

Strategies for the deployment of district cooling

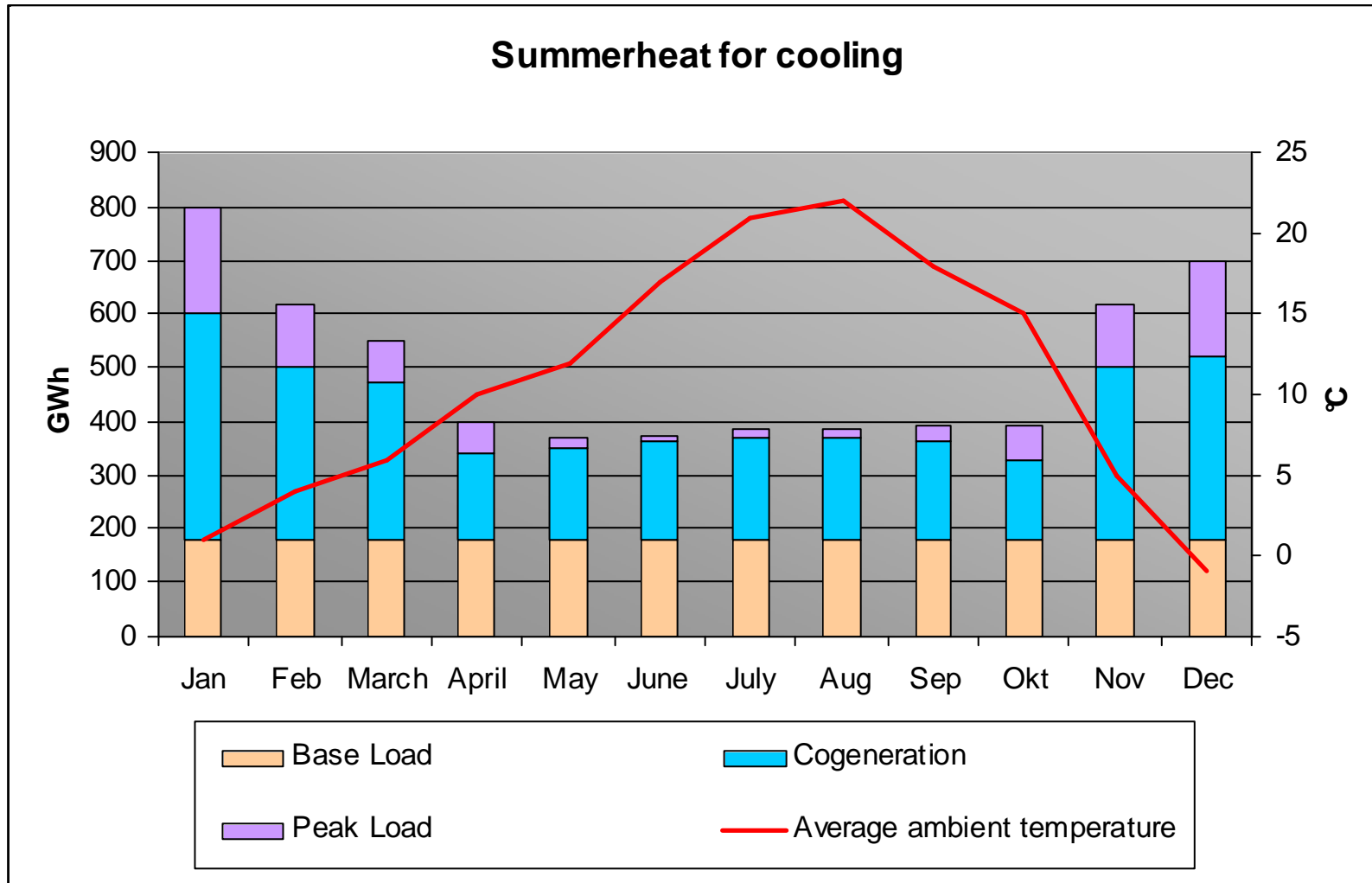
Presentation within SUMMERHEAT

Meet cooling demands in **SUMMER**
