

From Centralized to Decentralized CHP

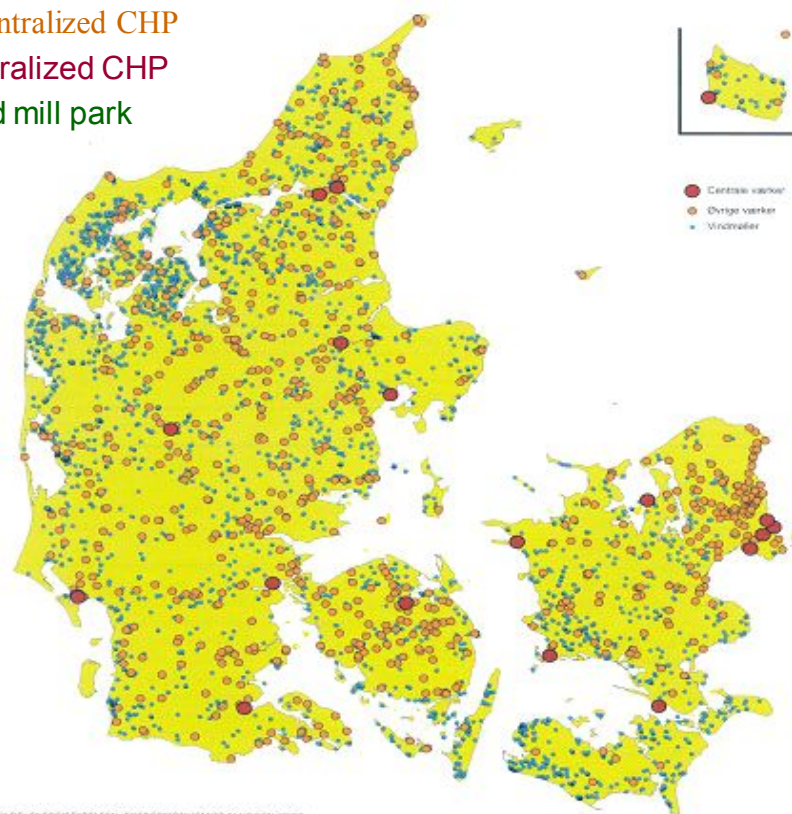
Centralized production in the mid 80's



Decentralized production of today

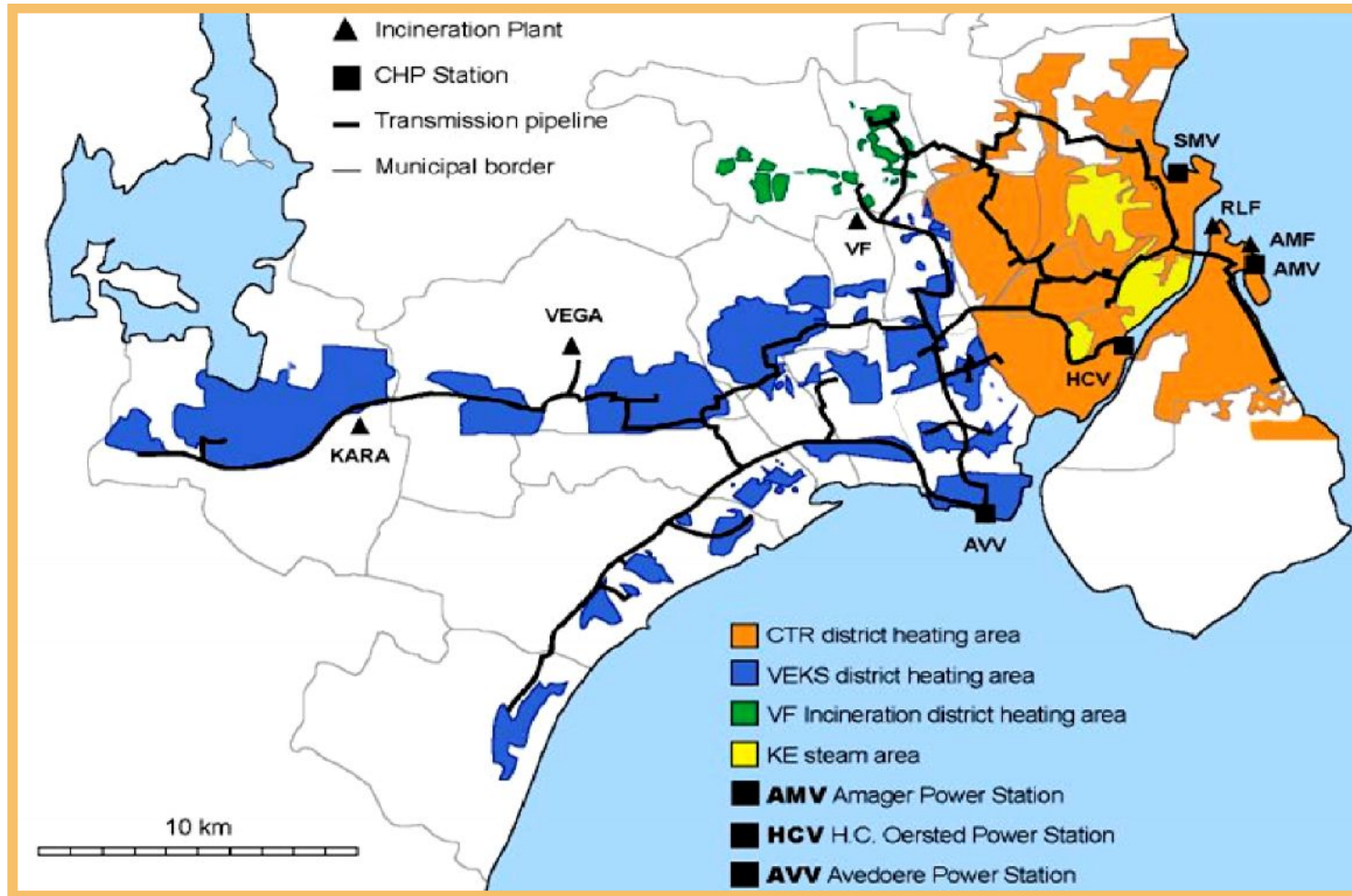
Legend:

- Decentralized CHP
- Centralized CHP
- Wind mill park



KILDE: ENERGISTYRELSEN, ENERGIPRODUCENTFALLINGEN 2000,
VINDMØLLEKOORDINATER, KORT A. MATRIKELSTYRELSEN 2001

Large integrated systems with optimal load dispatch



5 Characteristics Danish District Heating

1. Owned by consumers
2. Strong support from authorities
3. Large integrated systems with optimal load dispatch
4. Heat accumulation
5. Variety of technical solutions



Variety of technical solutions



- Heat exchangers
- Regulation of in-door temperature.
- Pumps
- Valves
- Meters - energy meters



Consumer prices for heat in Denmark

- Prices for heat can vary from region to region – but principles for pricing are the same according to the Heat Supply Act:
- A supplier may not charge any more or any less for heat than it costs to produce it.

Expenditures for DH-companies

Costs reflects expenditures for:

1. Fuels
2. Pipelines and grids
3. Operations
4. Installations and buildings (including interest and repayment for investments)
5. Depreciation of equipment/buildings
6. Administration salaries
7. Insurance and taxes.