Decarbonizing the heating sector of Frankfurt

– results from EU-project "Hotmaps" – www.hotmaps.eu

Panel 2: Integrated management of regional energy and resources- Promotion of local production and local consumption

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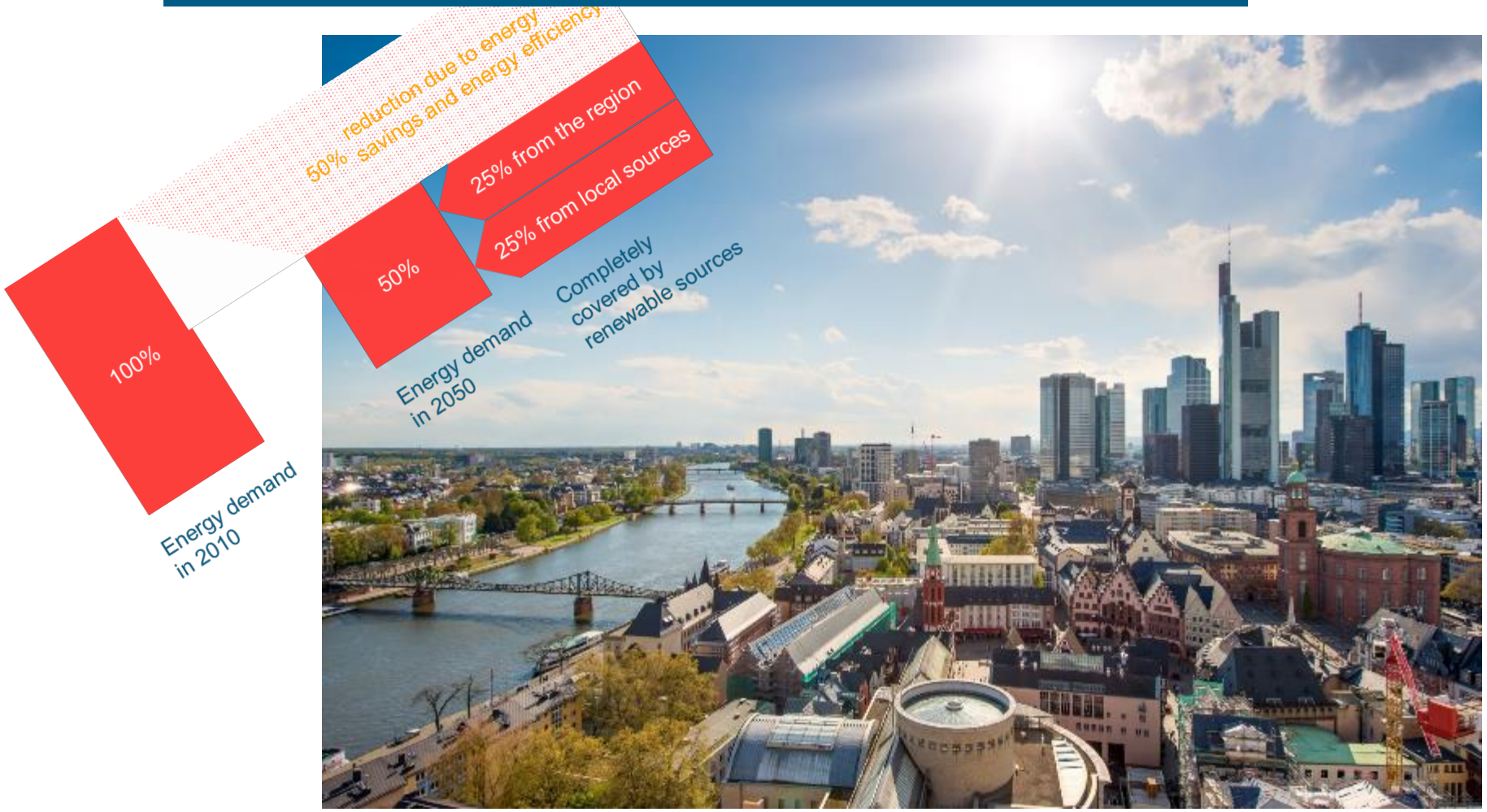
Frankfurt and its climate protection policy



