

District heating in Europe: opportunities for energy savings, business and jobs

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Structure of the EU energy system, 2014

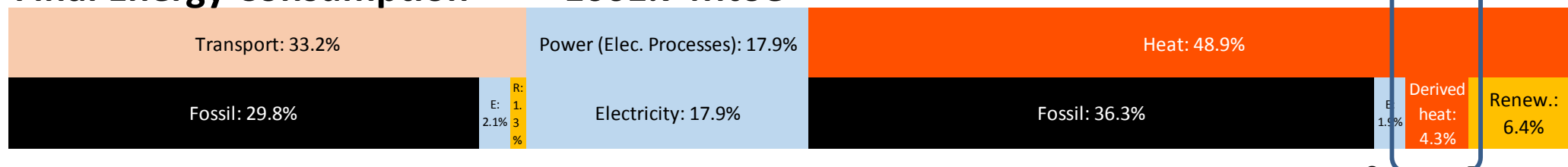
Gross Inland Consumption 1605.9 Mtoe



Final Energy Consumption 1061.7 Mtoe



Final Energy Consumption 1061.7 Mtoe



Source: Eurostat

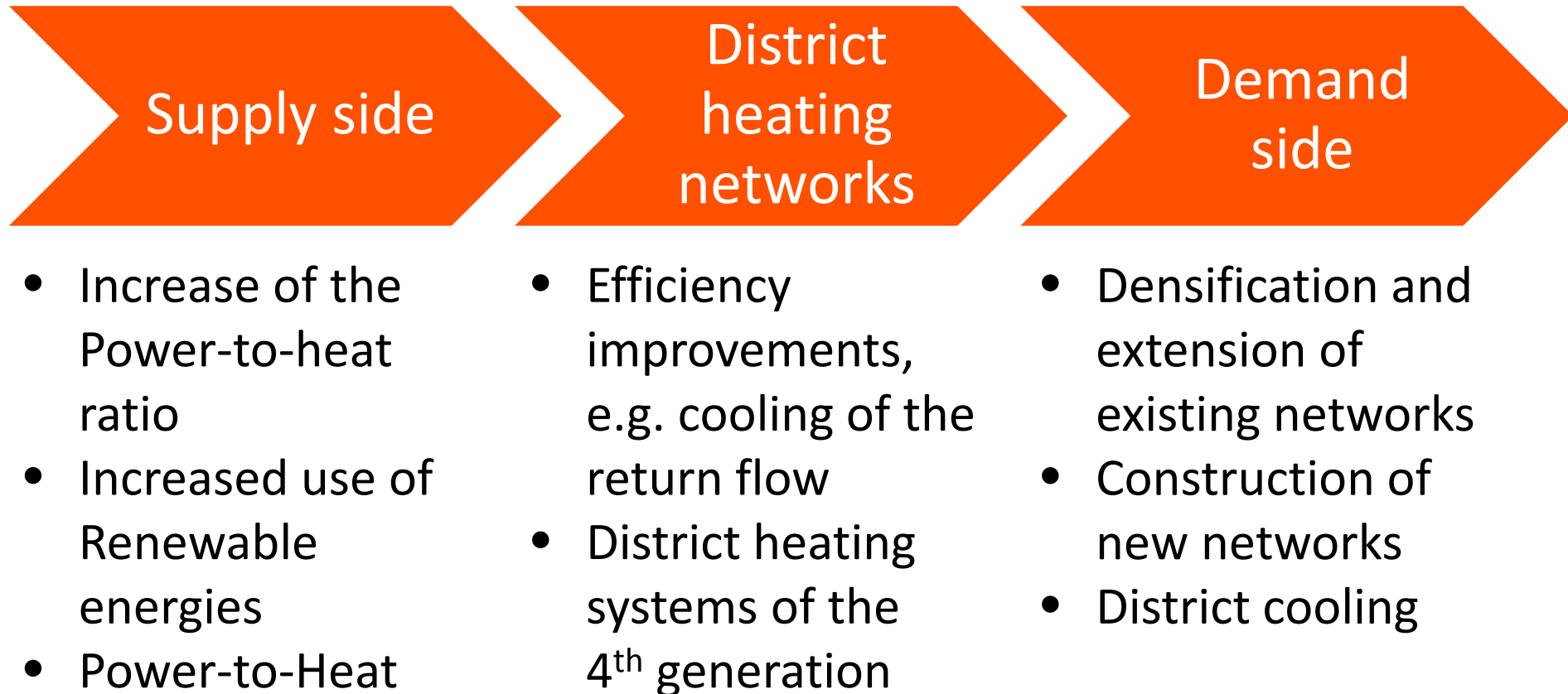
District heating:

FEC share: 4.3%

Supply structure: 76% fossil fuels, 24% RES

CO₂ intensity: 297.6 g CO₂ per kWh of district heat delivered

Measures to increase the level of performance of district heating



Good practice example: Densification of the district heating system in Mannheim, Germany

