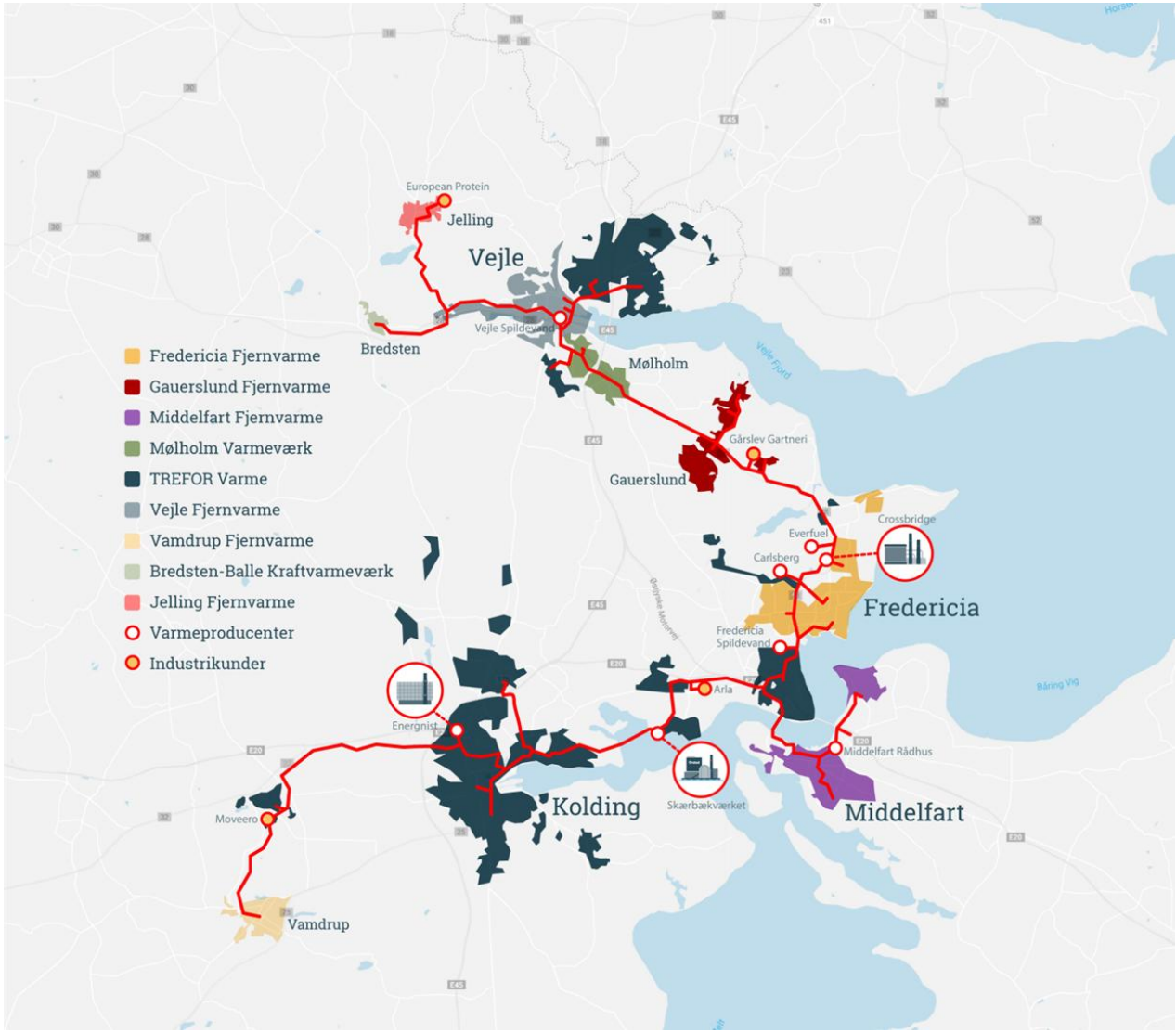
DBDH November 2025

Trekantområdets
Varmetransmissionsselskab I/S

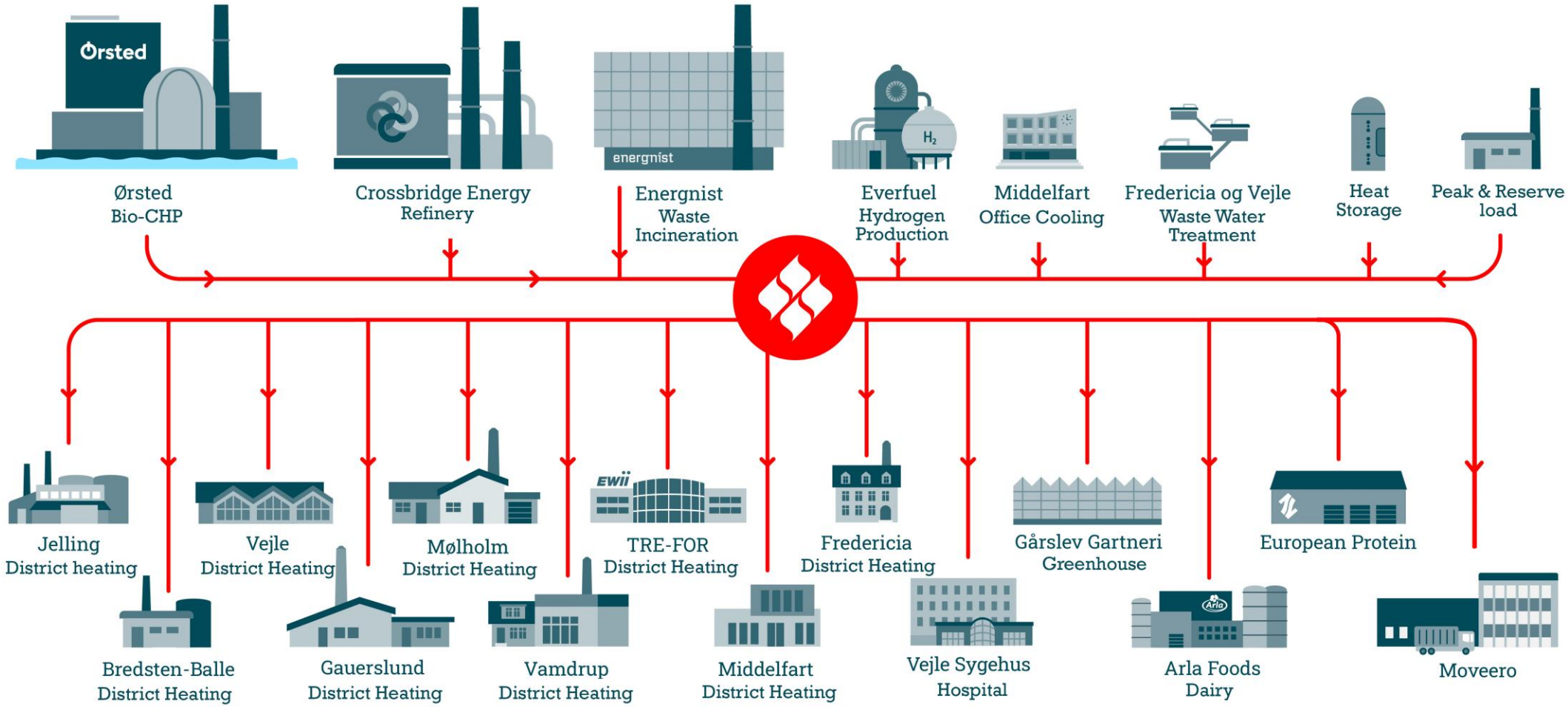
TVIS – Heat transmission company

- 29 employees.
- Turnover: 125 MEUR
- Heat sale – 2.000.000 MWh/Year
- 77 Stations with heat exchanger, pump stations, etc.
- 140 km main pipe trace from Vejle in the north to Kolding in the south.
- One central control room.
- Operating maximum water temperature up to 120° Celsius.
- Operating maximum hydraulically pressure up to 25 bar.
- Heat loss <2%
- Peak and reserve capacity <2%



TVIS
sammen om varmen
5. november 2025

TVIS – Multiple heat sources and customers

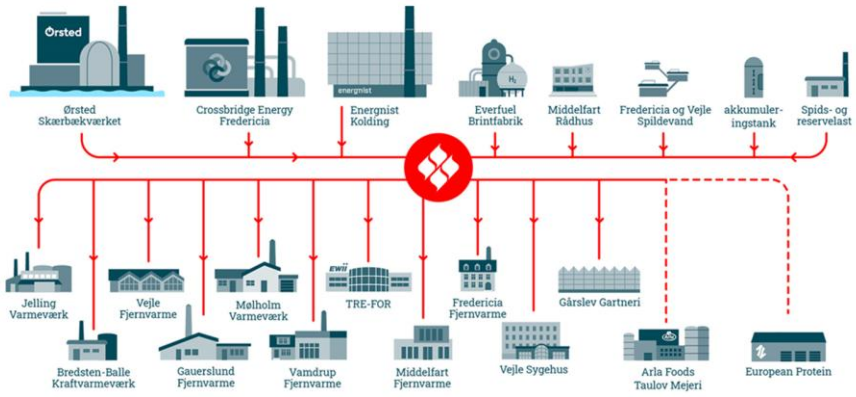


TVIS
sammen om varmen

TVIS – Owners strategy.