Source: Fotolia .de # 118063811

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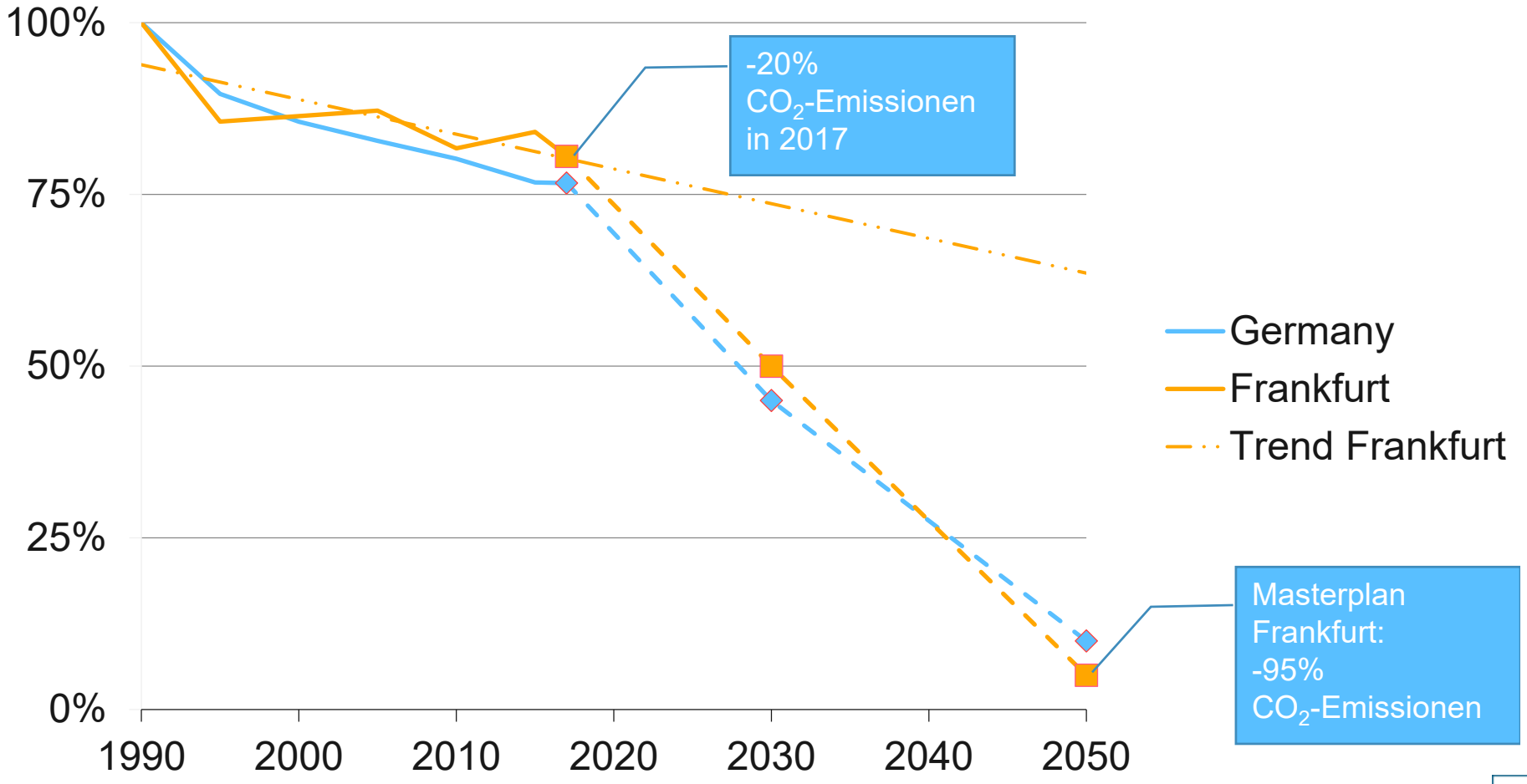
Development CO_2 – emissions Frankfurt vs. Germany process has to be accelarated