by applying **HEAT** from cogeneration

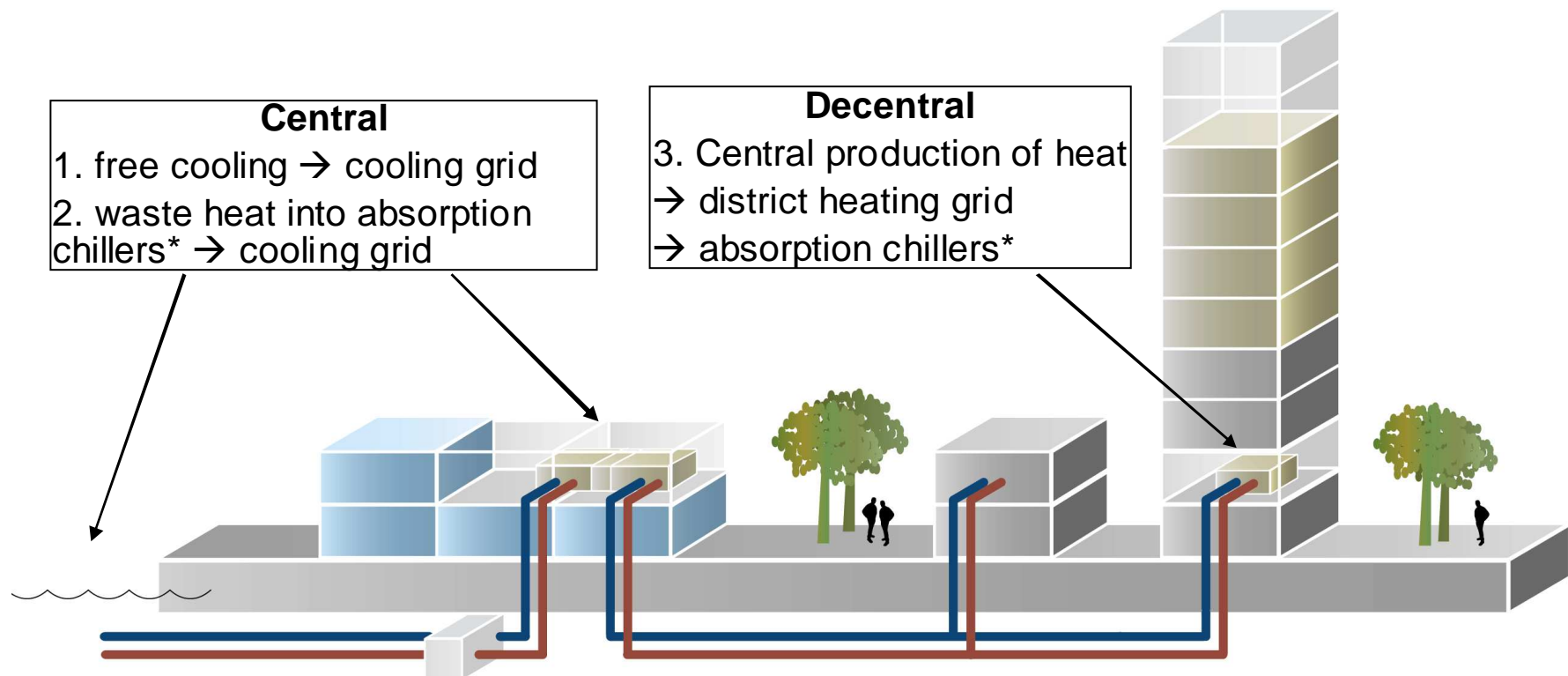
EUROHEAT & POWER Conference
Brussels, JUNE 5th, 2008

