District Heating Cooperatives - Examples from Denmark

(London, 26 March 2018)

Erik Christiansen
CEO, Master of Laws; LLM
EBO Consult A/S
My British Experiences

Refurbishment – 1990’s

DH i Brum - 2003
Agenda

• Short about EBO Consult
• District Heating in DK:
  History
  Idea
  Expansion
  Legislation
  How to do it?
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• Administration – budget, book-keeping, accounting, billing and finance.
• Monitoring, O & M etc.
• Planning and handling construction projects – including approval by public authorities and finance.
History & Idea
Heraudbygger Hvidovre Fjernvarmeelskab

Information om projektet og arbejdsplaner findes på www.ubm alternativ

Følg med på våre social medier:

Facebook: Følg Hafa Fjernvarmeelskab
Twitter: @HafaFjernvarme

www.hafa-dk

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2017

1,713,650 households = 64% of all

60% green

60,000 km
Solar District Heating in Denmark
Sum of collector area and the number of operating and upcoming plants

Installed collector area [m²] (light bars)

Year

Number of plants (thin bars) and growth rate (dotted line) [%]

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Legislation

- Danish Heat Law

1) Non profit
2) Income = Expenses
3) Expansion - public process - proof of competitiveness
4) Possible obliged connection to the grid
5) Price control - Danish Energy Regulatory Authority
How To Do It?

Organization:

1) Cooperative (340 DHCs in DK)
2) Municipal owned company
3) Investor

The cheapest: 1)!!
DH Cooperative:

• Statutes
• Codes of conduct:
  1) For members
  2) Technical
• Integration in a local energy plan
Proposal

1,083 single attached houses – 192 big consumers
- Estim.: 32,016 MWh – Investment: € 12,000,000
Economy

- No assets
- Shares: € 13,50/household
- Mortgage loan – market
- Mortgage loan – guaranteed by municipality
- Operation: income = expenses
Installation

Tendering:
- EU-regulations
- National regulations
- Detailed tendering materials
- Choose the contractor
- Contractor does the work
Operation

Make it
Move it
Monitor it
Meter it
Money saving activities

Very Good
Price

- Benchmarking
- Keep the same price level though you have investments.

Controlling authority?
Image Of Danish DH

• Viable economic activities.
• Low prices.
• Non profit business. No shareholder’s hysteria.
• Banks etc.: DH is solid investment = low interest rate.
• Policy:
The Energy Minister says that DH coops are the Golden eggs in Danish energy policy.
Tomorrow

• 100 % DH in DK
• 100 % DH based on renewables before 2030
• 100 % DH controlled by consumers/members
• 100 % DH service to the consumers/members
Thank you for your attention

Erik Christiansen  
erc@ebo.dk  
+45 36 38 38 00