

Changing Energy
with renewable technologies

MINIZING THE COST OF HEAT

Jonas I. S. | jis@aalborgcsp.com | Product Manager and Process Engineer

VISION & MISSION

Our Vision

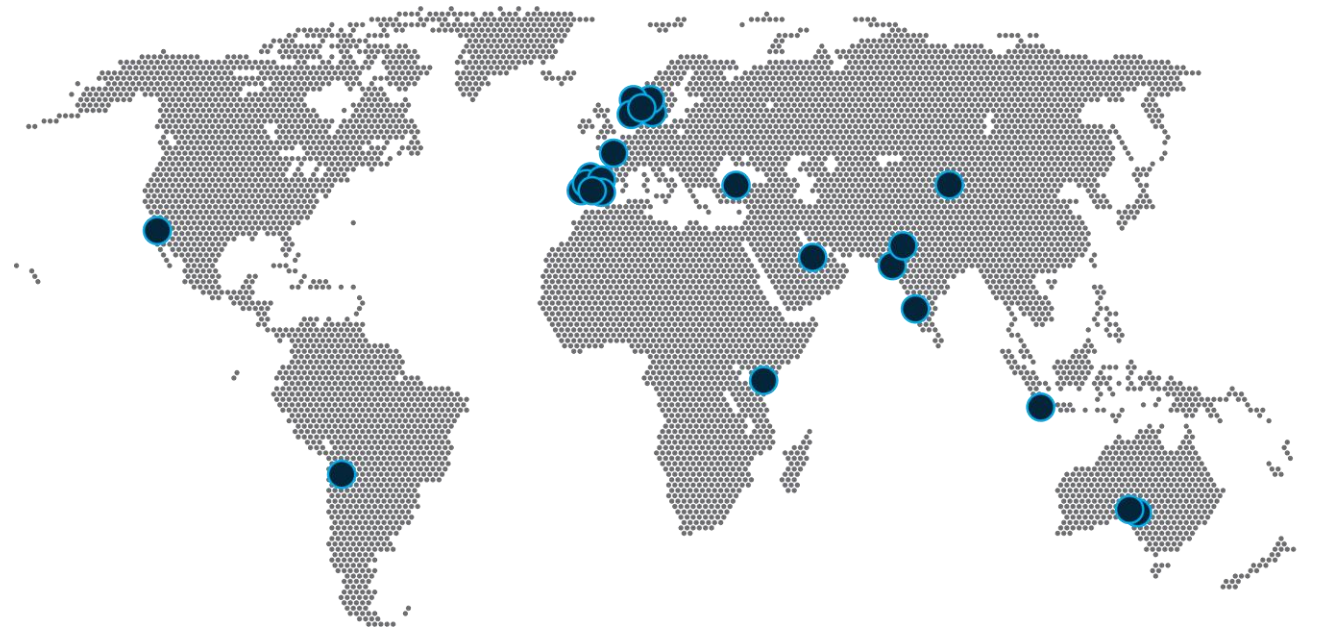
Changing Energy
accelerating the world's renewable energy
transition by making more competitive
green energy solutions.

Our Mission

to **develop** and **supply**
green technologies
and integrated energy solutions
to lower the cost of energy
for our customers.