Our ownership strategy emphasizes that TVIS has focus on:

- Economy and competitiveness - TVIS works continuously to maintain district heating as consumers' preferred choice and supports the competitiveness of district heating companies.
- Environment and sustainability - TVIS develops the utilization of surplus heat and other sustainable heat sources.
- Security of supply - Through the choice of heat sources, operation and maintenance strategies, TVIS places great emphasis on security of supply both in the short and long term.
- Social responsibility - TVIS ensures employee well-being and competence development, incorporates social responsibility in everyday life and in tendering.



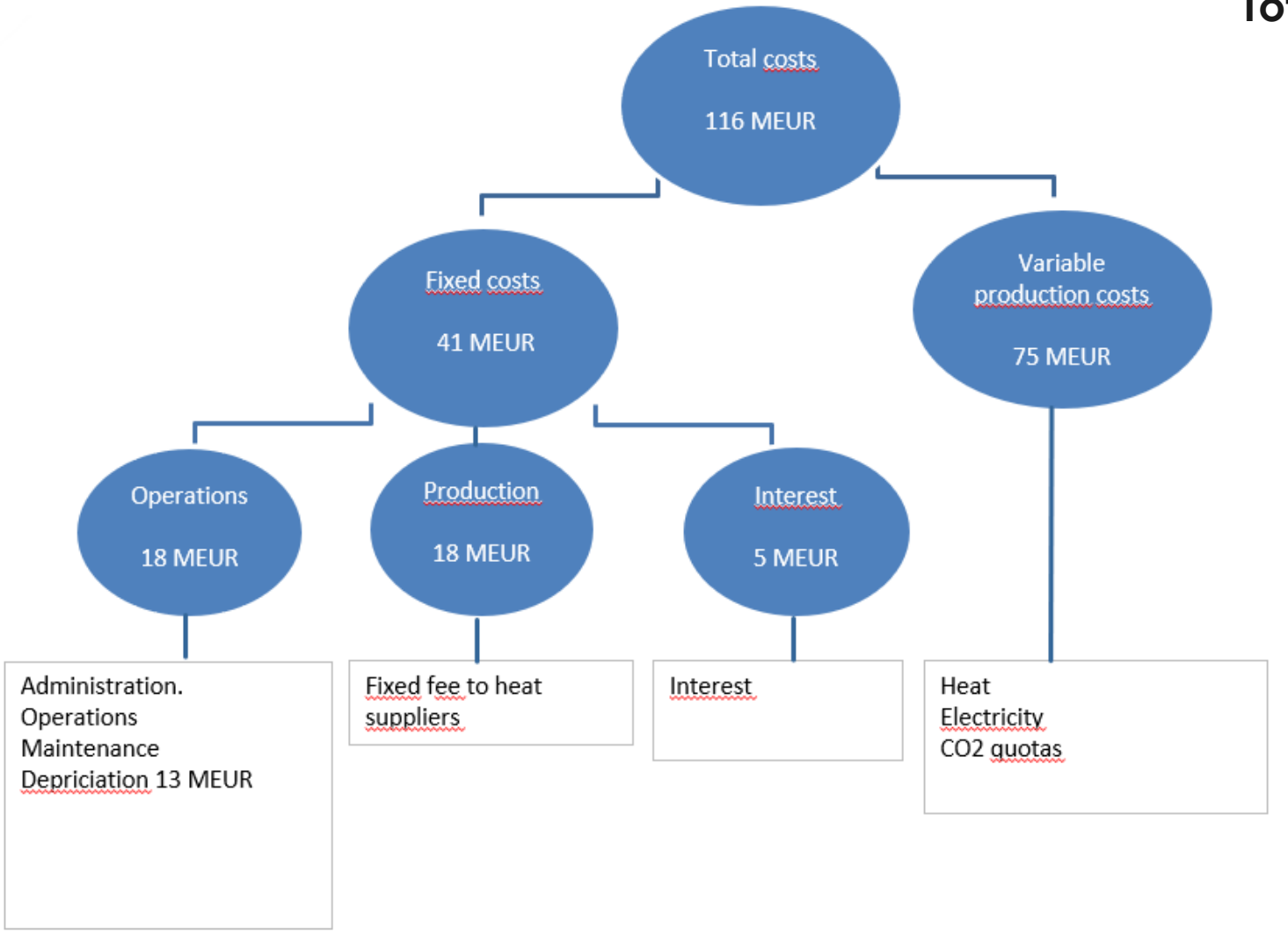
TVIS
sammen om varmen

Today

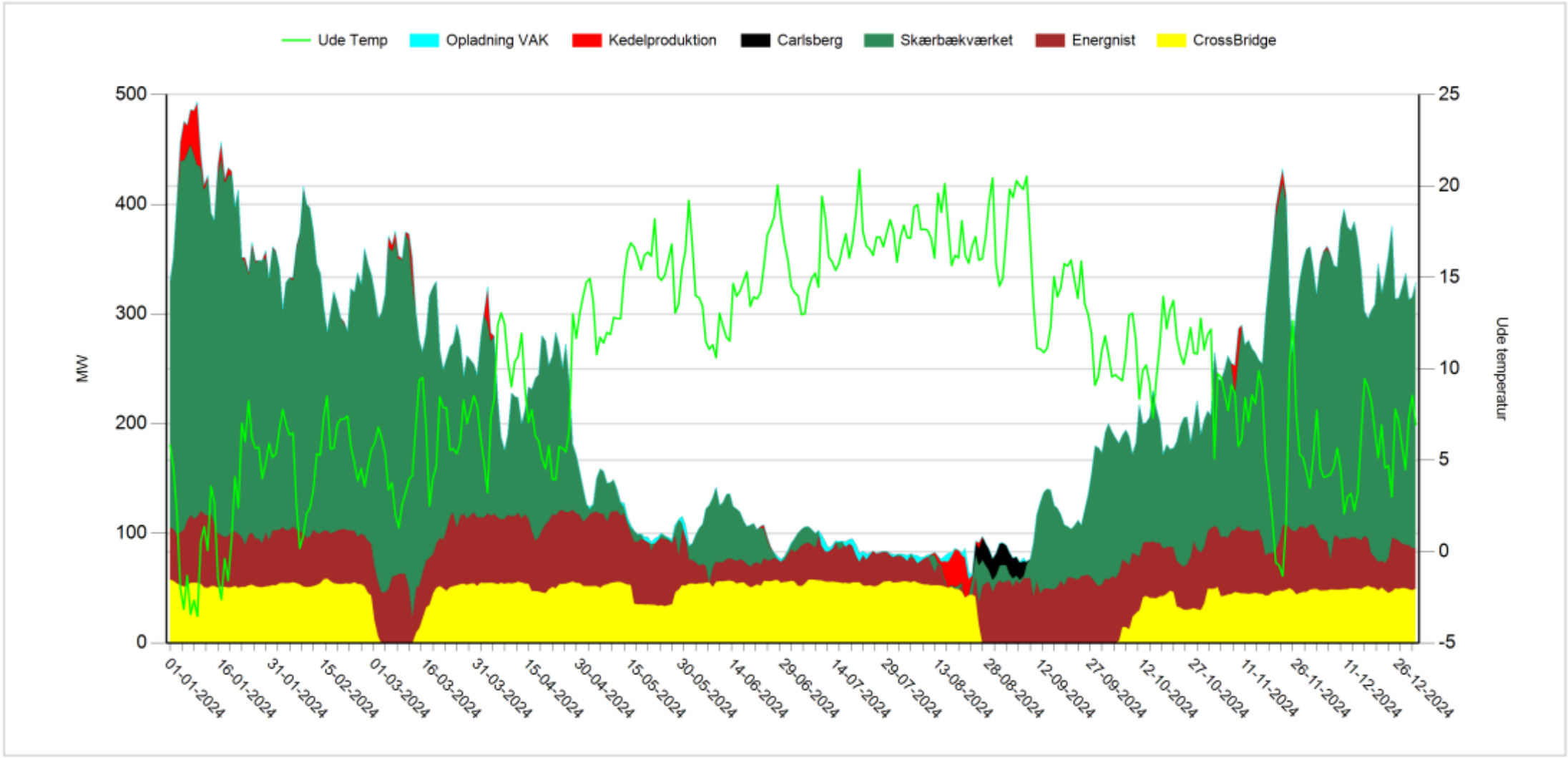
Variable costs: 38 €/MWh

Fixed costs: 22 €/MWh

Total costs: 60 €/MWh



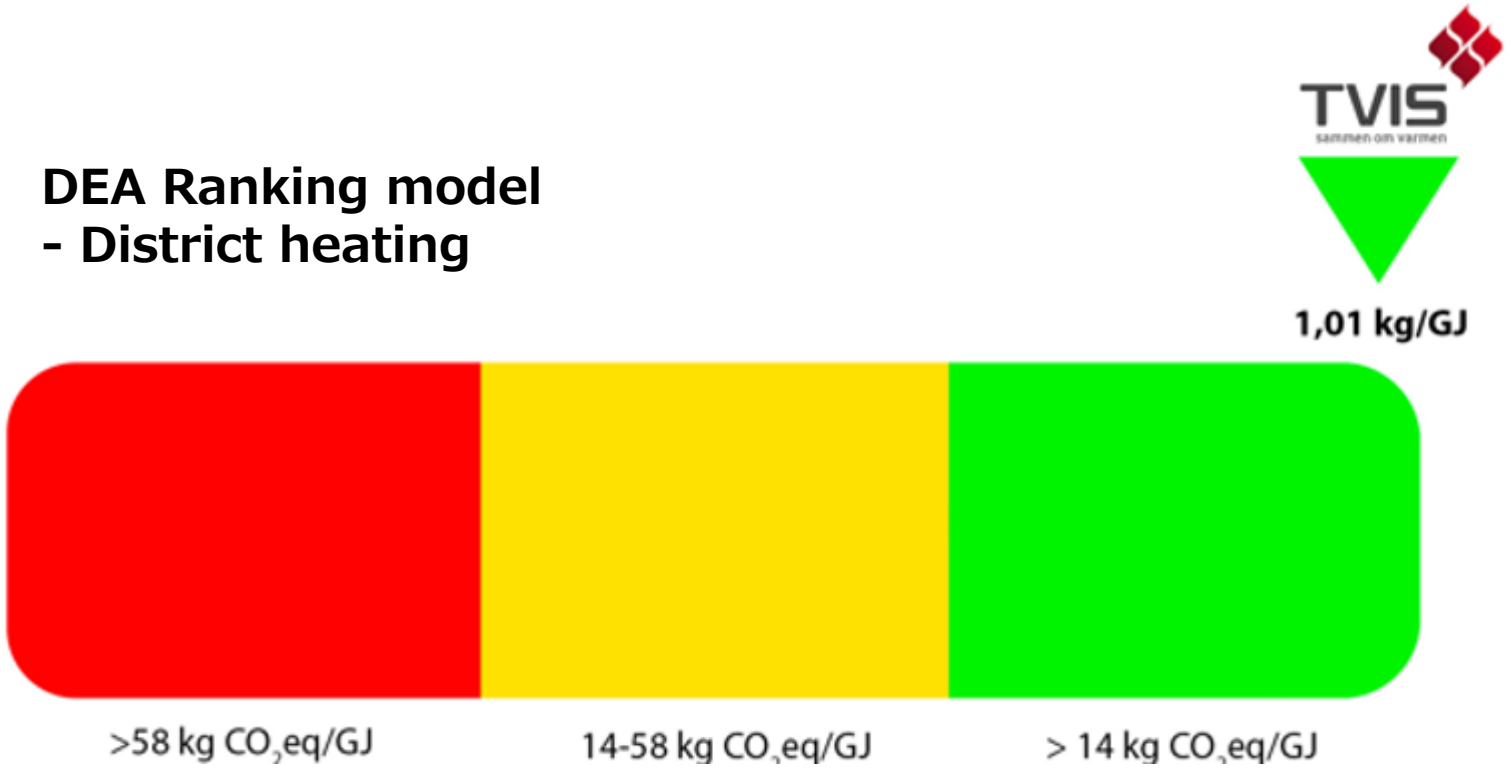
TVIS – 2.000.000 MW heat.



