



المؤتمر الدولي لتبريد وتدفئة المناطق
International District Cooling & Heating Conference

24th - 25th October 2017 | Ritz-Carlton Hotel - Doha, Qatar



District Heating – How it works?

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Nottingham Trent University

24 October 2017



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Outline



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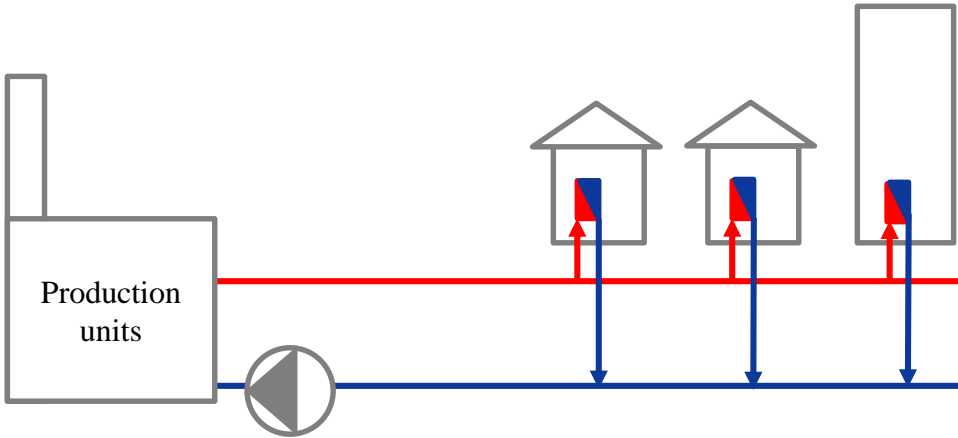



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District Heating System Introduction



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 EUROHEAT & POWER

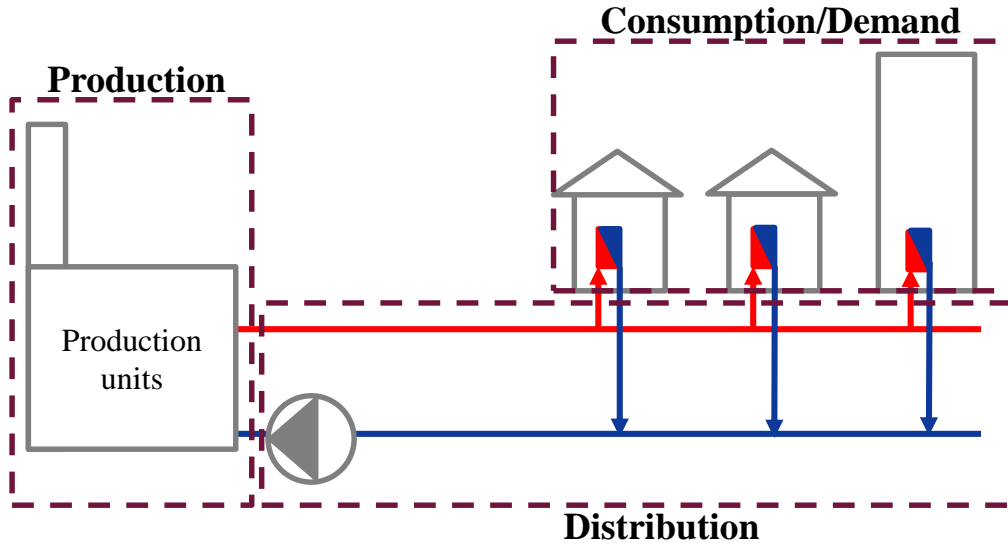
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District Heating System Introduction





