

SURVIVAL OF LOCAL CHP PLANTS

ANALYSE BASED ON INTERVIEWS OF DISTRICT
HEATING PLANTS WITH CHP

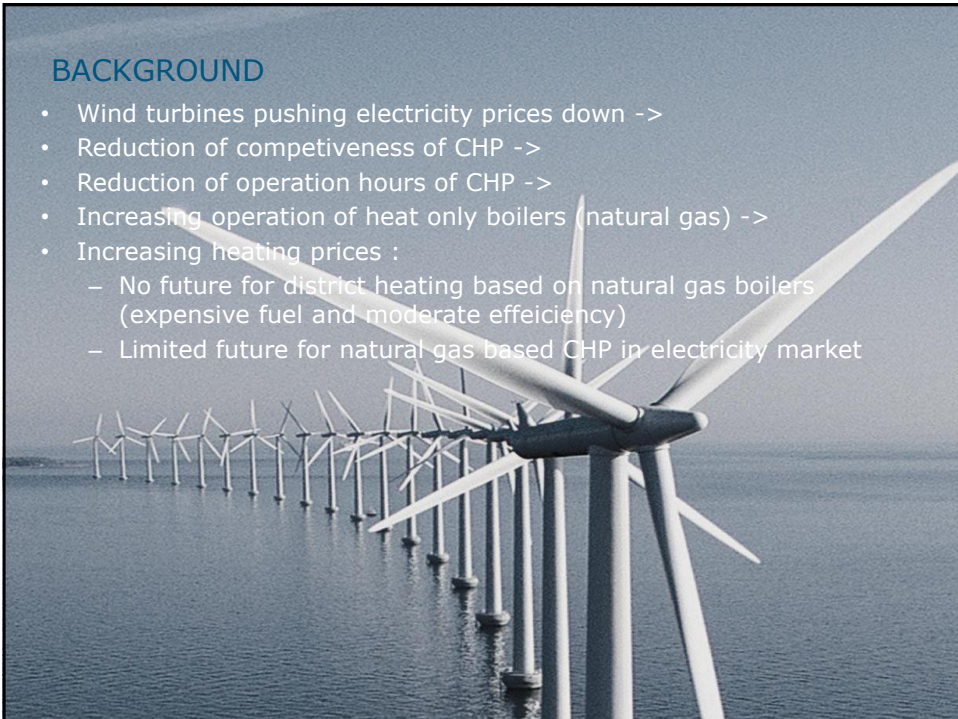
- 1) WHAT WILL HAPPEN WITH LOCAL CHP UNITS?
- 2) WISHES FOR FUTURE LOCAL HEAT PRODUCTION

JESPER KOCH
GRØN ENERGI / GREEN ENERGY ASS.

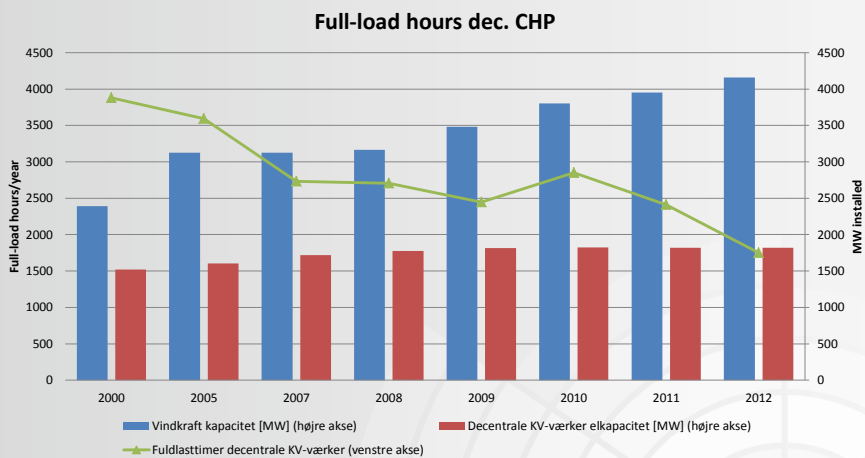


BACKGROUND

- Wind turbines pushing electricity prices down ->
- Reduction of competitiveness of CHP ->
- Reduction of operation hours of CHP ->
- Increasing operation of heat only boilers (natural gas) ->
- Increasing heating prices :
 - No future for district heating based on natural gas boilers (expensive fuel and moderate efficiency)
 - Limited future for natural gas based CHP in electricity market