TVIS
sammen om varmen

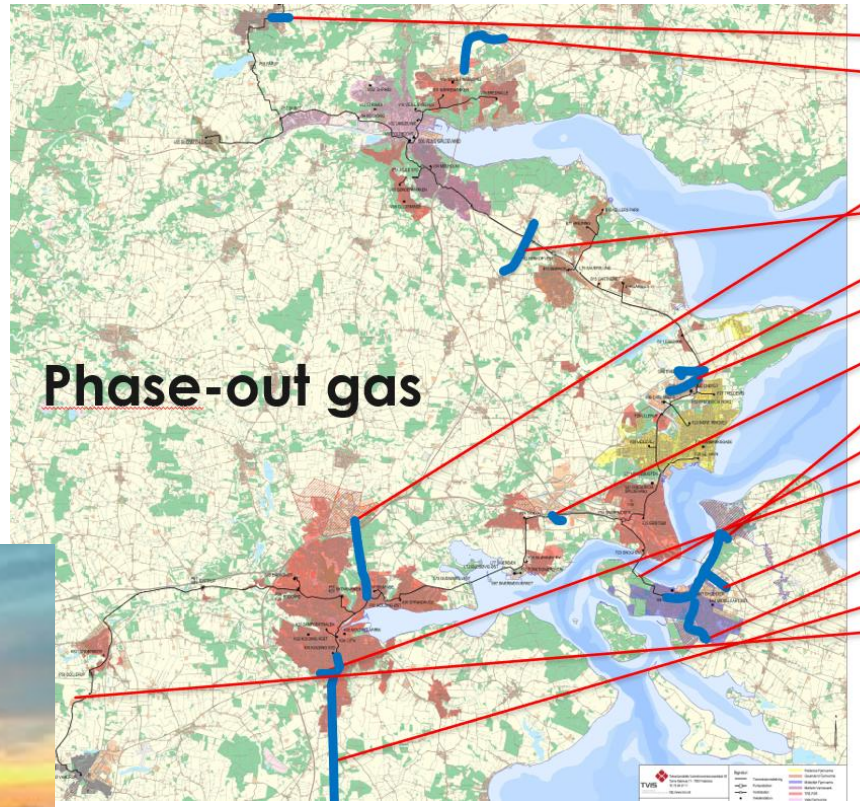
TVIS – CO_2 emissions

DEA Ranking model
- District heating



TVIS
sammen om varmen

New district heating customers

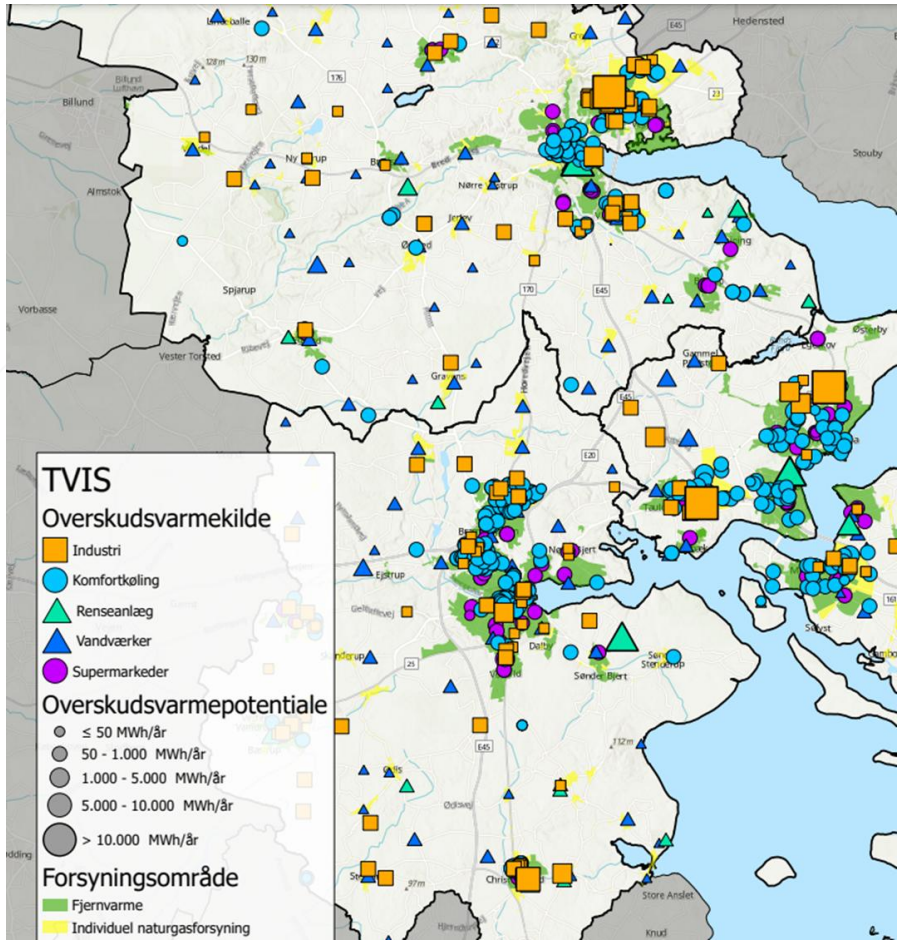


- Process heat - Potential 3600 MWh
- Surplus heat – 22.200 MWh
- District heating 5 small cities – 53.500 MWh
- District heating 3 small cities – 14.500 MWh
- Surplus heat - 50.000 MWh
- Process heat – 69.000 MWh
- Process heat - 24.000 MWh
- District heating – 36.000 MWh
- Process heat – 280 MWh
- District heating – 9.000 MWh
- District heating – 16.200 MWh
- District heating – 17.000 MWh
- District heating/Process heat – 55.000 MWh.
- Process heat - Potential 7500 MWh

- Green = Potential process heat to industrial costumer
- Red = Potential district heating