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District Heating Demand

- Space heating
- Domestic hot water demand



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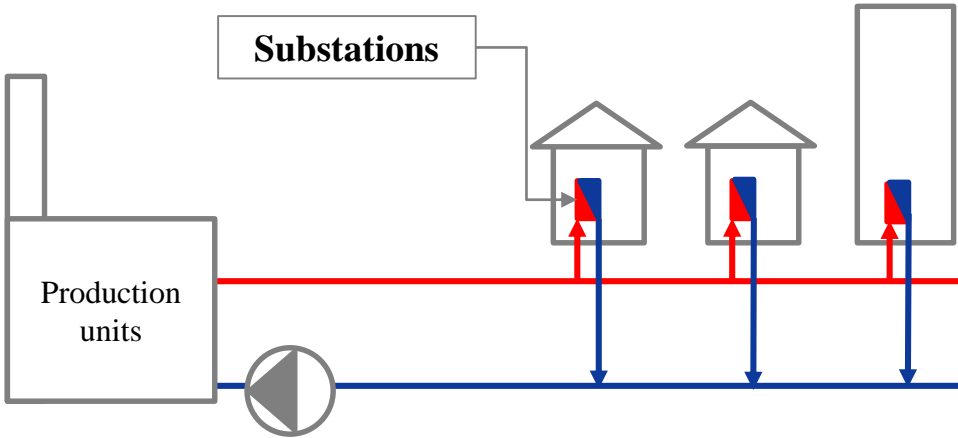
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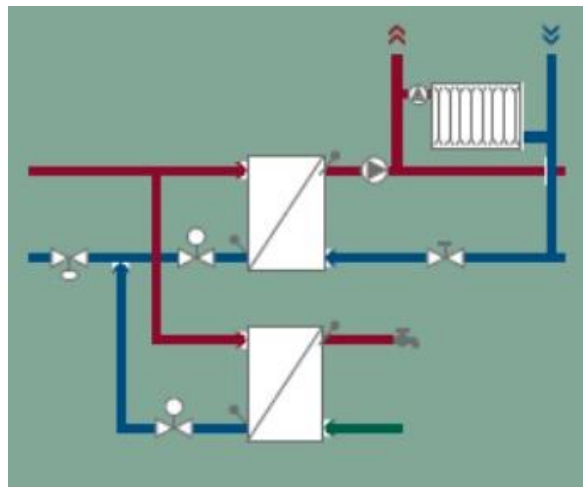
District Heating Substation