BACKGROUND: SIGNIFICANT DECREASE IN PRODUCTION HOURS - CHP



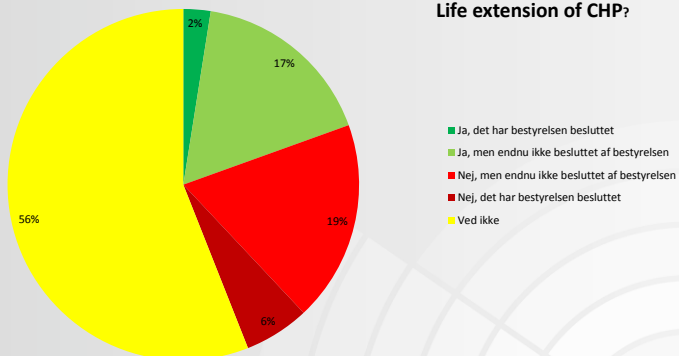
INTERVIEW OF LOCAL CHP (NATURAL GAS)



INTERVIEW OF 105 (200 UNITS) LOCAL CHP

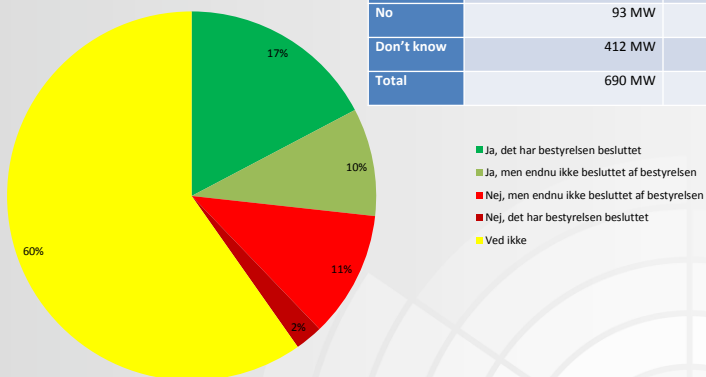
25 PCT. OF INTERVIEWED WILL PROBABLY CLOSE,
 56 PCT. OF INTERVIEWED "DON'T KNOW",
 19 PCT. OF INTERVIEWED PROBABLY "KEEP" CHP

Life extension of CHP?



13 PCT. OF CAPACITY WILL PROBABLY CLOSE,
 60 PCT. OF CAPACITY "DON'T KNOW",
 27 PCT. OF CAPACITY PROBABLY "KEEP" CHP

Life extension (MW)

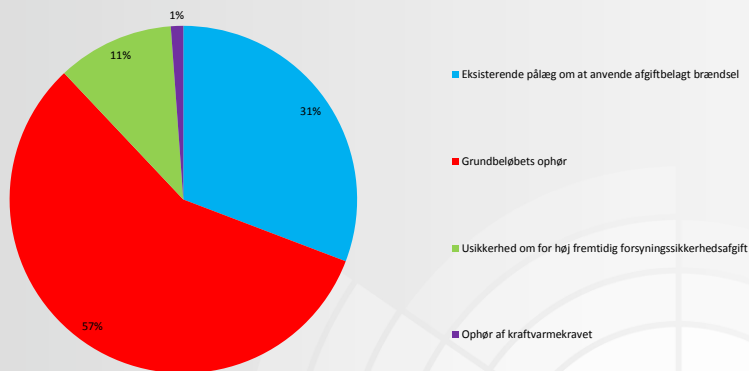


	Interviewed	Full Scale DK
Yes	184 MW	487 MW
No	93 MW	246 MW
Don't know	412 MW	1088 MW
Total	690 MW	1821 MW

