DBDH MEDLEMSMØDE
IS 99,5 % EQUAL TO A 100%

Tom Diget
Distributionmanager

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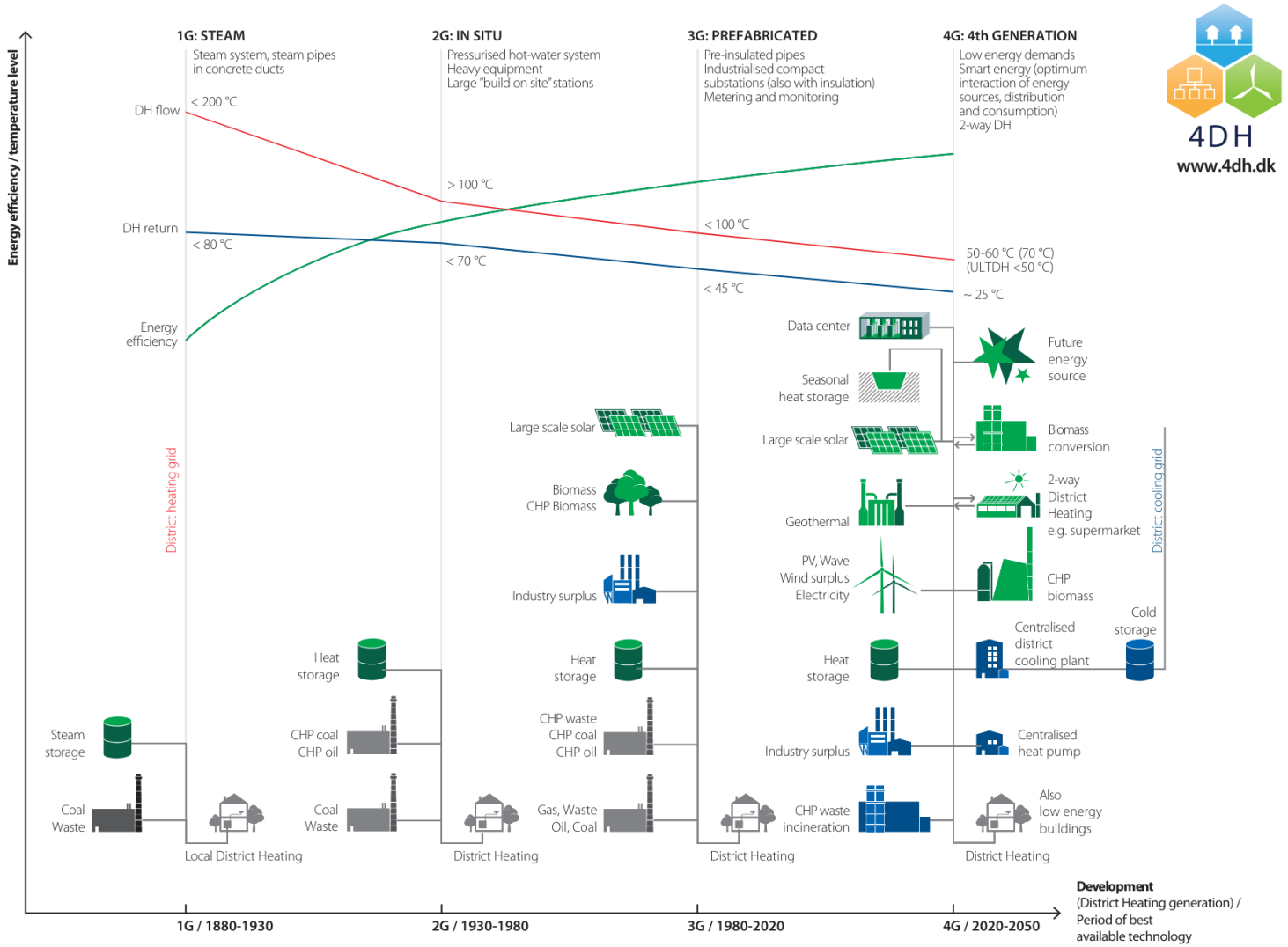
THE MAIN THOUGHTS OF OUR STRATEGY