CHANGING ENERGY

>1700 MWth
solar installations globally



BUSINESS AREAS



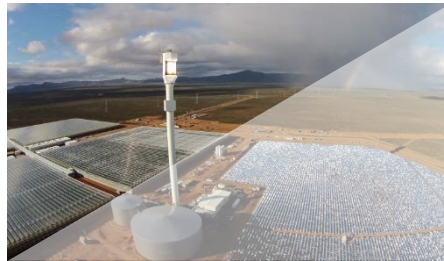
Thermal Energy Storage



Solar district heating



Heat pumps



Integrated Energy System



Heat exchangers



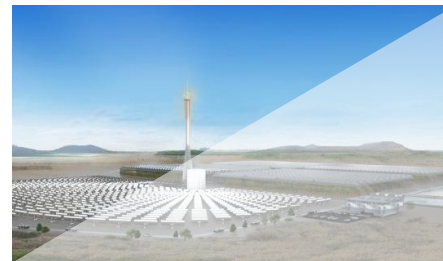
PTX technologies



CSP power plant technologies



Industrial solar technologies



R&D activities



After Sales & Service

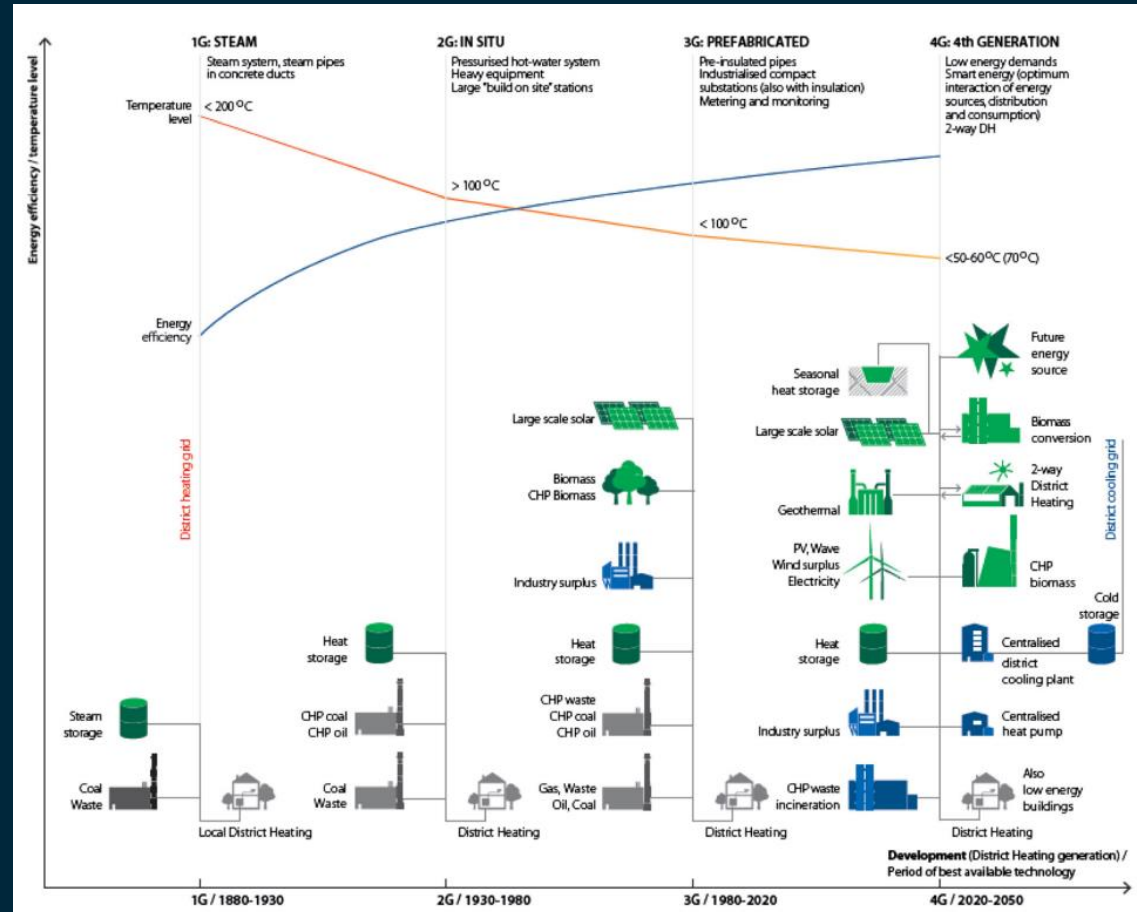
FROM IDEA TO REALITY



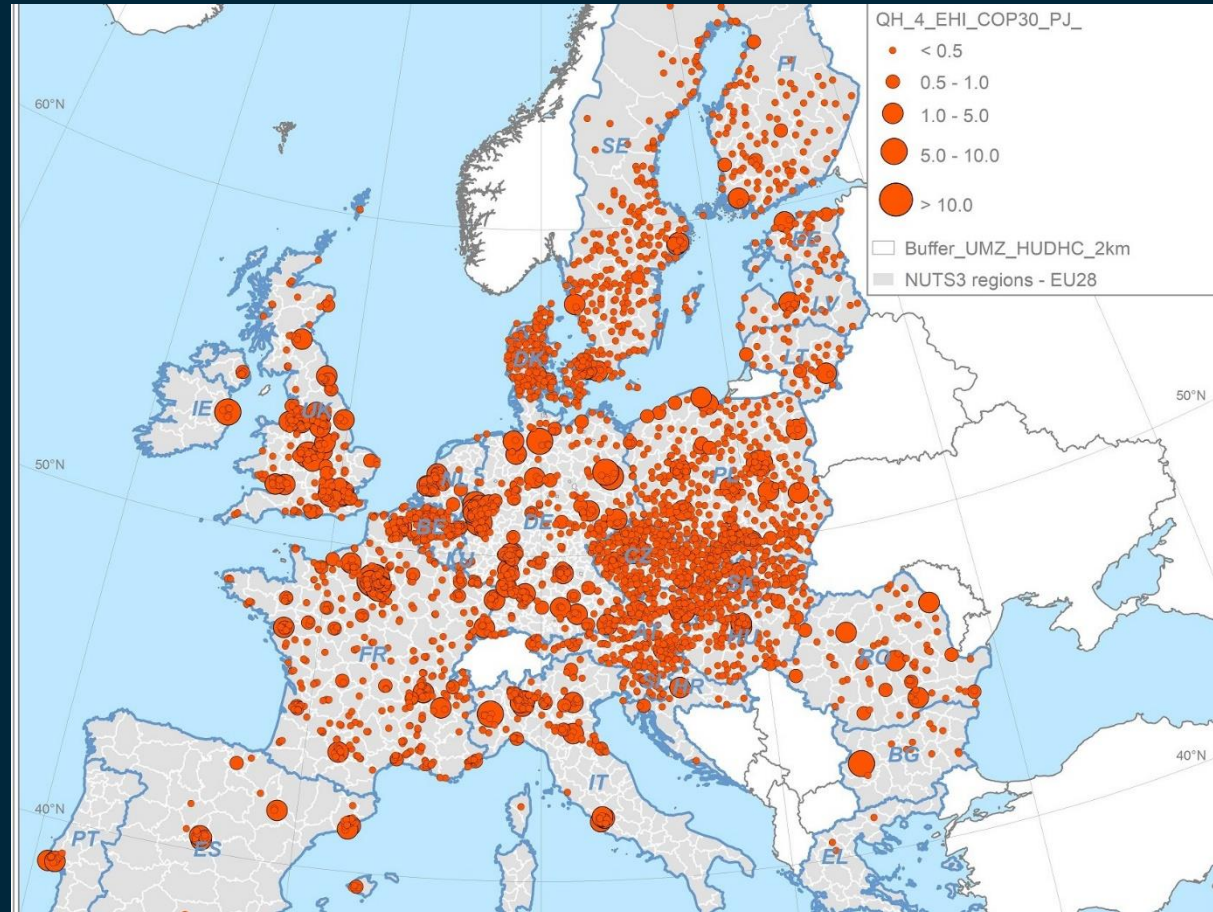
MINIMIZE COST OF HEAT

MAXIMIZE FLEXIBILITY AND SUPPLY

FUTURE PERSPECTIVES



COLLECTING CHEAP HEAT



Persson U., Averfalk H., Accessible urban waste heat. Deliverable 1.4 ReUseHeat. Recovery of Urban Excess Heat 2018.