- Orange = Surplus heat form industry
- Black line = Existing transmission grid.

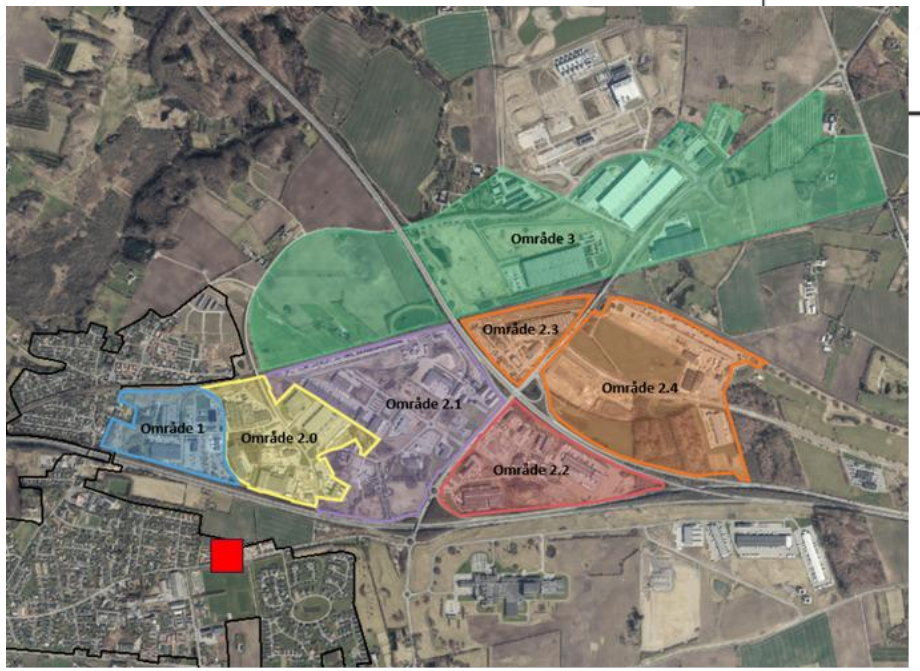
TVIS
sammen om varmen
5. november 2025

Power to X - Surplus heat in general – Large potential



New process customers – Industry changing from gas to TVIS

Proceskunder	Identificerede udbygningsprojekter		
	Anlægsår	Maks udbygn	TVIS skøn Invest
Forsyningsområde og prognose		TJ/år	mio DKK
Udvidelsesprojekter 2022-2026			
Arla	2023	86	10
European Protein	2024	13	2
Sektorkobling Carlsberg, Ball, Everfuel og CBE	2024	250	23
	2024	27	6



TVIS
sammen om varmen

Proces heat customer - ARLA

Data:

Effect: 10 MW.

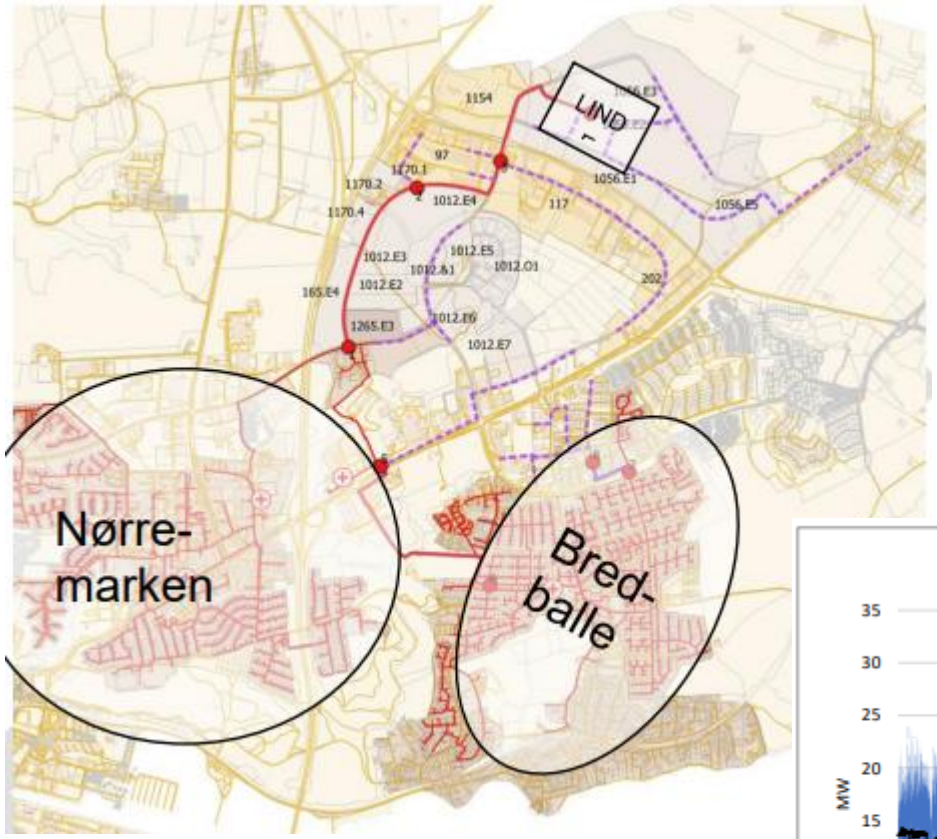
Yearly consumption: 30.000 MWh.

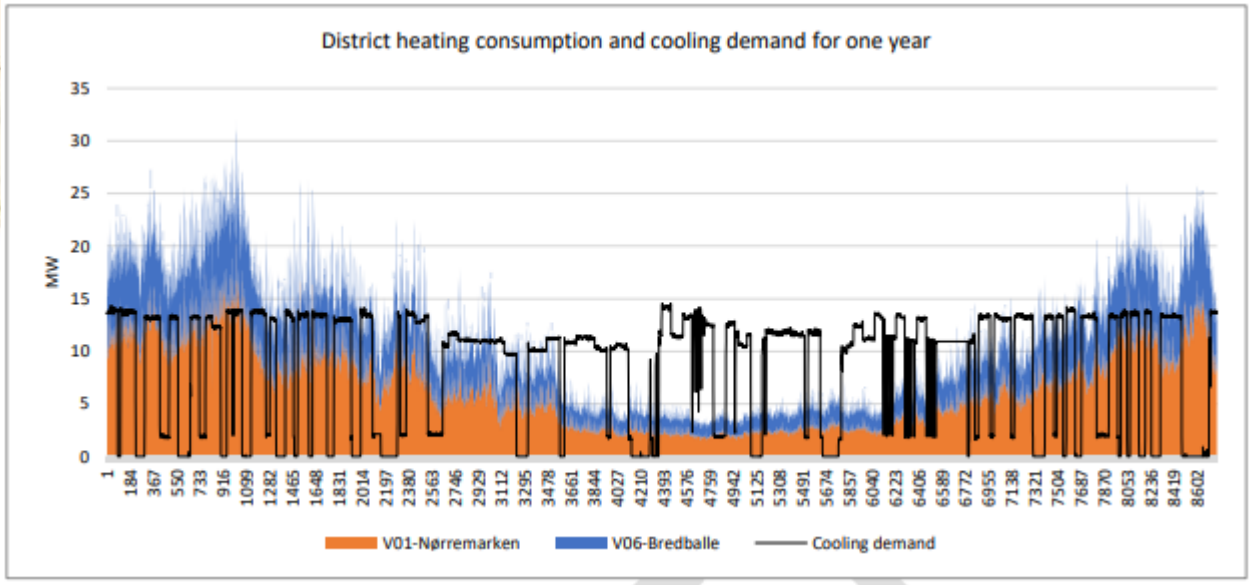
Investment: TVIS' budget = 10 mio. kr.