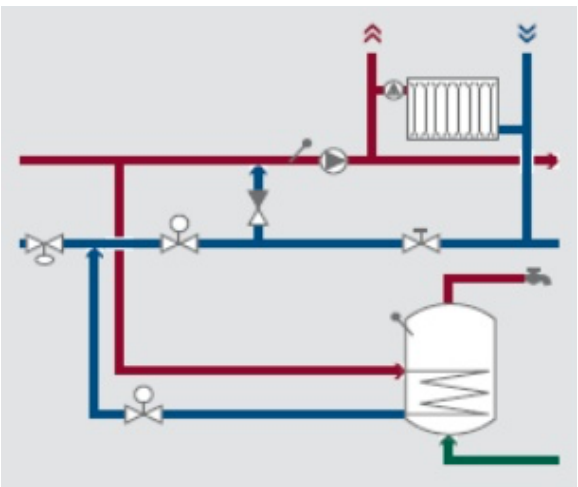


District Heating Substation

Substations in buildings
indirect connection

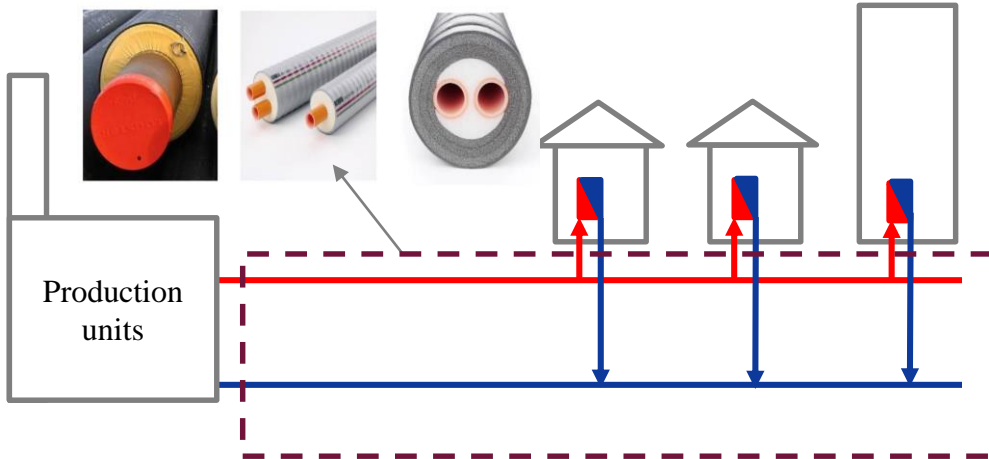


Substations in buildings
direct connection



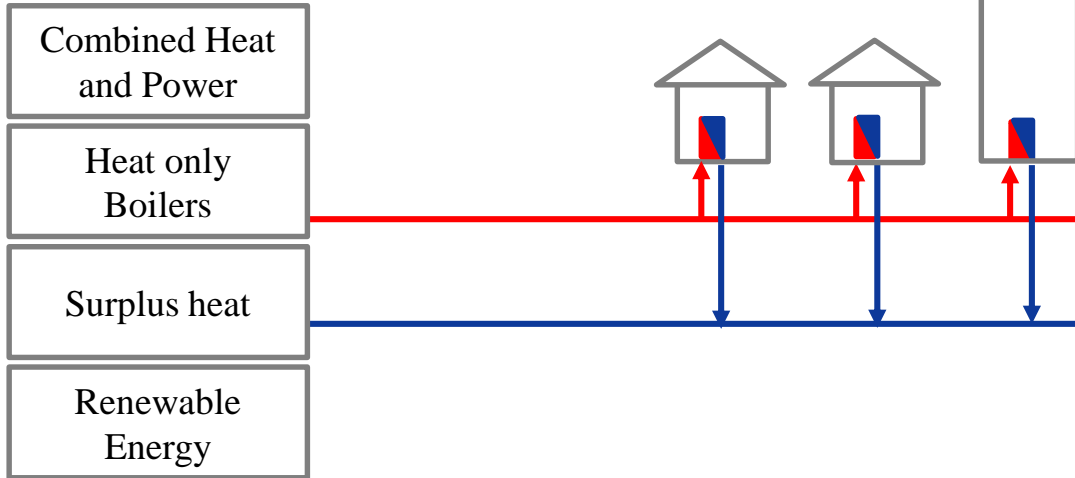


District Heating Distribution



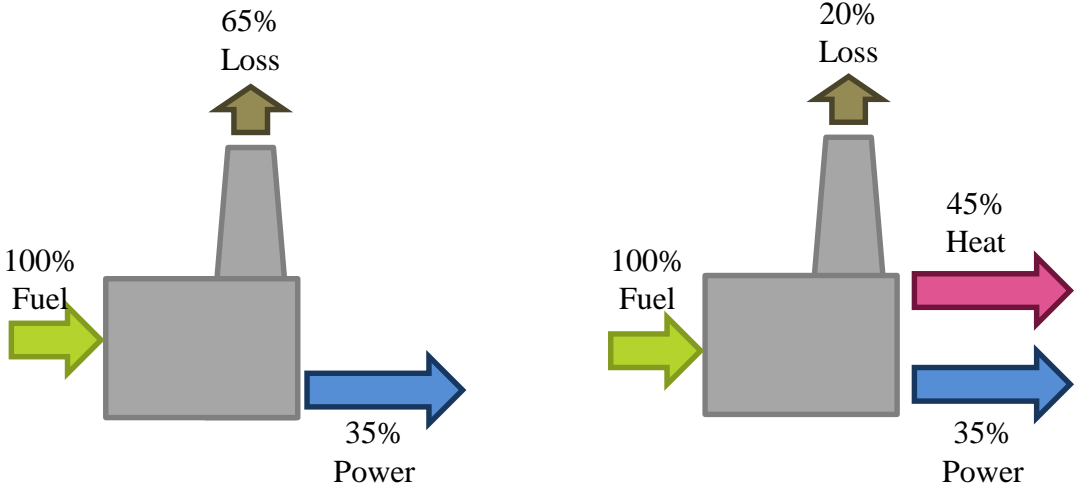


District Heating Production





District Heating Production



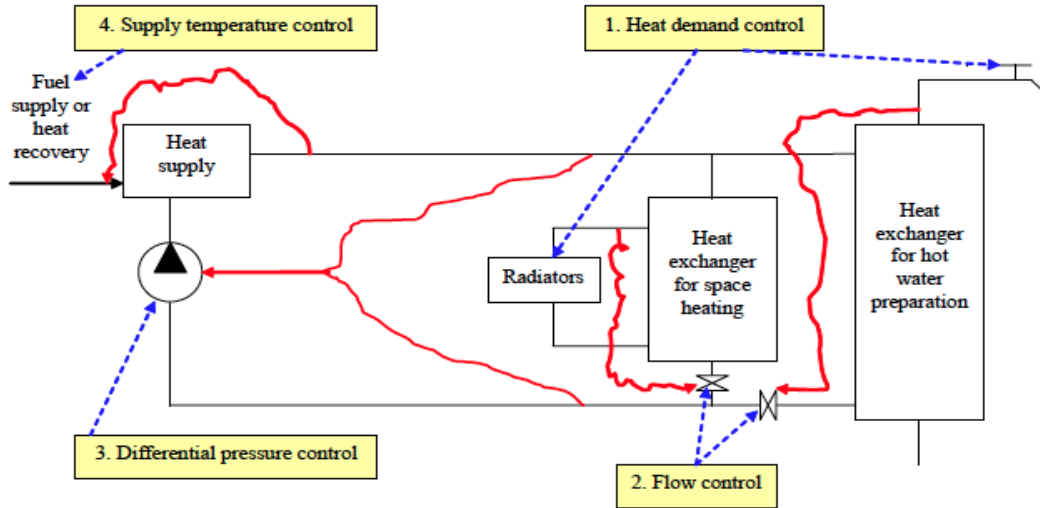


Network Design Criteria

- Peak heat demand profile for consumers
- The design supply and return temperature
- Max flow velocity
- The network pressure level
- Optimal maximum allowed pressure drop
- Simultaneity factor (diversity) for both SH and DHW demand

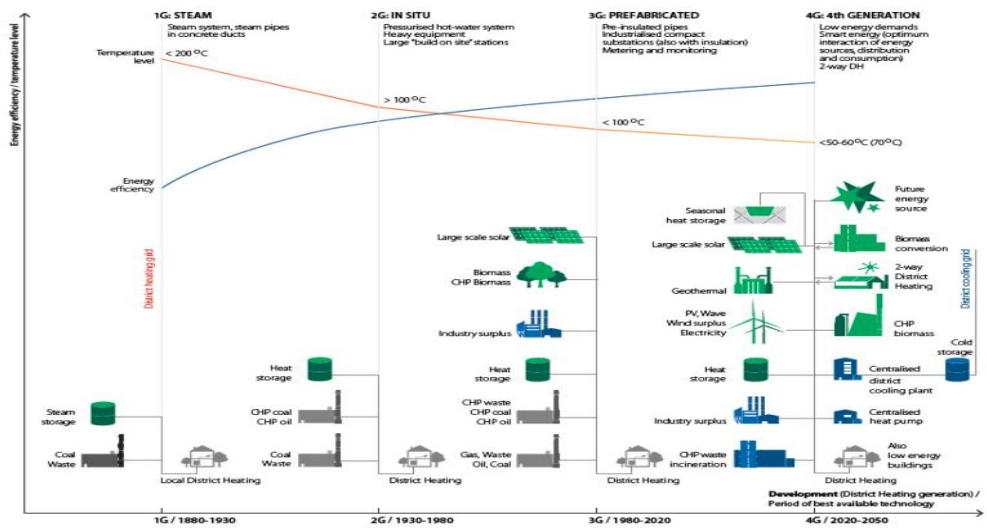