Growth of inhabitants: Germany: 4% vs. Frankfurt: 17%

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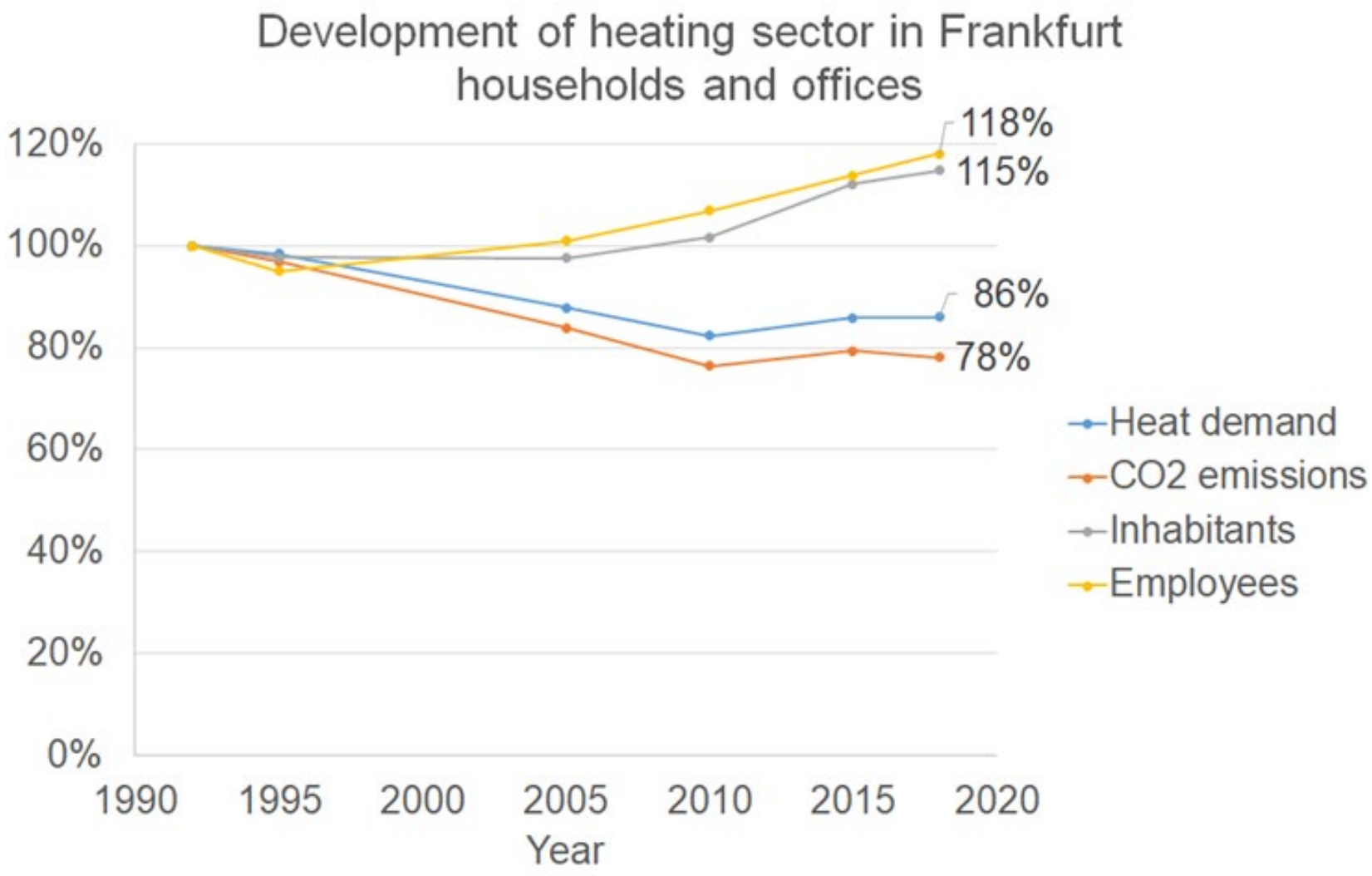
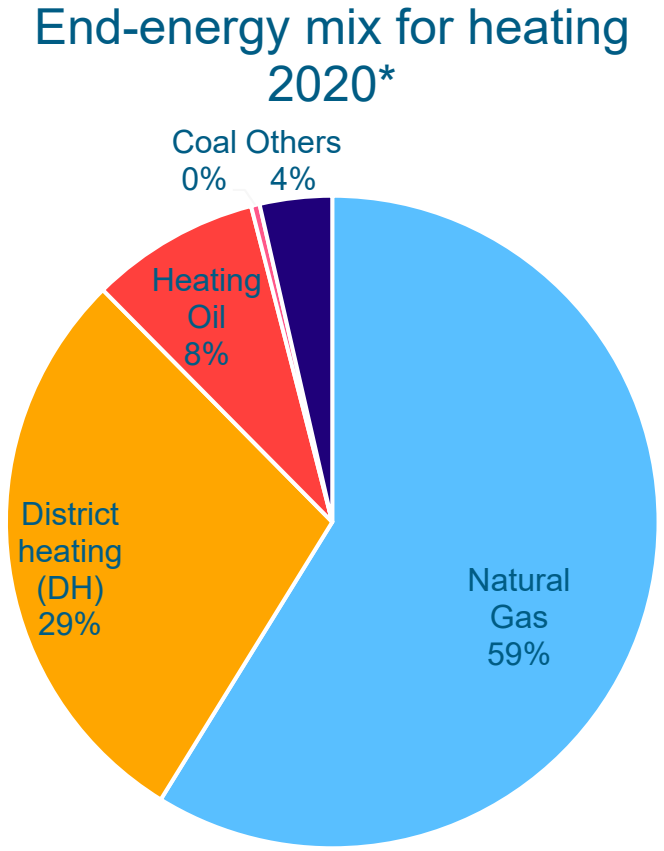
Development heat demand vs. inhabitants and jobs

