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# Deconstructing Danish District Heating

Tipping points that made district heating a success in  
Denmark

– with an international / Irish perspective

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# Promote District Energy for a Sustainable City Transformation



- Go-to platform
- Established in 1978
- 75+ members
  - Leading actors in Denmark
  - 2/3 Manufacturers, Consulting Engineers
  - 1/3 Utilities
- Magazine HOT|COOL
- Seminars, training, exchanges of know-how in DK and abroad
- [www.dbdh.dk](http://www.dbdh.dk)



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## Agenda



- District heating in Denmark
- Deconstructing “Danish District Heating”
  - Scientific survey – not really 😊
  - What is the main ingredients

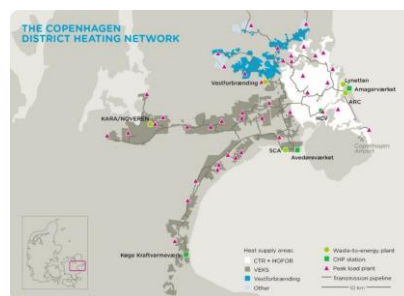


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## DH in Denmark

## District Heating in Denmark

- Half of heat demand (50%+)
- 2/3 of all households (1.736.668 / 64%)
- All homes in mayor cities (Copenhagen 98%)
- 64% renewable heat - growing
- Prices: Competitive, even declining slightly



## Developments today

- Gas is an obsolete technology!
- Heat Pumps
- More storage & **MEGA** storage
- Industrial surplus heat
- Efficiency in all areas



## The future is district heating!

- 500.000 more homes connected to DH
- Carbon agenda: 70% reduction by 2030.....
- Heating =0% carbon



# Danish DH De-Constructed

## The question

*Name 3 things that made DH the success it is today AND that makes it a success also in the future?*

- Asked 25 persons with long international experience (14 replies so far)

## Not Technology – not at all 😊

- Not one expert mentioned any type of technology!!!
- I even asked technology-experts
- So not low temperature, digitalisations, pumps, twin-pipes, heat pumps...
- Technology is clearly here to support the goals



What is it, then?

## TRUST

- Democratic ownership
  - Co-ops or municipal
  - End user involvement / ownership / control
- Control of the (nearly) natural monopoly against “too high profits”
  - Cost plus structures
  - Use of the commercial market by a natural monopoly organisation
- Strong consumer protection
  - By law
  - Through Benchmark
  - From Owners
- Transparency

## CLEAR GOALS

- **Low price!**
  - No one creates a profit for other purposes (private or municipal)
- No hassle
- Comfort
- Green – sustainable
- Reliable

## OWNERSHIP

- Co-ops or municipal ownership
- Owned by the end-users = same goal
- Gives access to low interest loans and technical depreciation periods

## Final comments

- Trust
- Clear goals
- Ownership
  
- Forget technology!





# Thank you

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