Omfattende projekt: Arla vil lave 60 mio. kg ost uden brug af gas

60 mio. kg oste af typerne Maribo, havarti og Danbo producerer Arla årligt på sit store mejeri i Taulov. Her skal naturgas nu erstattes af fjernvarme som en del af et stor projekt, der i Trekantområdet skal fjerne 460.000 ton CO2. PR-foto

Surplus heat from industrial gas production.





TVIS
sammen om varmen

Surplus heat from datacenter

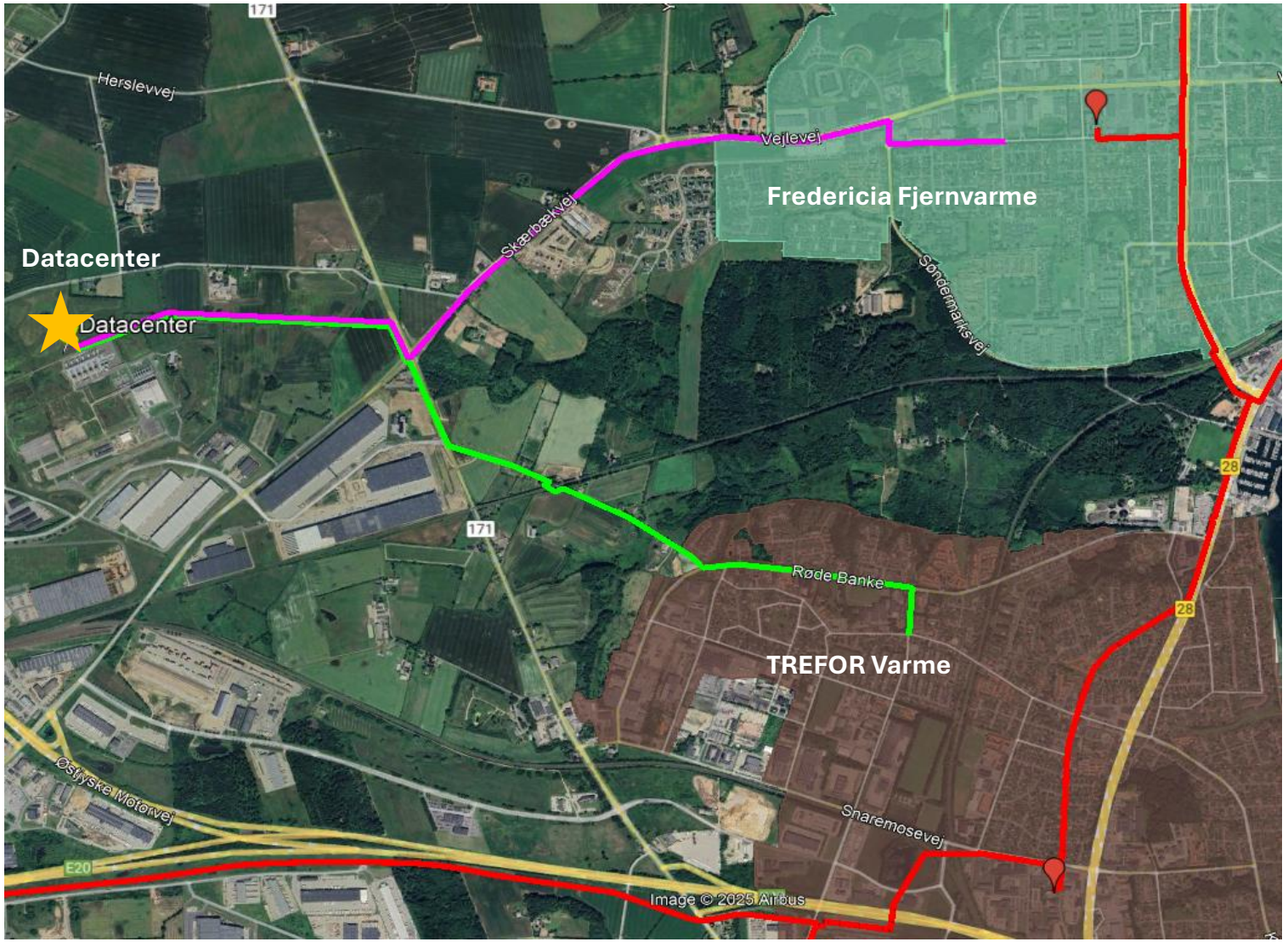
Free cooling and free surplus heat.