CURRENT PTES PHILOSOPHY

SEASONAL



WEEKLY



Marstal

Seasonal Storage

75 000 m³

10 000 m²

7 000 MWh

1 cycle / year

Dronninglund

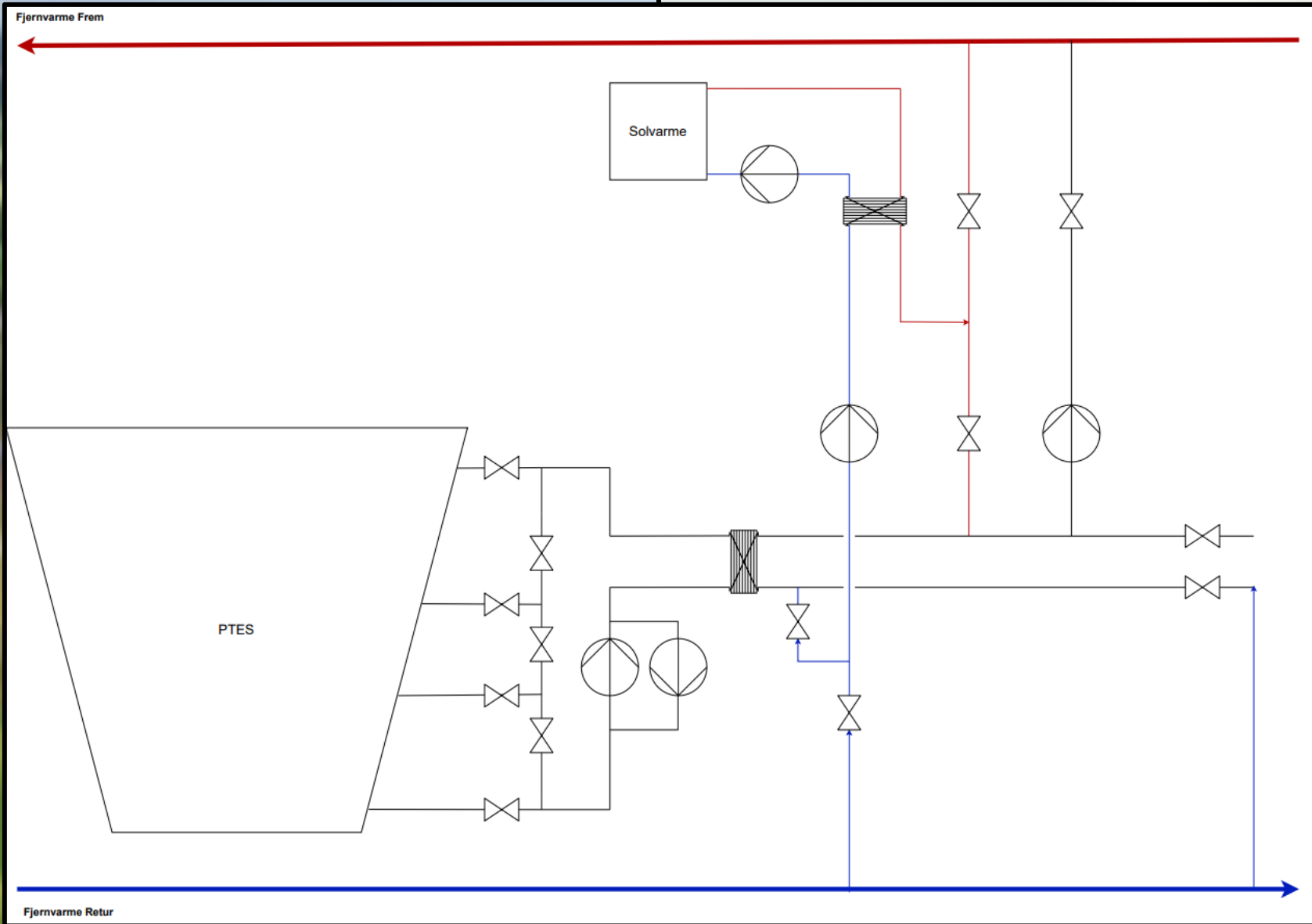