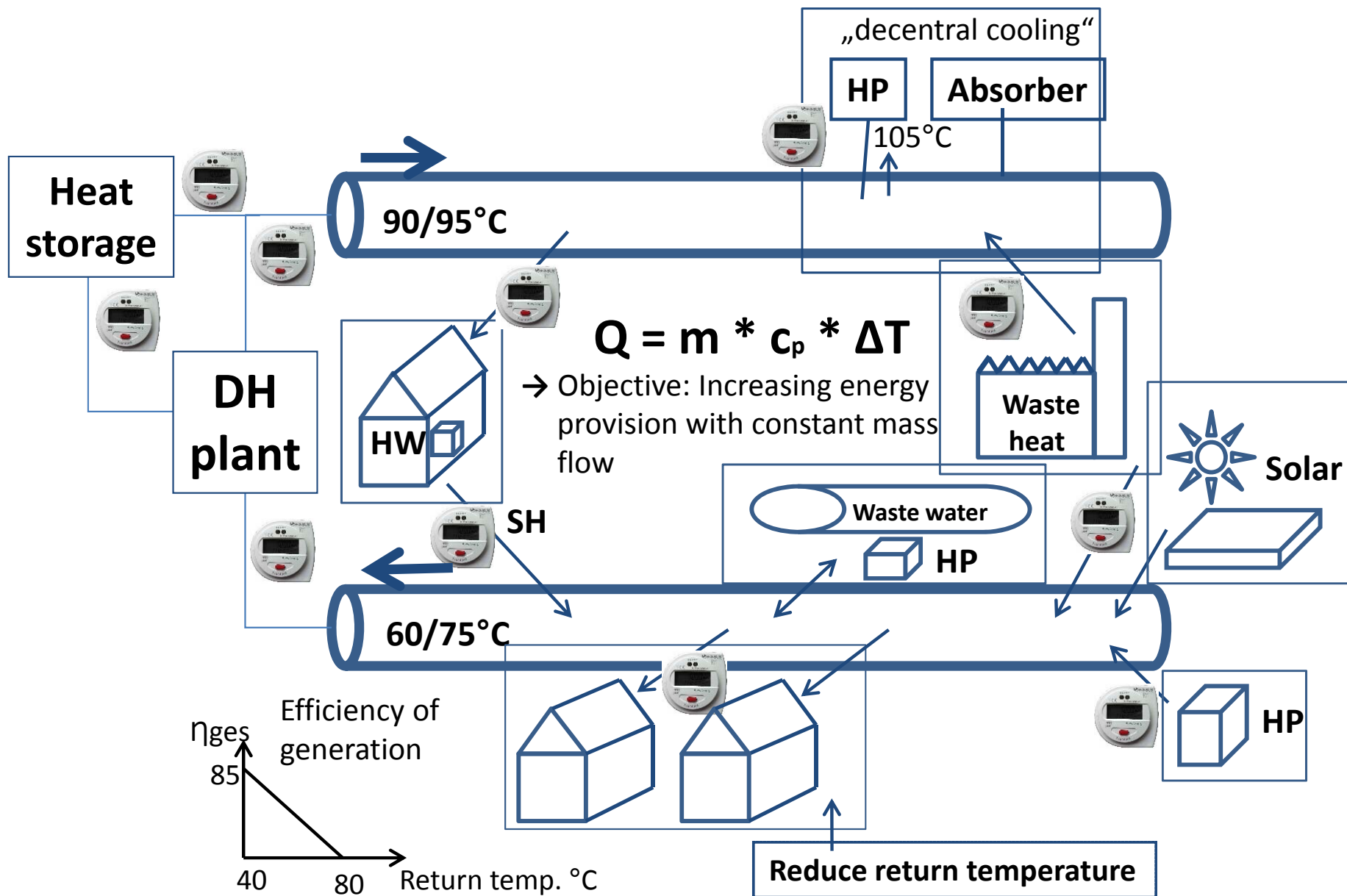


- Additional pipeline capacity of 30 km (maroon lines)
- Investment of about EUR 30 million
- 17.6 kt annual reduction of CO₂ emissions
- 115,000 MWh of primary energy savings per year
- Effective employment level of 4,000 man-years

Employment effect of district heating

- In 2012, the district heating sector already employed around 200,000 people across EU-28
 - This corresponds to 360 employees per TWh of district heat delivered
- Taking into account the links to upstream and downstream industries an additional 500,000 indirect and induced employment effect will be associated with district heating
- In 2012, in total 700,000 employees can be ascribed to the district heating business
 - This corresponds to an employment intensity of 1,246 persons per TWh of district heat delivered

Outlook: Smart district heating



Conclusion

- 1. District heating must become more climate-friendly***
- 2. Efficiency gains must be considered holistically taking into account all stages of the value chain***
- 3. The transition to a smart district heating and cooling system should be conceptualised, developed and implemented***

Thank you!

FOR FURTHER INFORMATION:

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