2 x 13 MW

In 20 °C

Out 28-32 °C

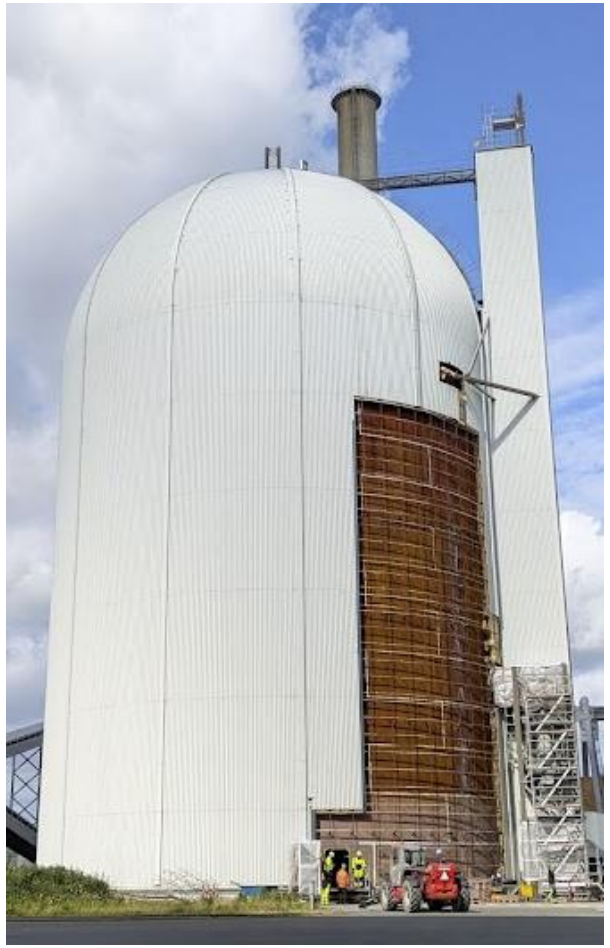
80 °C to the district heating grid

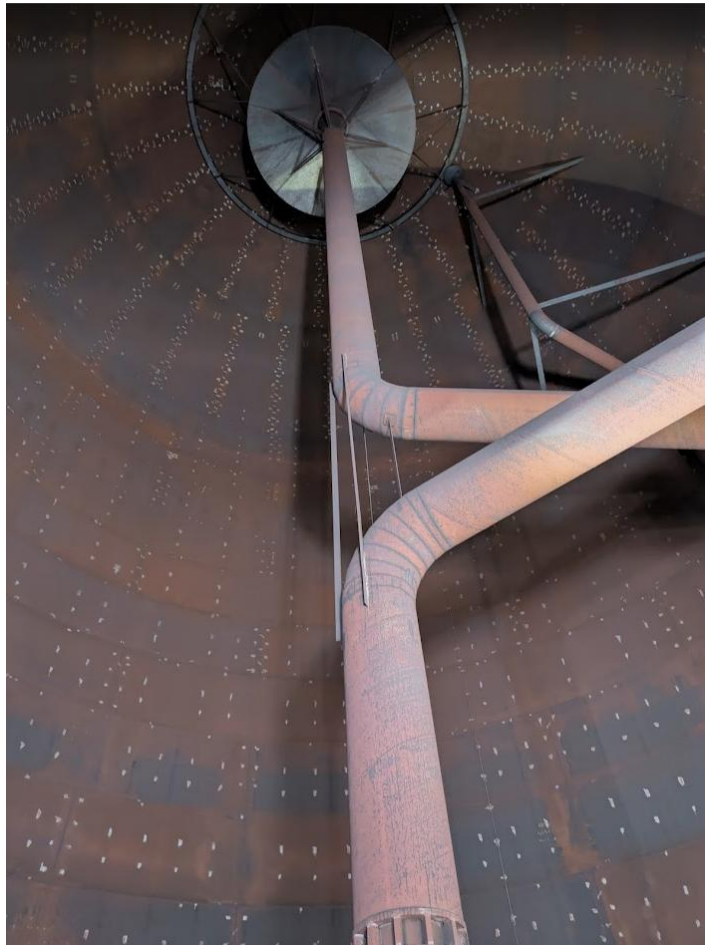


….but not without investemente

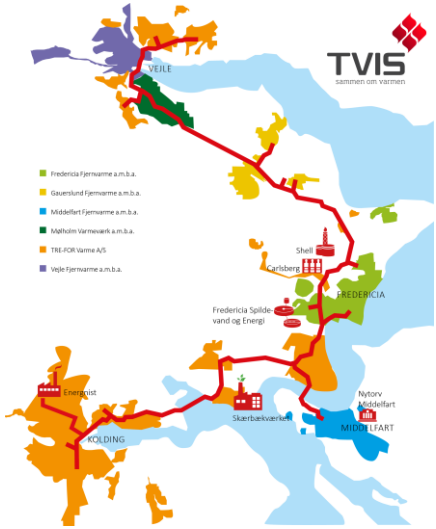
- **Investment in land, piping, storage and heatpump.**

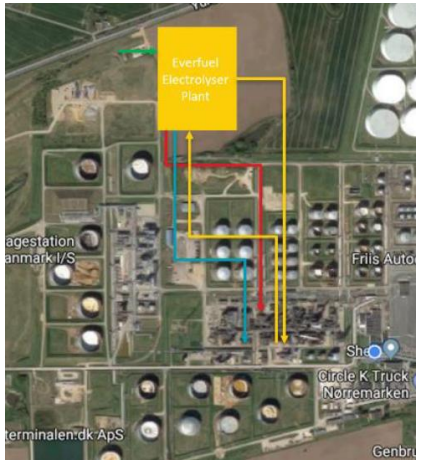
25.000 m3 and 10.000 m3 accumulation tank



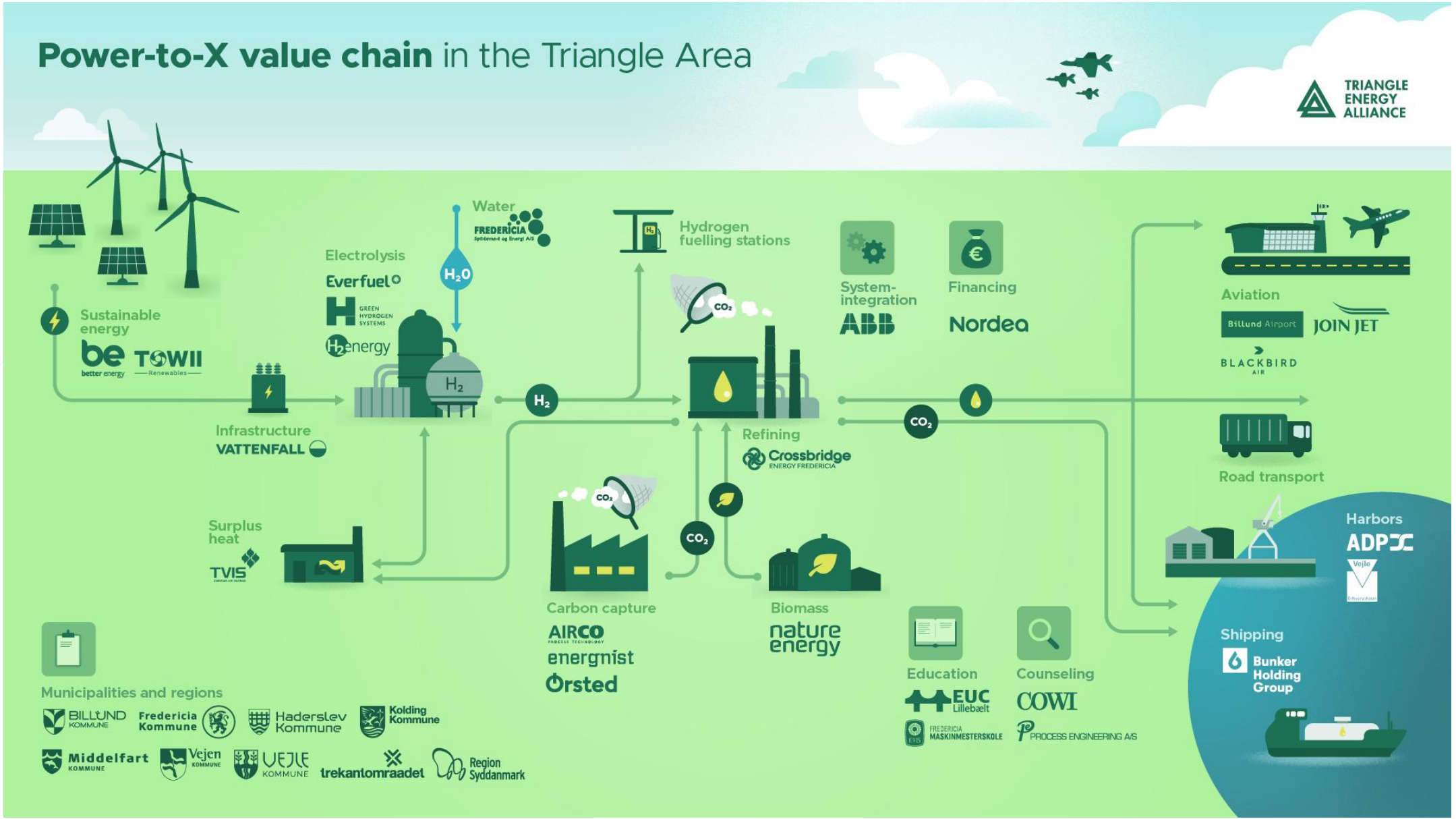


Why should we have P2X activities in the triangel region?





Power to X



TVIS
sammen om varmen

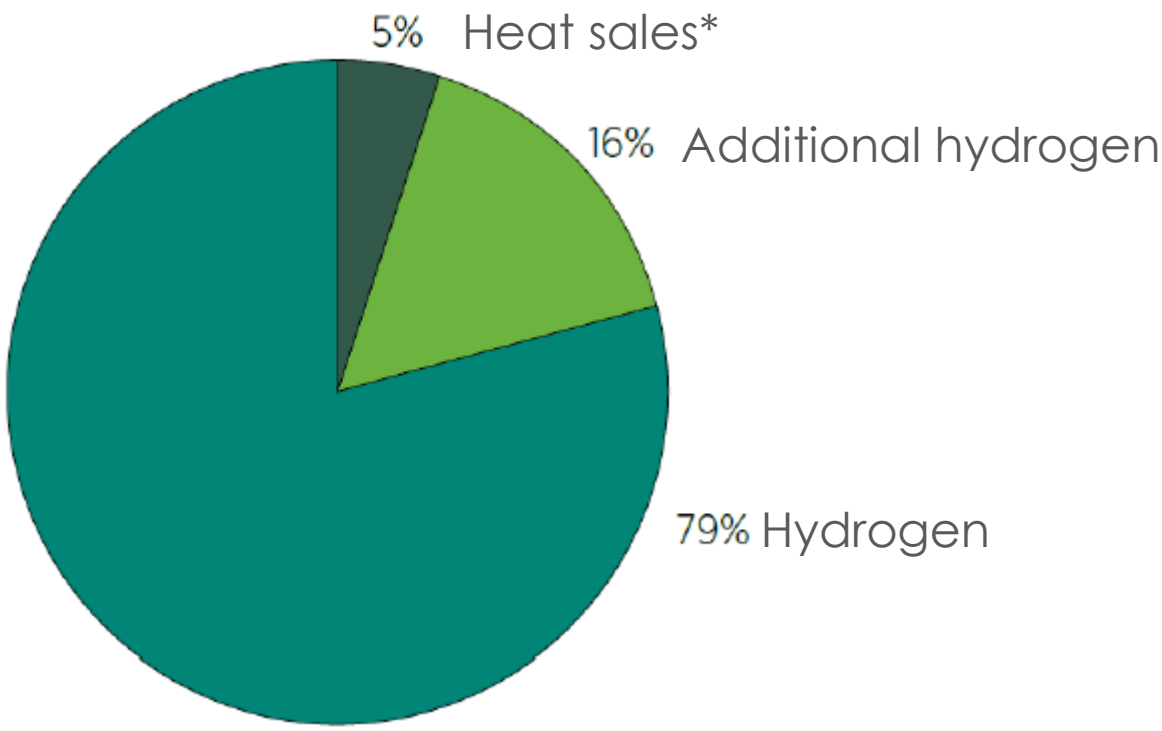
Everfuel, CBE, og TVIS – 20 MW electrolysis in Q2 2025.