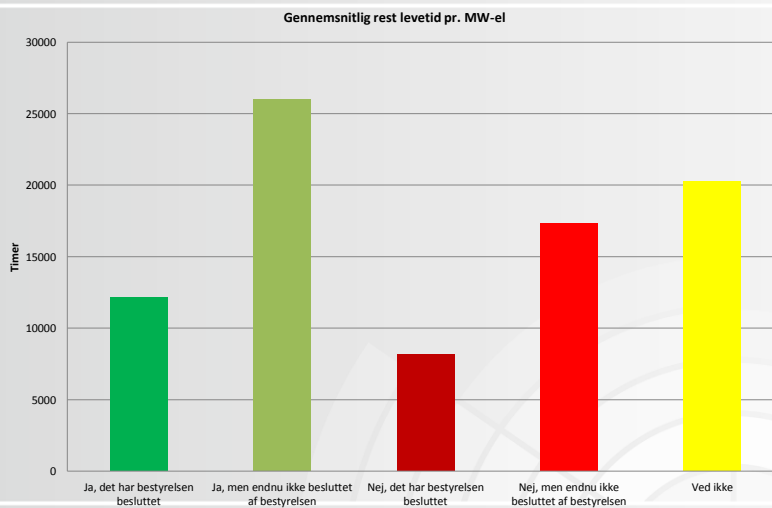


THE 60 PCT: MAJOR RISKS-> END OF BASIC SUBSIDY IN 2018 AND THE EXISTING LEGAL OBLIGATION RULE TO USE GAS

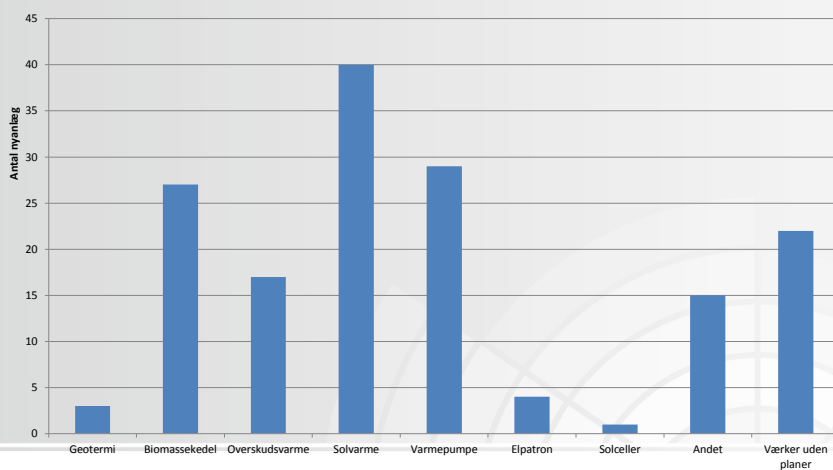
Risk of closing CHP due to missing legal statements



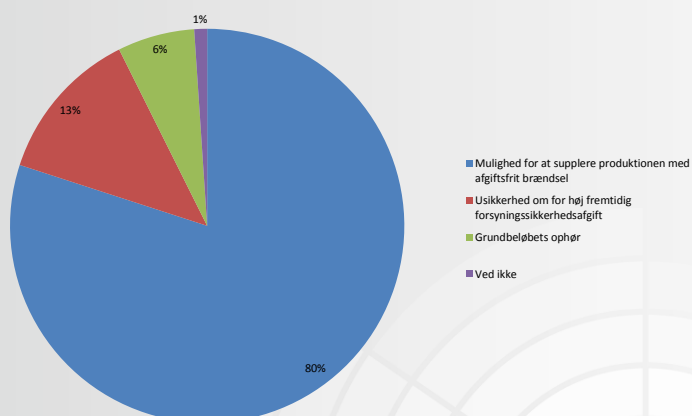
AVERAGE EXPECTED LIFE DURATION OF CHP-UNITS



FUTURE HEAT SUPPLY

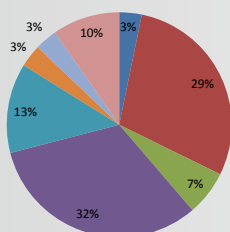


MAJOR DECISIONS BEHIND INVESTMENTS IN HEAT SUPPLY

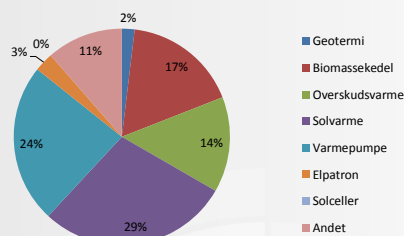


BETTER INCENTIVES FOR LARGE HEAT PUMPS MAY INCREASE NUMBERS OF LOCAL HEAT PUMP CAPACITY

Decision already made (33 units)



No finally decision (109 units)



OBSERVATIONS

- Risk of closure of a significantly amount of CHP - 1300 MW electricity power
 - Poor economy in CHP (now and in the future)
 - Missing statements of legal rules
 - End of basic subsidy
 - Future tax regime
- Heat only boilers based on gas is not competitive and cause risk of undermining the district heating systems
- Solar heat plants, biomass boilers and heat pumps seems to be next generation of green heat supply plants



WISHLIST

- Decision of long-term legal rules in 2013
- Free choice of fuels and heat supply plants
 - can ensure district heating systems competitiveness
- Need for favorable incentives for large heat pumps
 - strengthening the role of district heating in the smart energy system in Denmark