District Heating System Functioning





District Heating System History



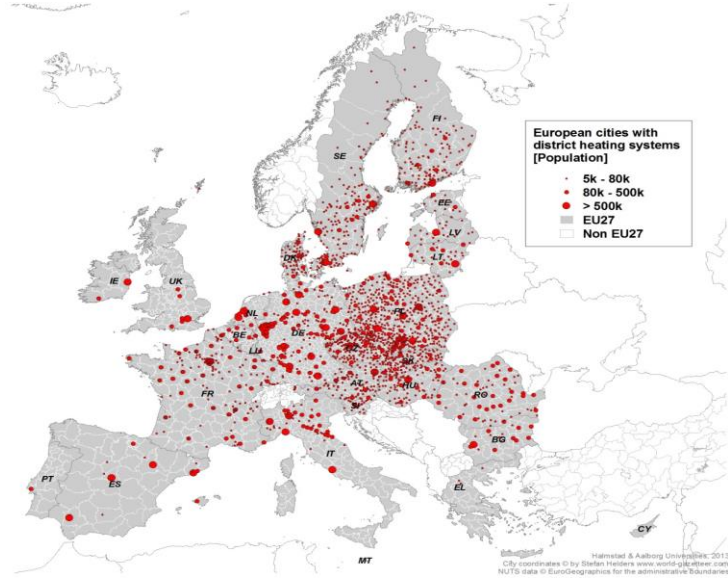


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District Heating Map in Europe



Map created by Halmstad & Aalborg Universities, 2013
City coordinates © by Stefan Heider, www.world-globe.net
NUTS data © EuroGeographics for the administrative boundaries



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Why District Heating System

- Long-term security of supply
- Environmental benefit
- Diversity of heat supply
- Space saving at the building level
- Increased safety
- Easier maintenance



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Thank you

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