Operational hours per year: 6000
Hydrogen: 3.880 Nm3/h (ca. 350 kg/h)
Surplus heat - Direct: 10.000 MWh per year
Surplus heat – Heatpump: 18.000 MWh per year.

* **1 ton green hydrogen will reduce CO2 emissions with 10 ton at the refinery.**

TVIS
sammen om varmen
5. november 2025

Surplus heat and cooling – Hydrogen production.



* Not including reduced investment in cooling and operational costs for cooling

New activities – 100 MW

Posted by **Søren Schmidt Thomsen** • 6/28/2022 •••

Triangle Energy Alliance (TEA)
488 followers
16h •

100 - 300 MW elektrolyse! Endnu et godt eksempel på at TEAs partnere ikke kun snakker om PtX. Vi gør det! Perspektivrig aftale med opskalering af brintsamarbejde, der lægger et vigtigt spor frem mod storskala produl ...see more

See translation

Crossbridge Energy og Everfuel tager næste skridt med HySynergy

Posted by **Søren Schmidt Thomsen** • 6/27/2022 •••

Triangle Energy Alliance (TEA)
488 followers
1d •

I Trekantområdet taler vi ikke kun om PtX, sektorkobling og samarbejde. Vi gør det!

...see more

See translation

TVIS - Trekantområdets Varmetransmissionsselskab I/S
690 followers
1d • Edited •

TVIS og **Everfuel** indgår endnu en varmeaftale fra Europas største elektrolyse-anlæg i **Fredericia Kommune**. Everfuel skal køle støtteprocesserne til brintproduktionen med en 4,5 MW varmepumpe, som TVIS kan bru ...see more

See translation

Fjernvarme til 1300 husstande mere fra Danmarks første PtX-aftale

TRIANGLE ENERGY ALLIANCE

A strong partnership

ABB
ADP
AIRCO PROCESS TECHNOLOGY
be better energy
Billund kommune
Billund Airport
BLACKBIRD AIR
Bunker Holding Group
COWI
Crossbridge ENERGY FREDERICIA
energnist USE OF USED
EUC Lillebælt
Everfuel
Fredericia Kommune
FREDERICIA MASKINMESTERSKOLE
GREEN HYDROGEN SYSTEMS
H2energy
Haderslev Kommune
JOIN JET
Kolding Kommune
Middelfart KOMMUNE
nature energy
Ørsted
PROCESS ENGINEERING A/S
Region Syddanmark
TOWII Renewables
trekantområdet
TVIS
VATTENFALL
Vejen KOMMUNE
Vejle Erhvervshavn
VEJLE KOMMUNE

Power to X

Hydrogen from naturel gas

Renewable energy for hydrogen production

100 % green hydrogen

H_2

E-jetfuel og E diesel

Fossil fuel, ammonia, chemicals

Green fuel, ammonia and chemicals

Methanol

Bio-olie

Fossil fuel
Fossil CO_2

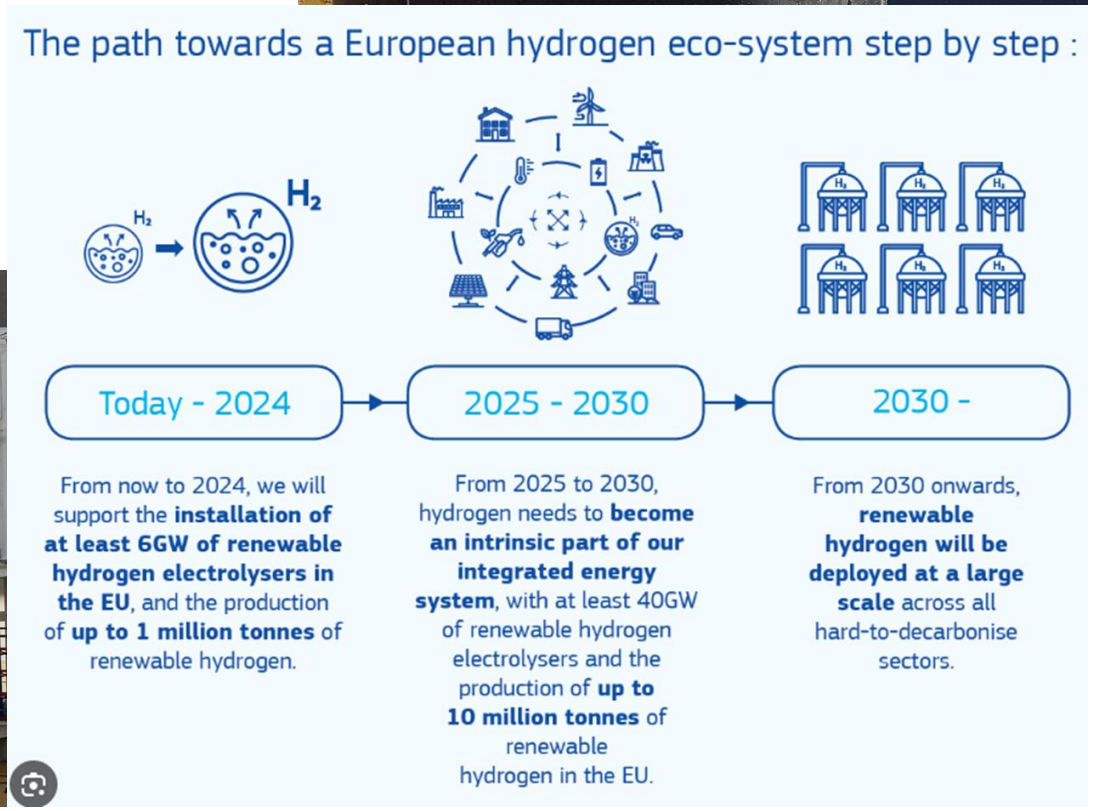
CO_2 from biomass, biogas and waste incineration

Bio-reffining of biomass

Methanol production from 300 MW solar cells green hydrogen and CO_2 from biogas production => surplus heat

EU 2030 – 100 GW electrolysis.

Operational hours per year: 6000
Surplus heat - Direct: 50.000.000 MWh per year
Surplus heat – Heatpump: 90.000.000 MWh per year.

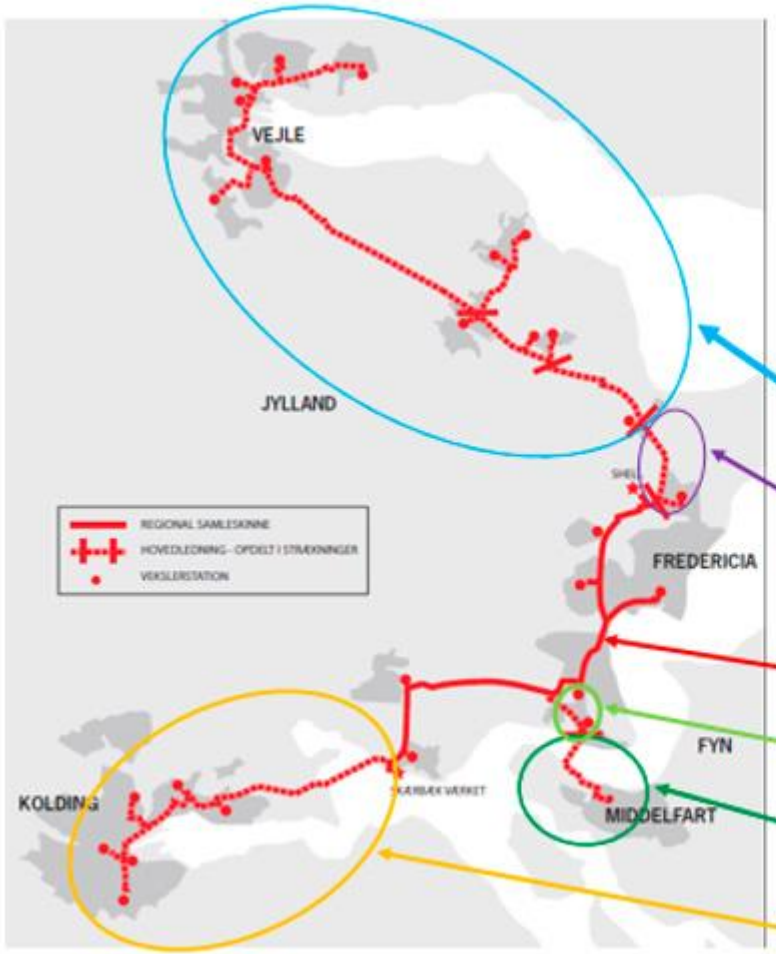


Thank you!