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Berlin Energy Agency

Project idea



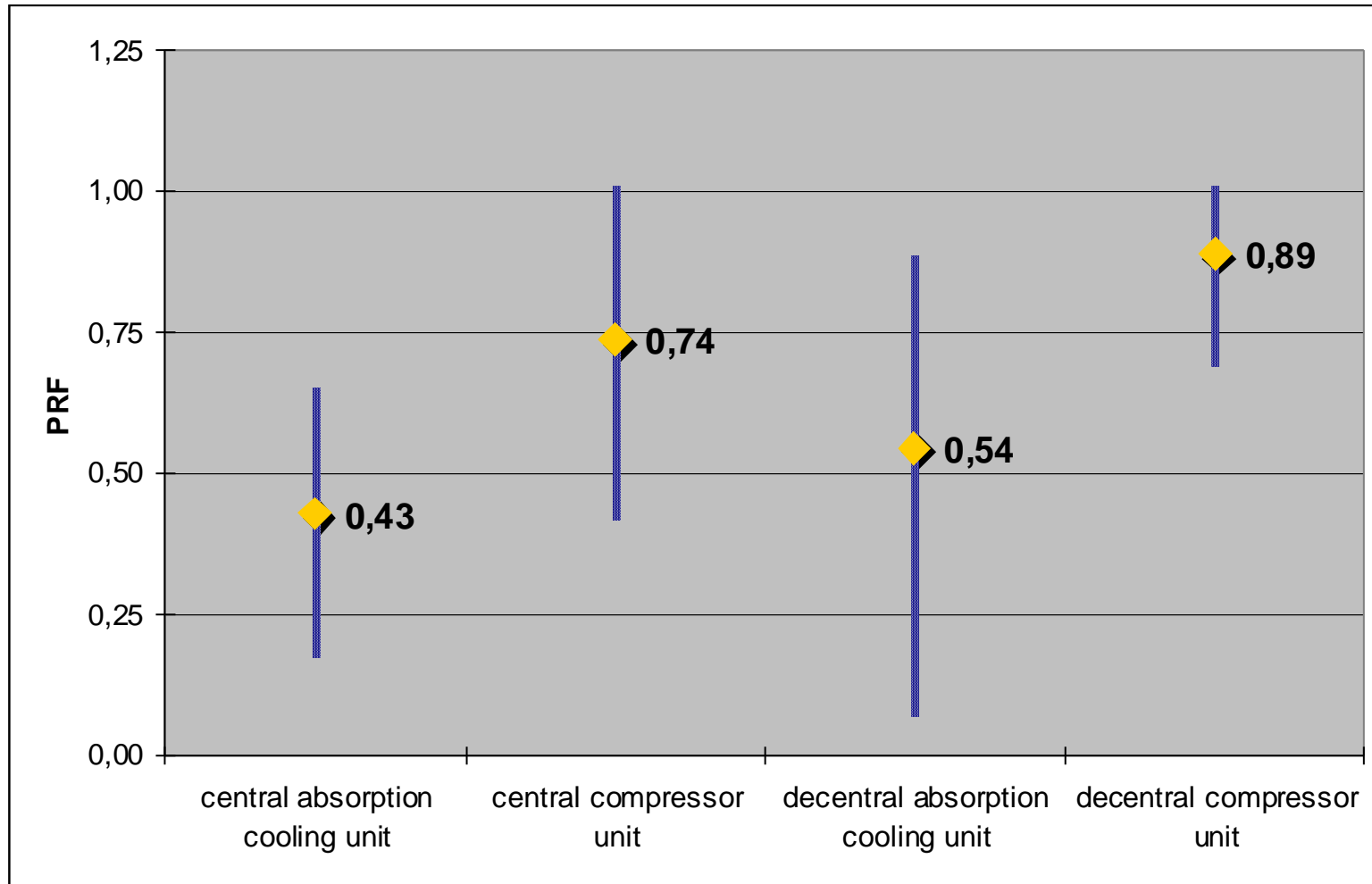
Technology coverage



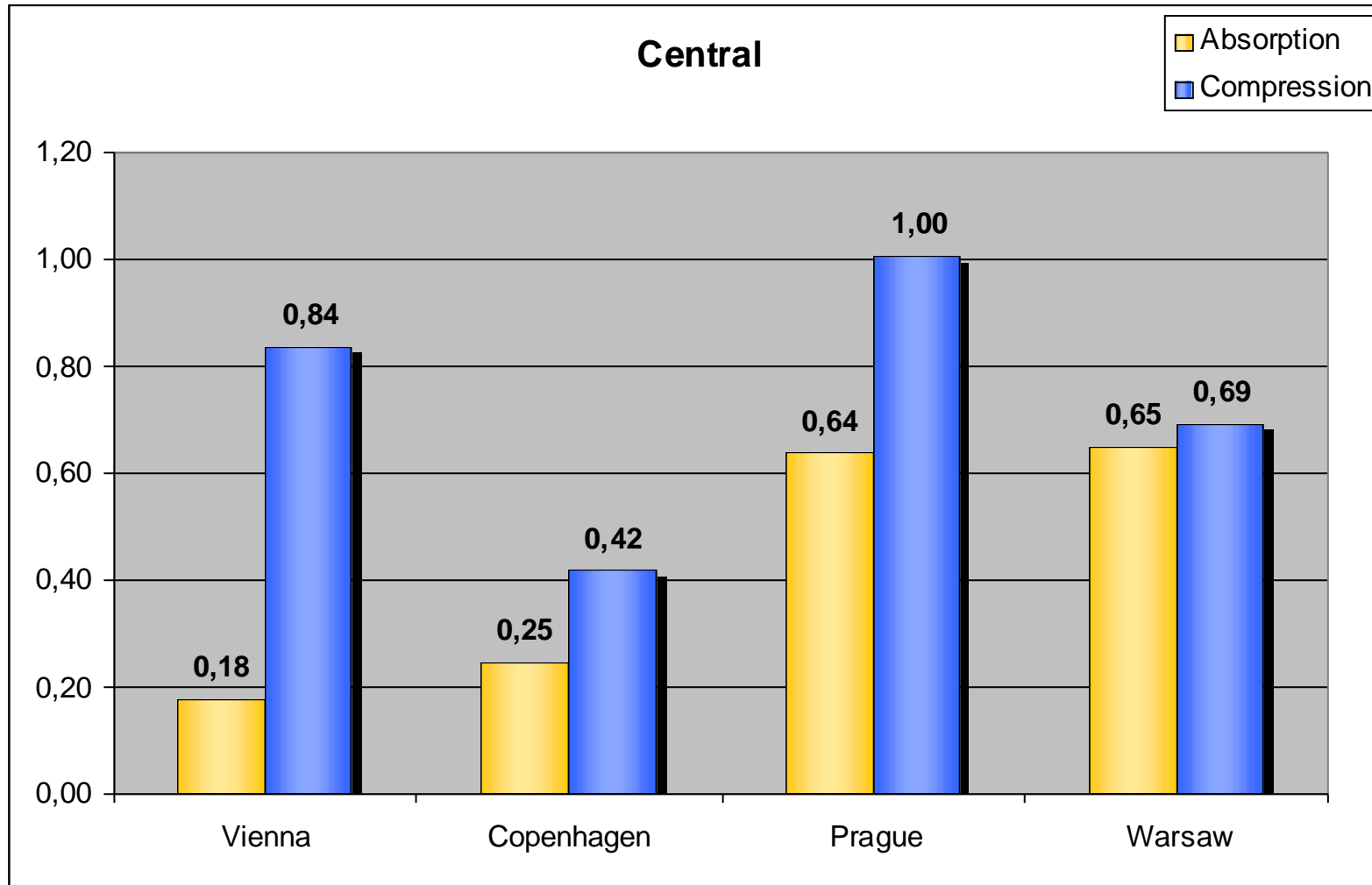
Graphic: Capital Cooling, Sweden

* Single-effect Lithium Bromide Absorption chillers

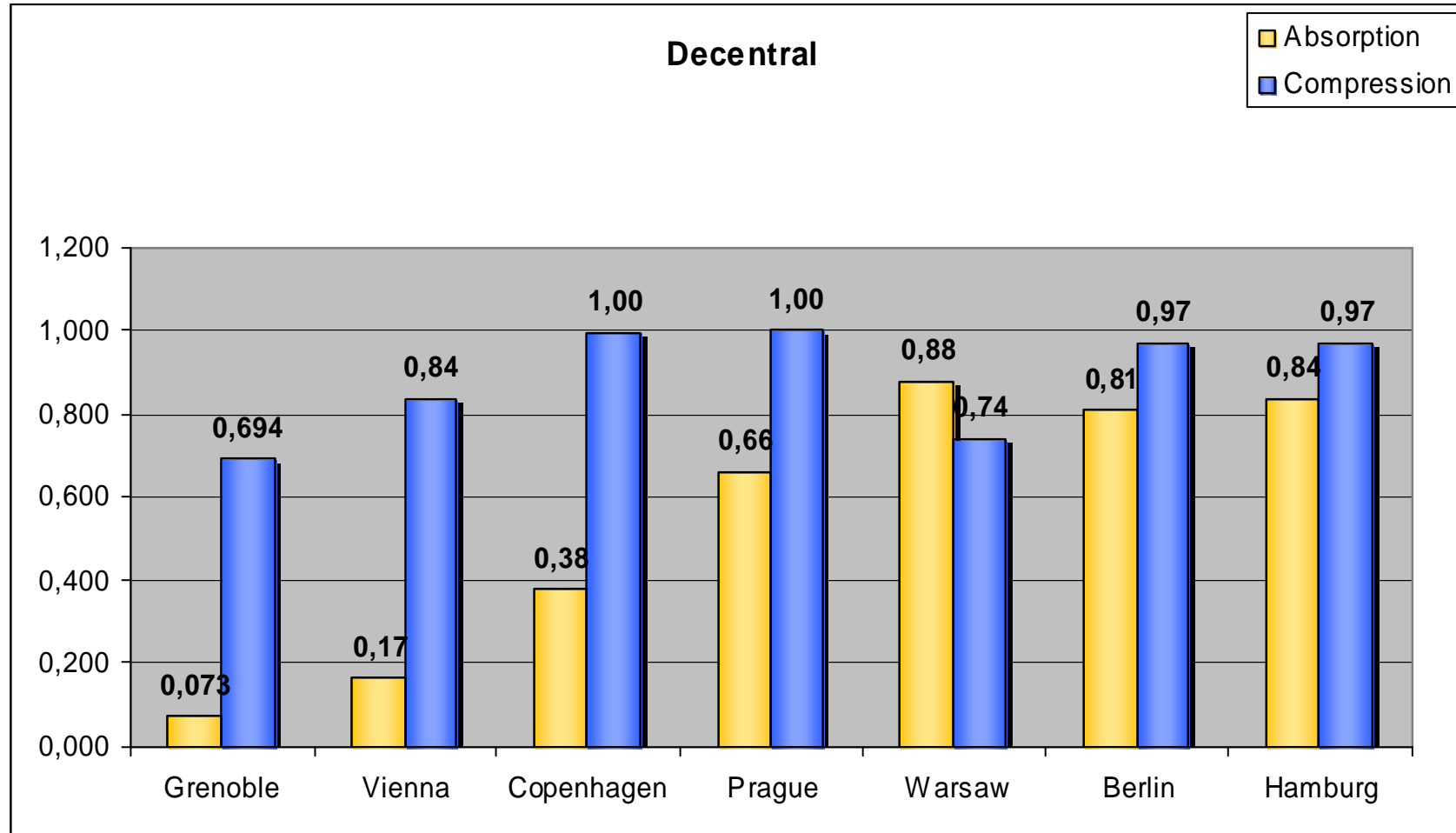
Primary resource factors



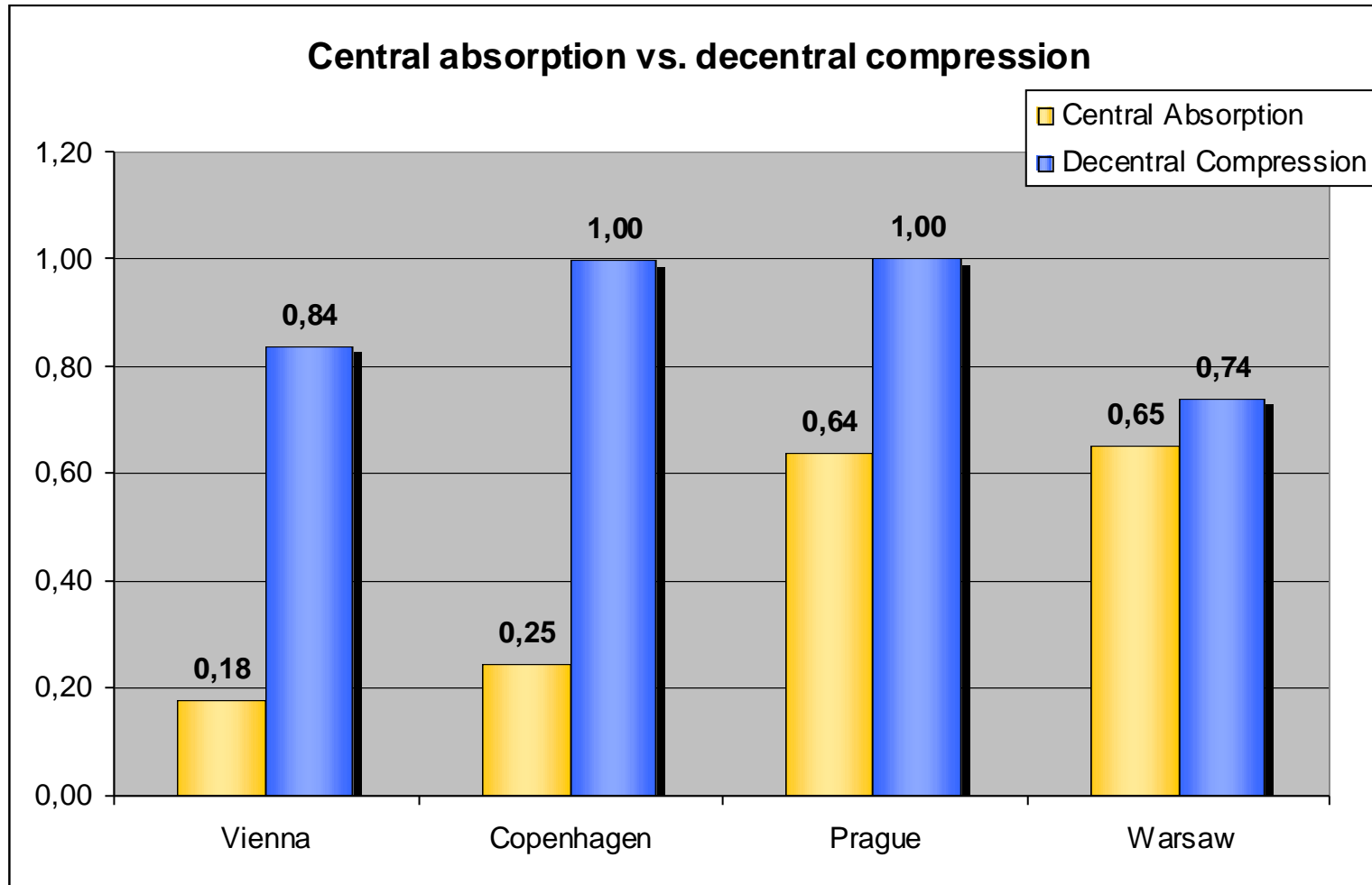