4DH
www.4dh.dk

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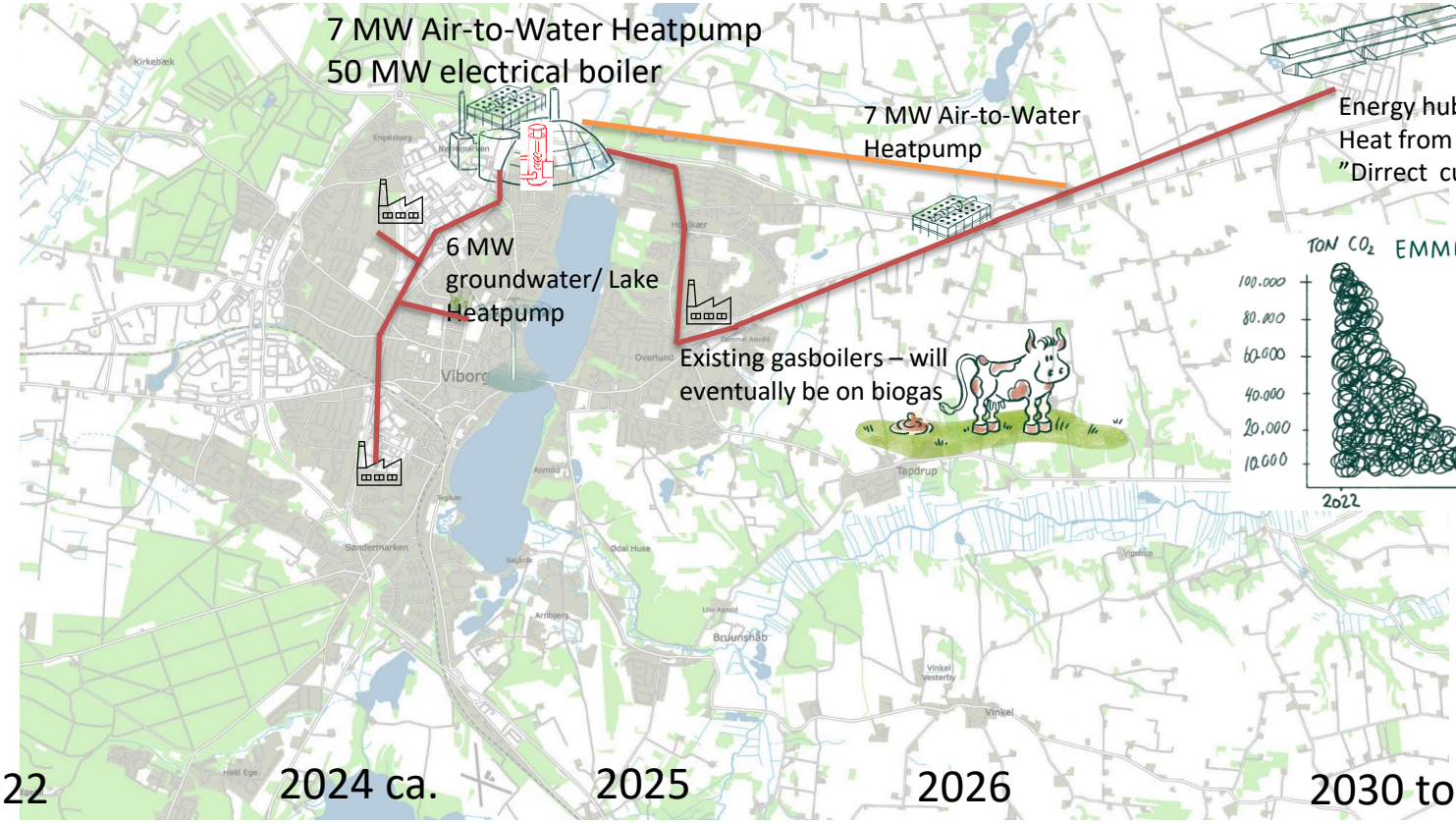
HEAT PRODUCTION 2026 (DIFFERENT SOURCES IN DIFFERENT



