Leverage private investment by increased public investment

Link research and policy

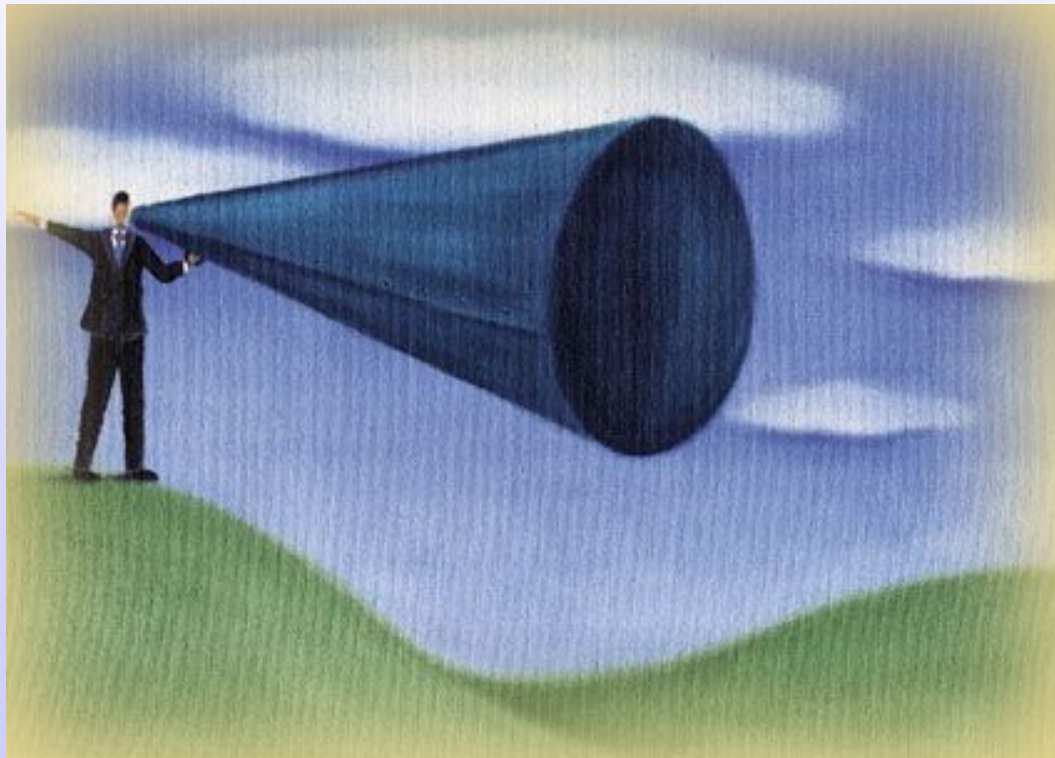
And do it NOW!



Energy Council, 23 November 2006 :

Council underlines that it is important to ensure that the most energy efficient technology available is used for the construction of new capacity, including the increased use of **high-efficiency CHP, district heating and cooling and waste heat recovery...**

For more information



Euroheat & Power
Av. De Tervuren 300
B-1140 Brüssel
Tel.: +32-2-7402110
www.euroheat.org
www.ecoheatcool.org