Primary resource factors



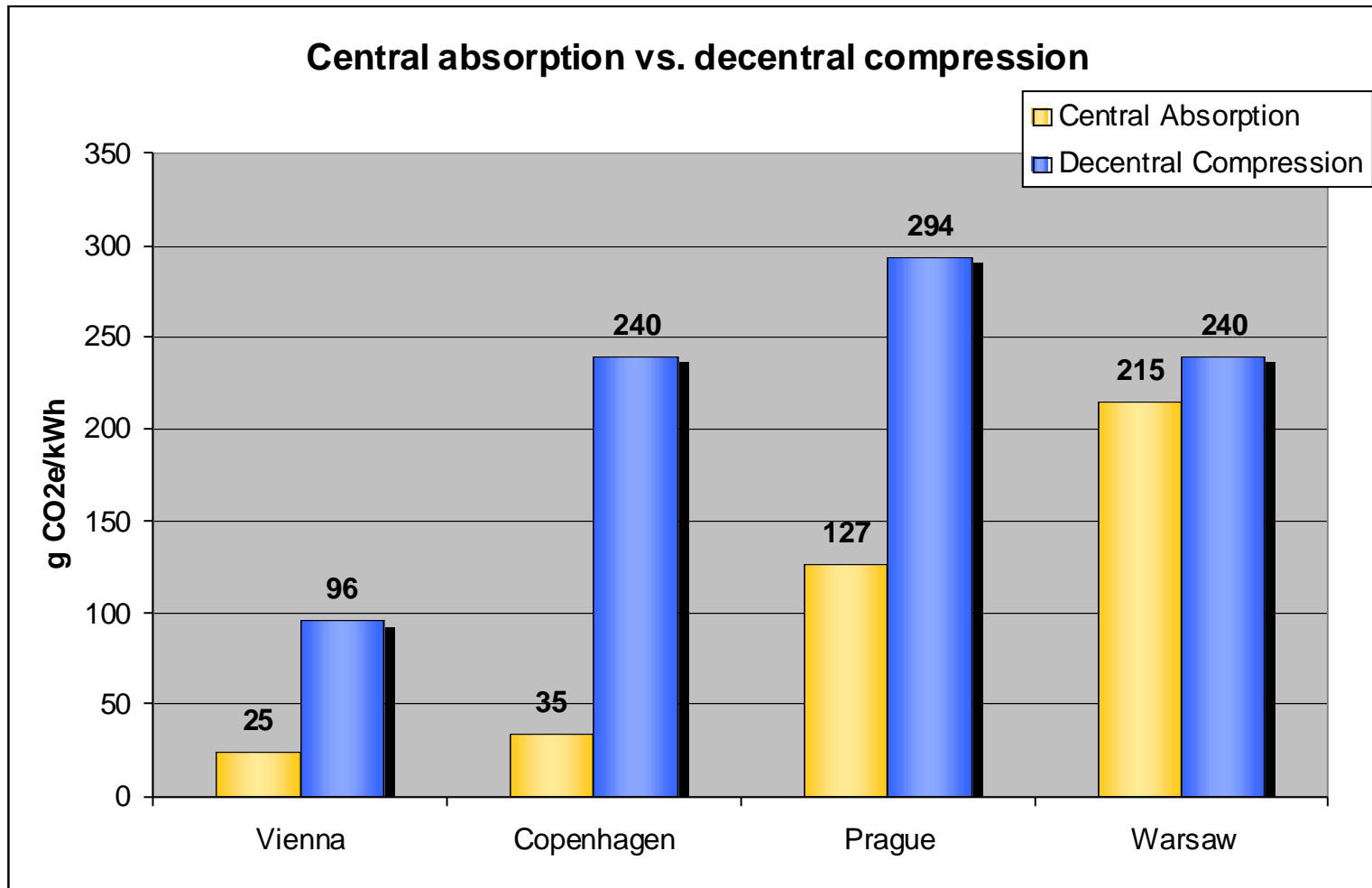
Primary resource factors



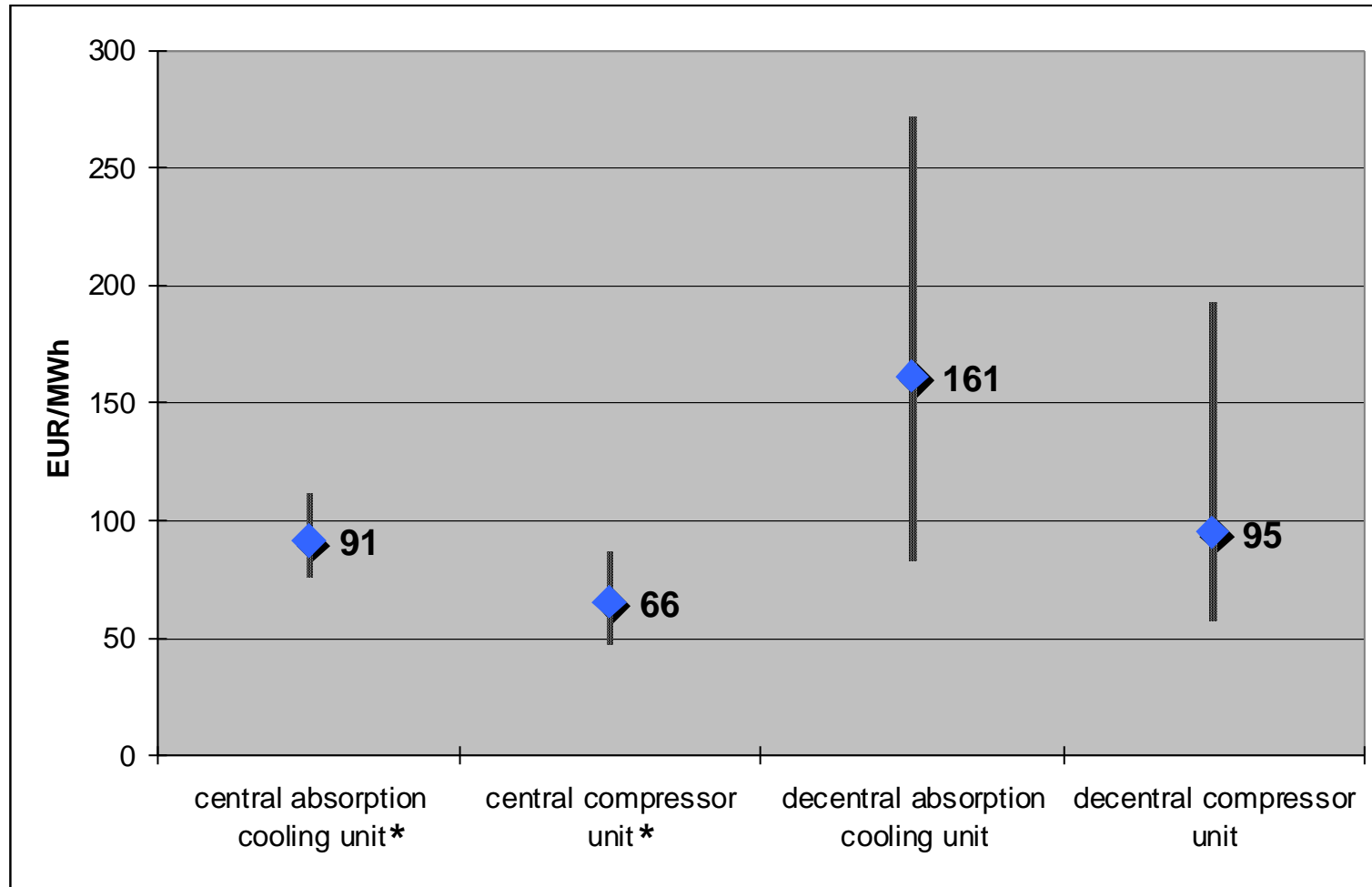
Primary resource factors



g CO_{2e}/kWh



Production Costs



* excluding network construction costs

Challenges for DC

- DC using waste heat saves primary energy but has to compete with compression chillers which have
 - Lower cold production costs