2022	2024 ca.		2025		2026		2030 towards 2040	
Gas 100%	Heatpu.	37 %	Heatpu.	52 %	Heatpu.	84 %	Heatpu.	93 %
	El. boiler	35 %	El. boiler	28 %	El. boiler	13 %	El. boiler	6,6 %
	Gas	28%	Gas	20%	Gas	3 %	Gas	0,4 %

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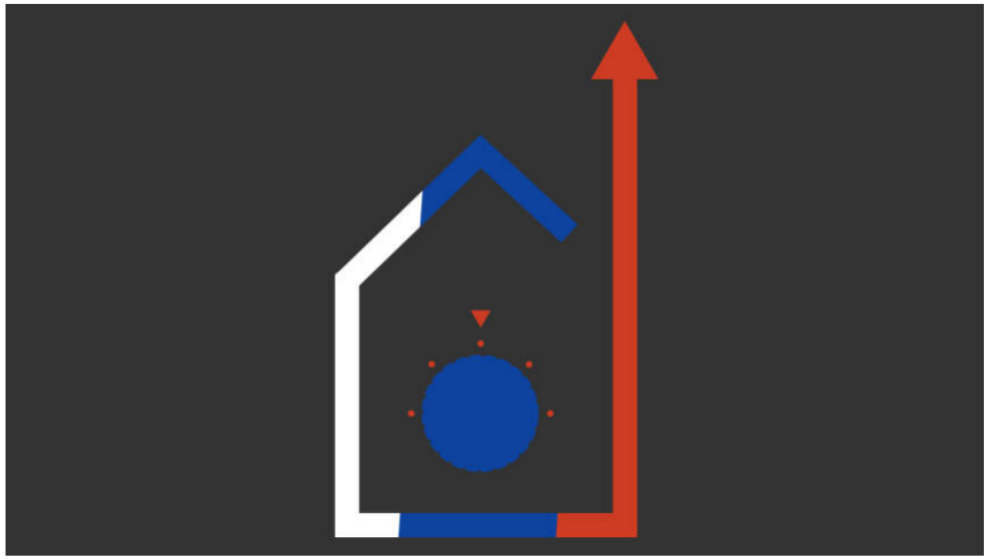
RUSSIAS CONTROL OF GAS

DR SENESTE NYT **INDLAND** UDLAND PENGE POLITIK REGIONALT VEJRET

Krig og skyhøje gaspriser øger efterspørgslen efter fjernvarme

Fjernvarmeværker bliver kimet ned af borgere, der vil kobles på fjernvarmenettet efter Ruslands invasion af Ukraine.



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RUSSIAS CONTROL OF GAS

SAMFUND

Mette F.: 400.000 danske husstande skal væk fra naturgas

9. apr. 2022, 22:51

Mette Frederiksen siger, at "i de kommende år tror jeg både, at vi selv og en række andre europæiske lande hellere vil bruge dansk gas, end vi vil købe det af Putin". Foto: Mindaugas Kulbis / ASSOCIATED PRESS

af **Ritzau**

Alle danske private hjem med gasfyr skal over på en anden energikilde, siger Mette Frederiksen til Berlingske.

I et interview med Berlingske løfter statsminister Mette Frederiksen (S) lidt af sløret for regeringens kommende udspil til, hvordan Danmark kan blive uafhængig af russisk gas.

MEST SETE PÅ TV2.DK

CORONAVIRUS

Panikken spreder sig i verdens tredjestørste by - folk deler overlevelsesguider

PENGE

Rekordhøj inflation i marts

MMA

Mark O. svines til efter sejr: - En fis i en hornlygte

UNDERHOLDNING

Gik fra hinanden kort før brylluppet for 17 år siden - nu er de forlovede igen

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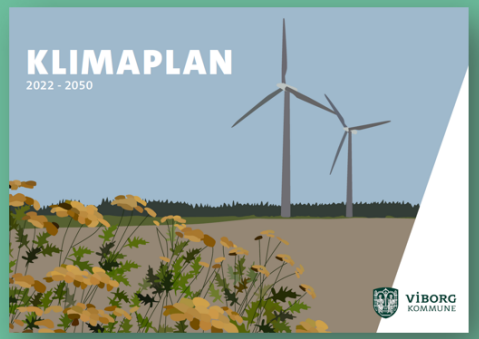
The Goal in the Viborg Municipality Climate plan