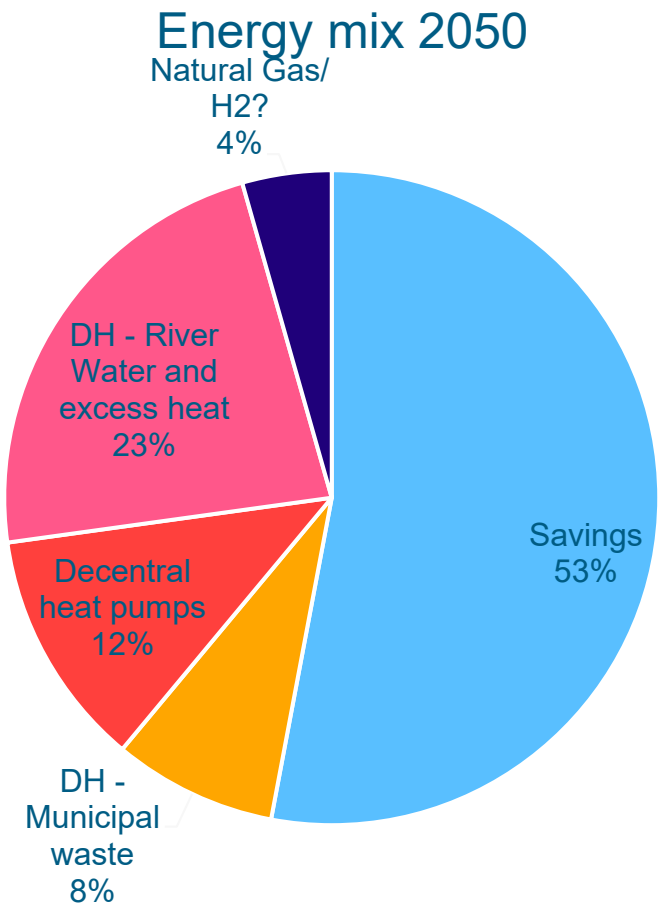


Where do we come from: Heating System in Frankfurt approx 70% dependency on Natural Gas and 90% on fossil fuels