 - No additional network construction costs in decentral applications

- DC in general has
 - Long amortisation rates
 - Low IRR



DC as an energy service

Customer benefits

- Outsourcing of cooling supply
- Space savings (basement)
- Space savings (roof)
- Architectural benefits
- Reduced noise & vibration
- Reduced risk: system with high reliability
- Predictable costs/prices compared with alternatives

Community drivers

- Up to 30 % fuel savings
- Up to 80 % electricity savings
- Up to 65 % CO_{2e} reductions
- Removal of CFC / HCFC emissions



Critical success factors

Political / Municipal

- Provide level playing field for long term planning
- Create incentives / restrictions to leave BAU scenario:
 - environmental bonus
 - environmental comparison
- Promotion of CHP has to incorporate DC (summer gap)

Corporate (energy utility)

- Adopt long term planning (amortisation / IRR)
- Involve municipality
- Identify / use local opportunities (country-/site-specific)
 - business areas (high WTP)
 - power plant park with low PRF
- Start with islands with high cooling density
- Adapt secondary systems



Summerheat Guideline

- Target groups

- Potential investors
- Municipalities
- Other interested parties (policy makers?)

Available in Fall 2008!
Promotion event in October in Brussels!

Check website for updates & details!

- Contents include

- Comparison of different cooling concepts to support possible future (demo) projects
- Exemplary plan of procedures & pre-feasibility studies



Thank you!

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