In 2022 Viborg City Council passed a Climate plan with these climate goals of 2030:*

- All individual oil- and gas-boilers is converted to renewable energy.
- District heating shall be developed in communities where it is climate and socio-economical feasible
- All District Heating companies shall have phased out fossil fuels
- Surplus heat from the industries shall be used in the heating networks



*among others

VIBORG KOMMUNE

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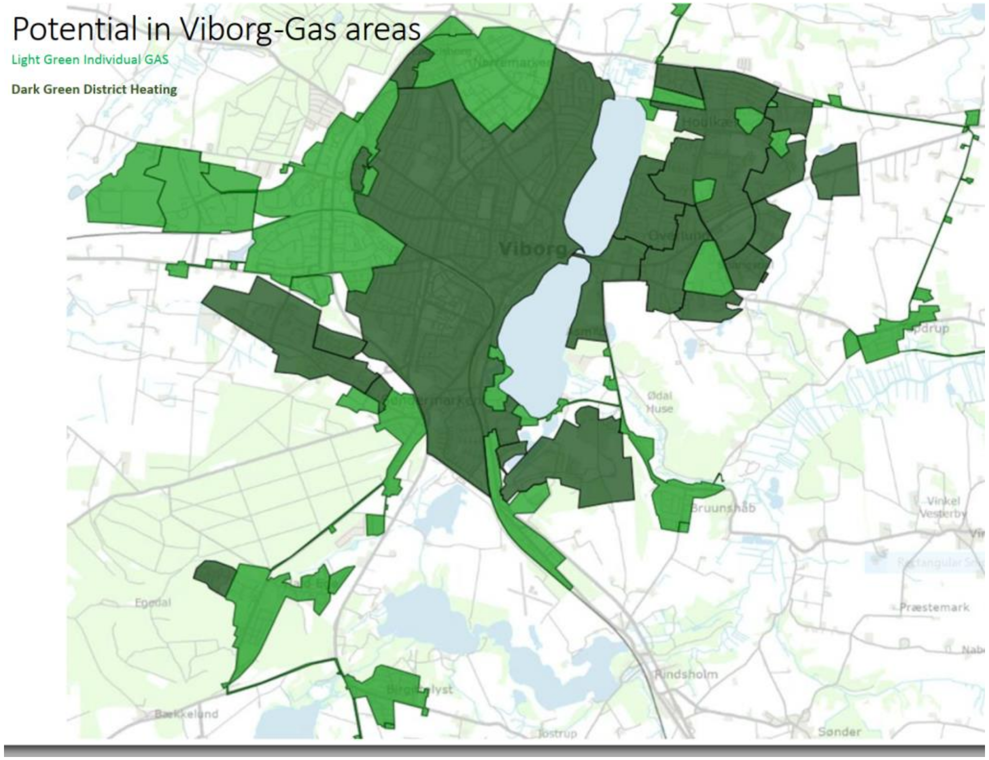
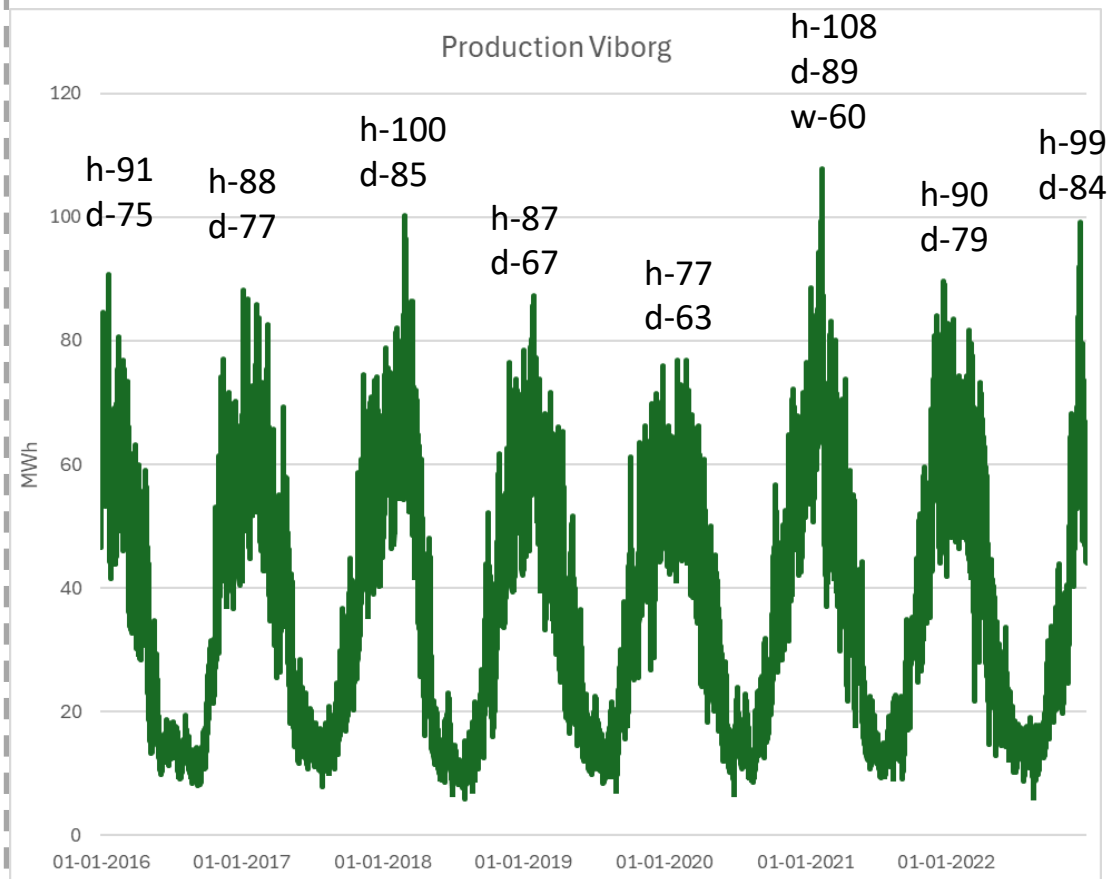
MAP OF THE NATURAL GAS GRID