* Without industrial sector

Total 6.8 TWh



Remaining 3.2 TWh

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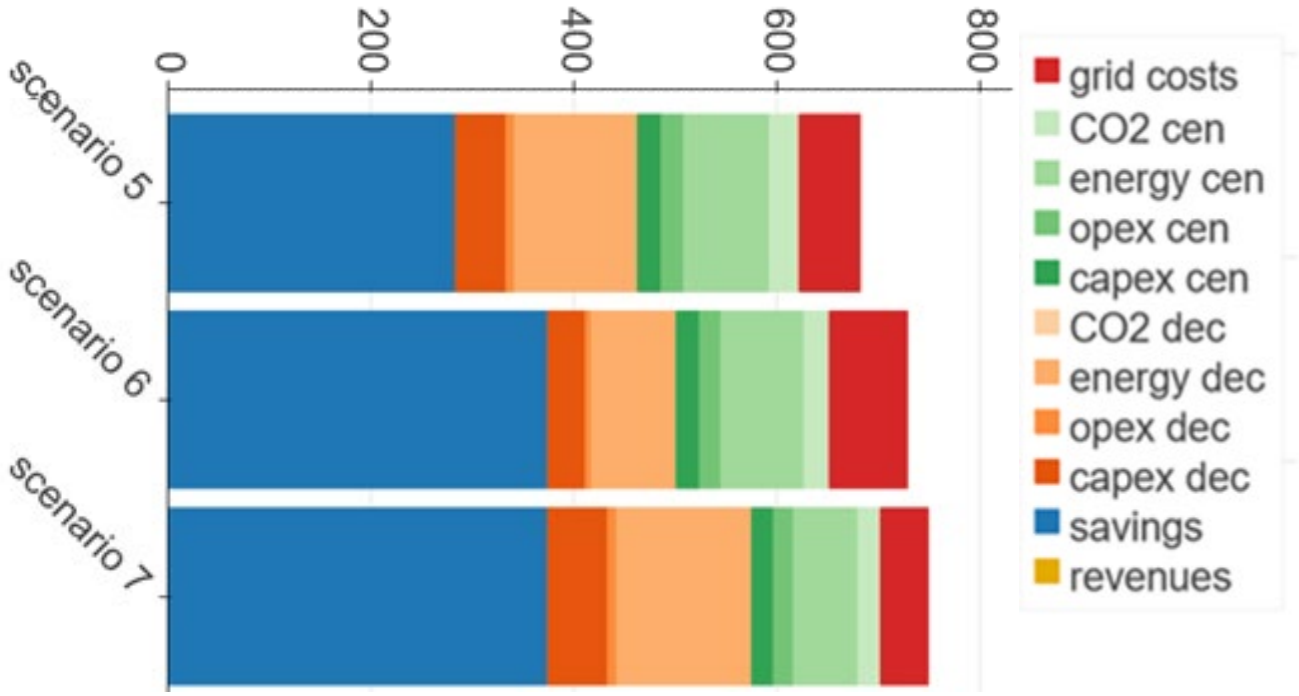
Outcome of EU-Project Hotmaps (development of toolbox for European Cities):

Several scenario calculations on how much does decarbonizing cost? Figures in Mio Euro/year



Vs Fuel cost of actually 440 Mio Euro/year.

If CO_2 Prices rise up to 150 €/t than the renewable energy supply will also be econonomically feasible

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IMPOSSIBLE

Conclusions

- Every city can make it´s own plan for zero carbon – try hotmaps toolbox
- Available renewable and excess heat sources are individual
- Cut down energy demand is crucial for heat transition
- For Frankfurt the development of data centres maybe one part of the solution (electricity demand foreseen in 2030: 3.5 TWh)- if they manage to cover their electricity demand 24/7 with renewable energy
- Problem remaining: high temerature energy demand (steam network/industry)


Thank you
for your attention