Seasonal Storage

62 000 m³

8 300 m²

5 500 MWh

2.5 cycles / year



Høje-Taastrup

Weekly Storage

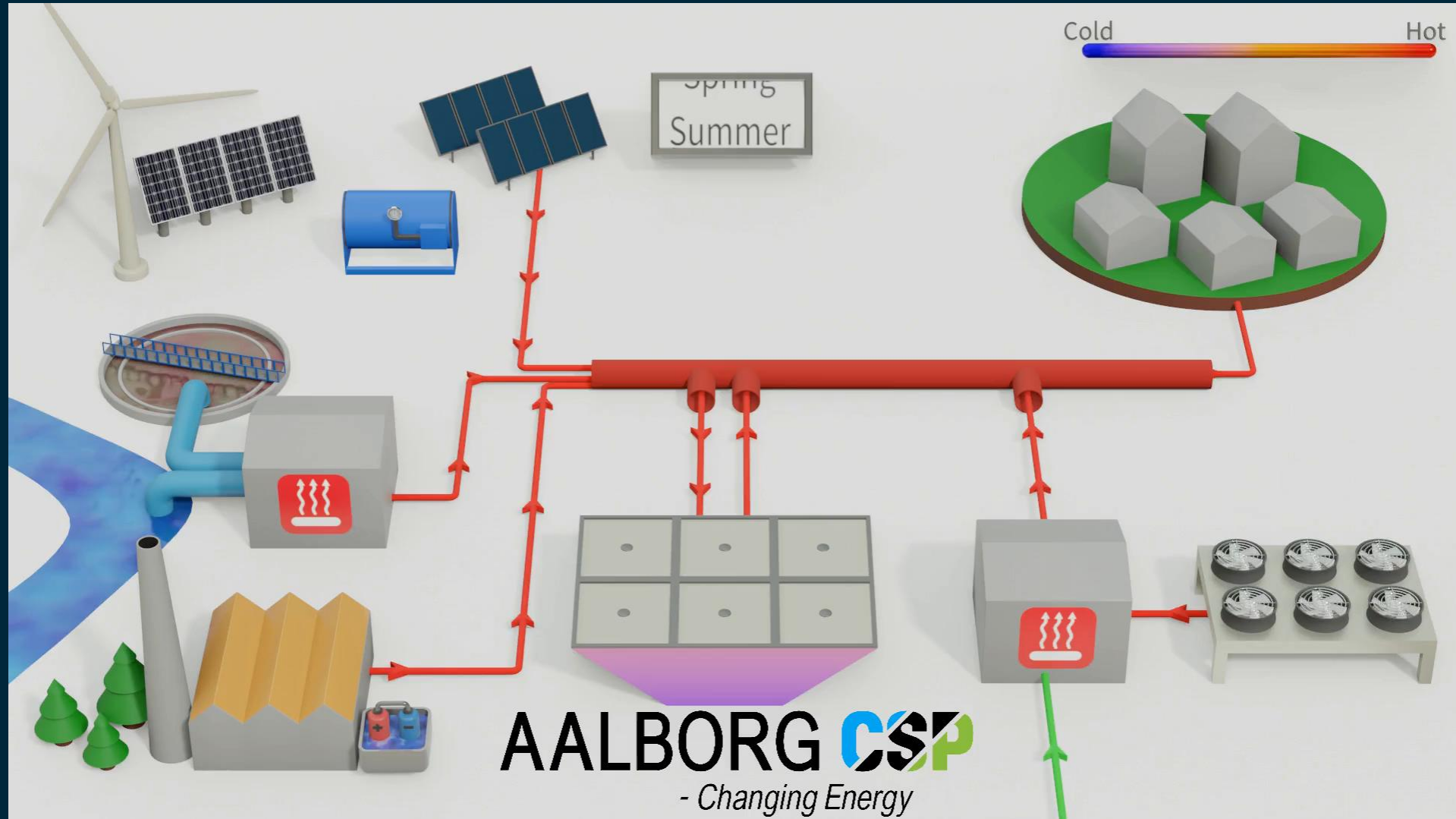
70 000 m³