Linkedin.com - Jørgen Nielsen

TVIS
sammen om varmen

1982 - Articles of association:



Municipality of Vejle

Split between Vejle and Fredericia

Split between Vejle, Fredericia, Middelfart and Kolding

Split between Fredericia and Middelfart

Municipality of Middelfart

Municipality of Kolding

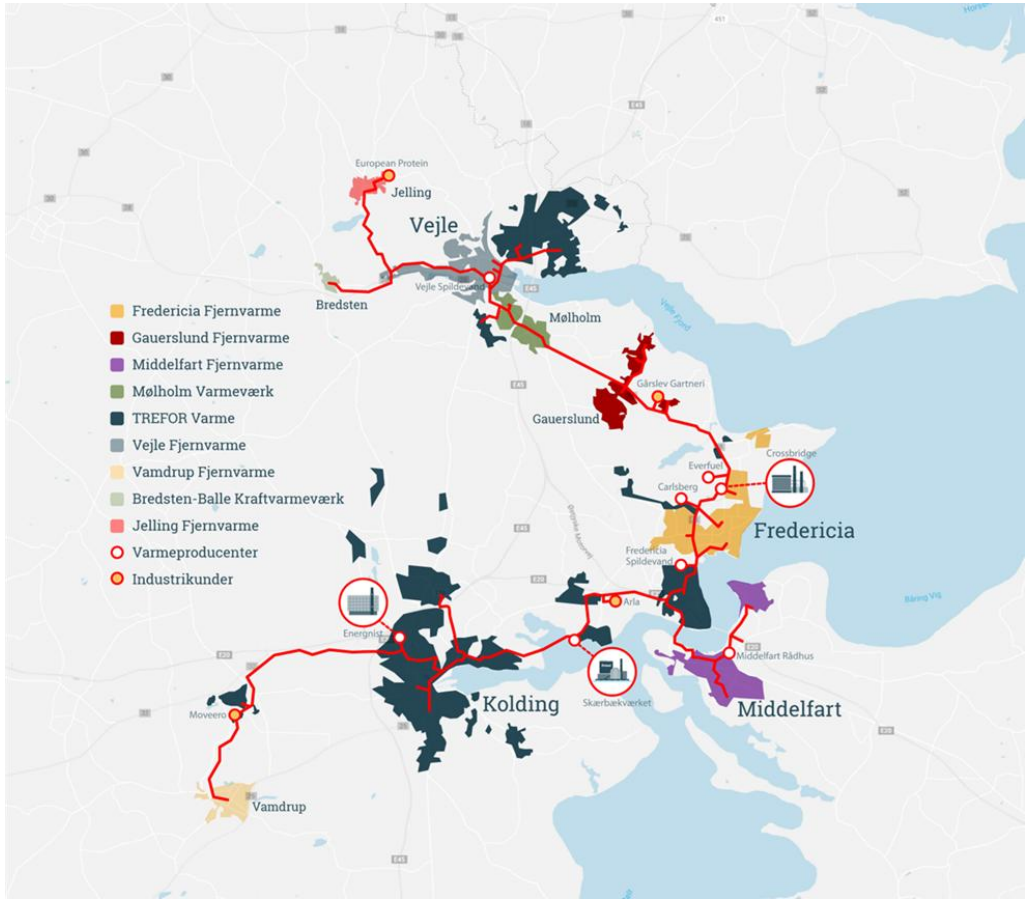
Ownership - Articles of association:

§ 3.4. Interessentkommunernes ejerandele er baseret på Interessentkommunernes historisk indmeldte forventede varmeaftag pr. 2008 og udgør:

- Fredericia Kommune ..... 31,68 %.
- Kolding Kommune ..... 28,87 %.
- Middelfart Kommune ..... 8,14 %.
- Vejle Kommune ..... 31,32 %.

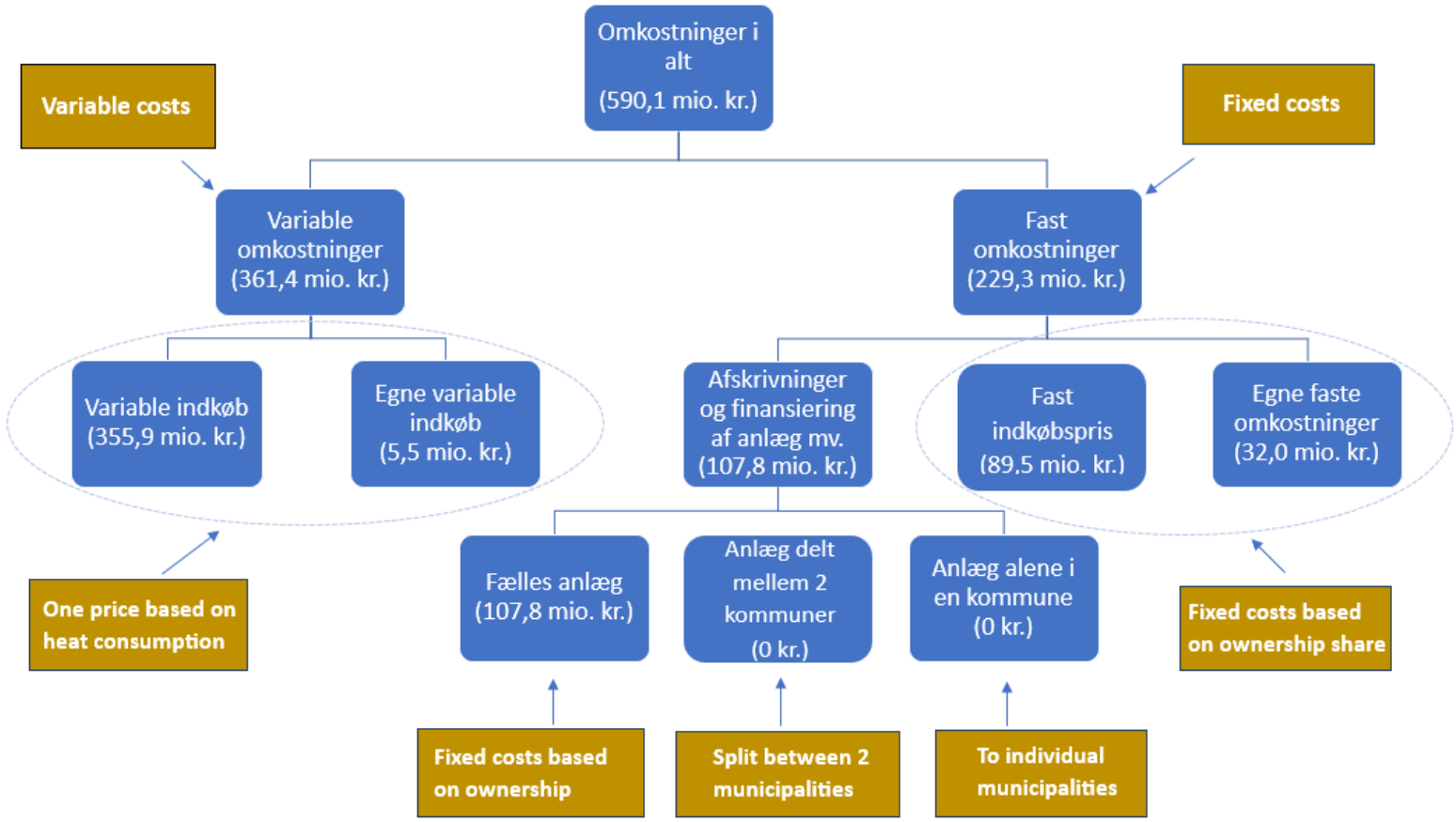
§ 3.5. Interessentkommunernes forventede varmeaftag pr. 1. januar 2020 udgør

- Fredericia Kommune: ..... 1790 TJ.
- Kolding Kommune: ..... 2410 TJ.
- Middelfart Kommune: ..... 510 TJ.
- Vejle Kommune: ..... 2120 TJ.



TVIS
sammen om varmen

1982 - Articles of association:



TVIS
sammen om varmen