- 3500 possible connection
- All areas is calculated to see if there's a business case to pursue
- Connection rate of possible – above 90 %

PEAKLOAD – PHASING OUT FOSIL FUEL



Renewable production capacity and the yearly production

30 MW	35 MW	40 MW	45 MW	50 MW	55 MW	60 MW	65 MW	70 MW	75 MW
67%	75%	81%	87%	91%	95%	97%	98,60%	99,30%	99,70%

- A peak load is a load that does not come every year
- A huge difference to the hourly and the daily peak
- And even more if it's over a week
- But a capacity at around 65 % of the hour peak is very close to 100%

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HOW ABOUT THE BUIID OUT OF THE CITY

- Peak in 2012 – a cold period with a peak hour of 105,7 MW in February – 2.052.000 m2 connected
- 2021 additional 325.000 m² connected
  - If calculated a 13,7 MW peak
- The peak on a -12 degree day in 2021 108 MW or additional 2 MW peak
- Gaspotential is around 900.000 m²
  - If calculated it's 38 MW extra peak.
- But from experience it should probably be expected to be around 10 MW

PRODUCTION INVESTMENT

Investment in Heat pump from surplus heat
1 mio. € per MW

	30 MW	35 MW	40 MW	45 MW	50 MW	55 MW	60 MW	65 MW	70 MW	75 MW
	67%	75%	81%	87%	91%	95%	97,2%	98,6%	99,3%	99,7%
Average yealy extra MWh production		22.364	19.920	17.584	14.732	11.015	7.261	4.289	2.290	1.132
20 year extra production		447.280	398.400	351.680	294.640	220.300	145.220	85.780	45.800	22.640
€ invested per MWh produced		11	13	14	17	23	34	58	109	221

What is the alternative heat production, if we don't invest in heat pump?

In Viborg it's Gas boiler or Electrical boiler

Also 19.000 m3 accumulation

Electrical boiler 2,5 mil € in Viborg with a 50 MW capacity