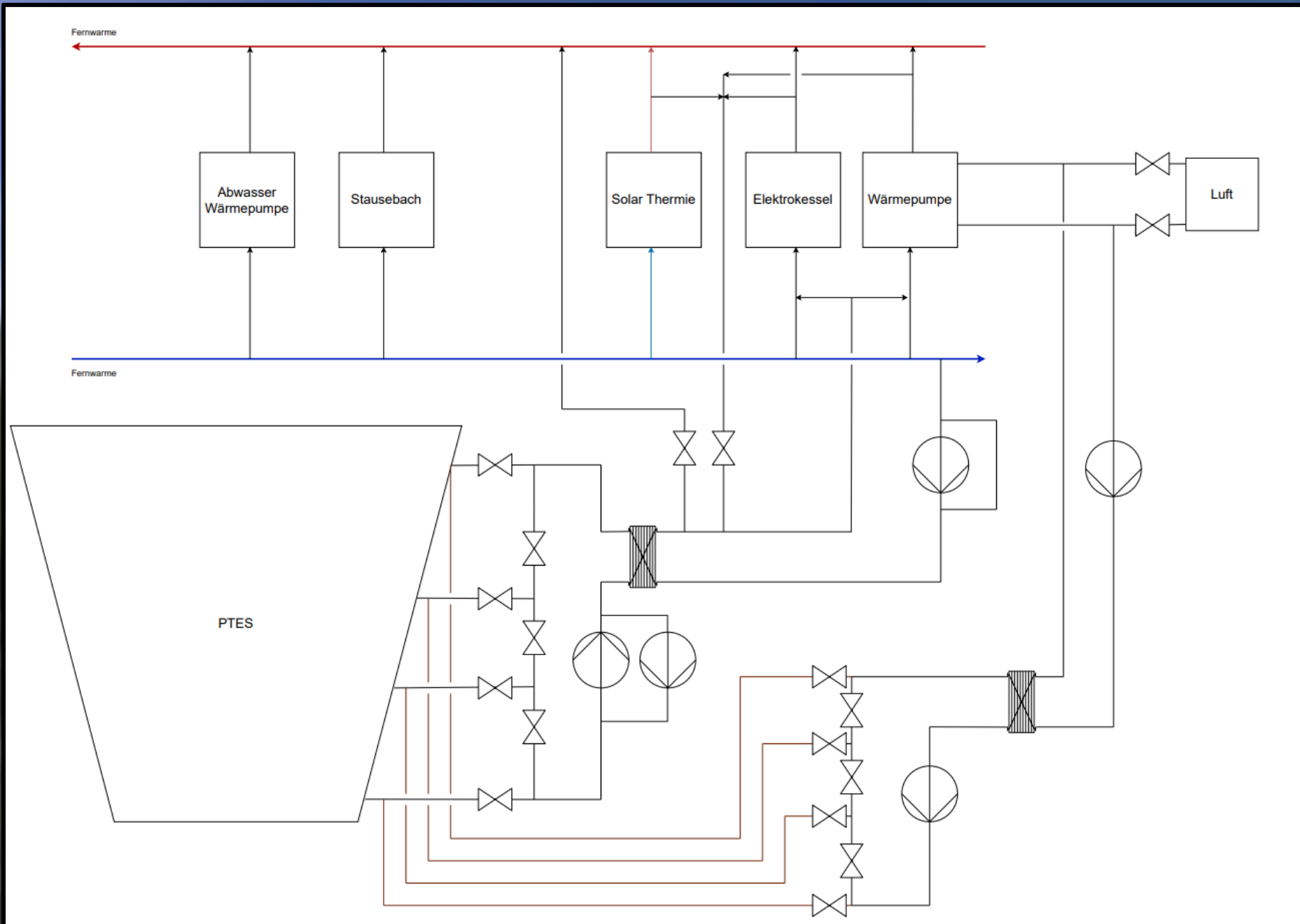
11 000 m²

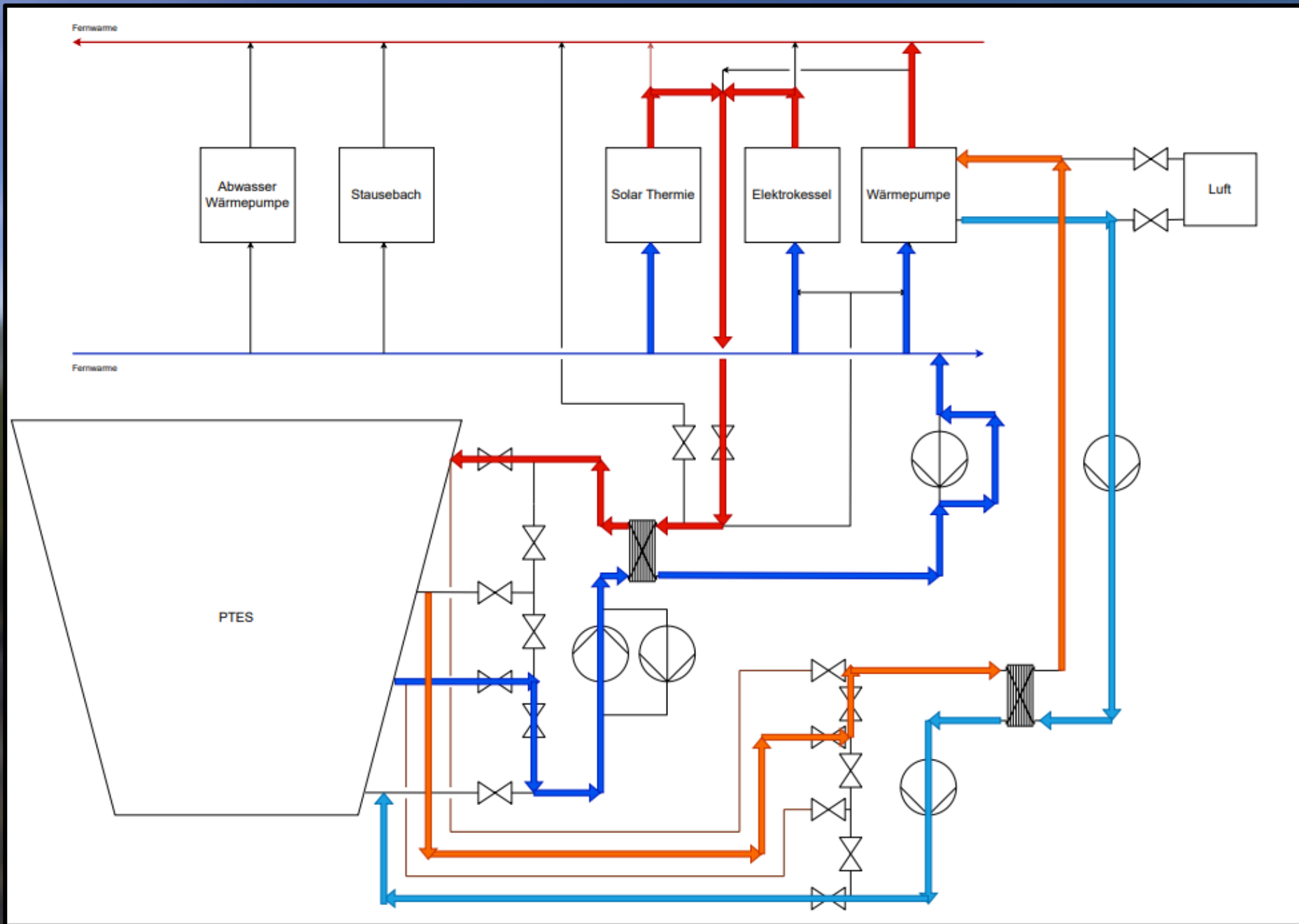
3 300 MWh

25 cycles / year

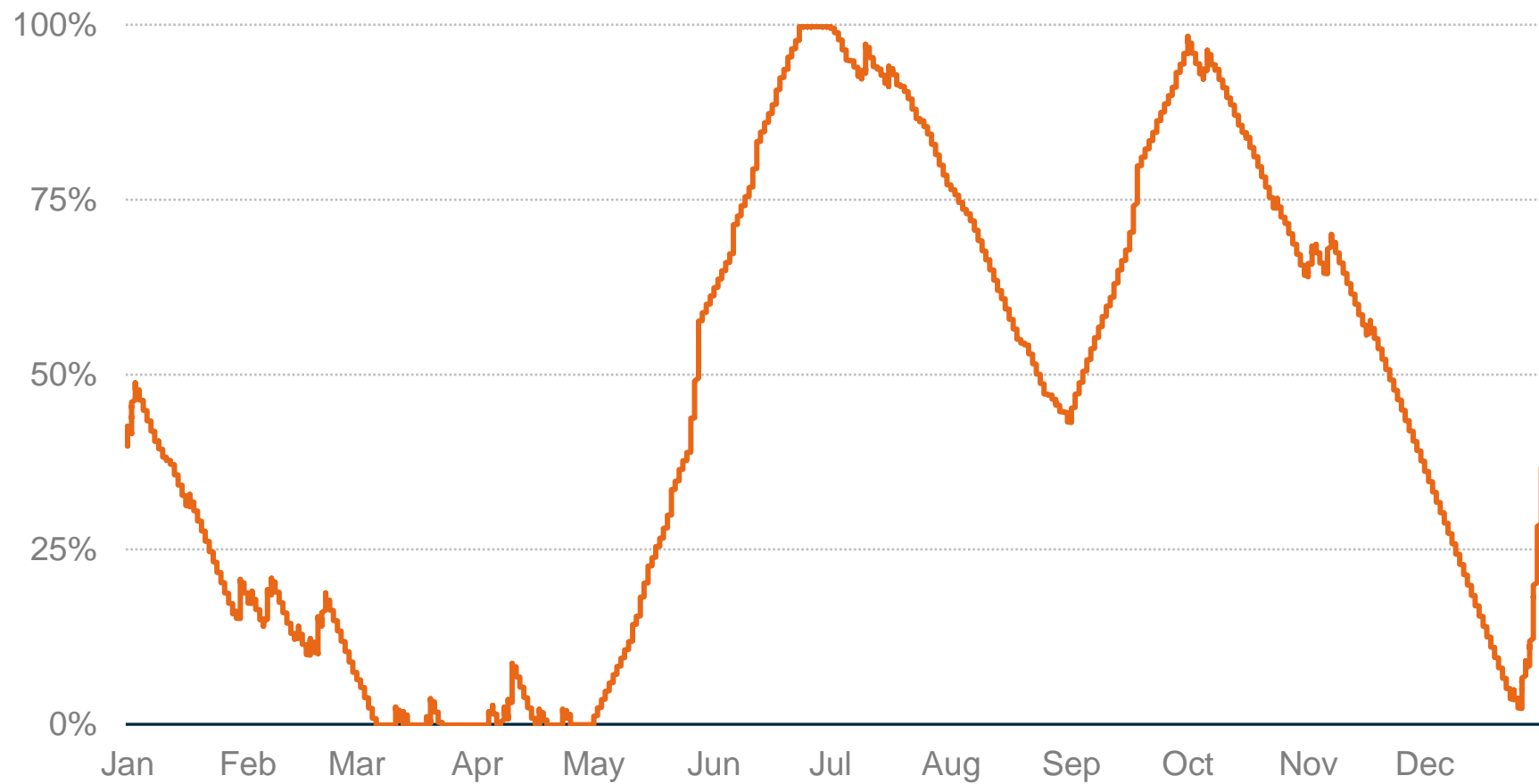
Multi-Functional PTES







Pit thermal Energy Storage Content



Patented and Certified Design

No moisture build up

No rainwater puddles

Low heat loss – **8% - 10%**

Lifetime min. 25 years

Certified by Lloyd's Register

THANK YOU FOR YOUR ATTENTION

Jonas Ilum Sørensen

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