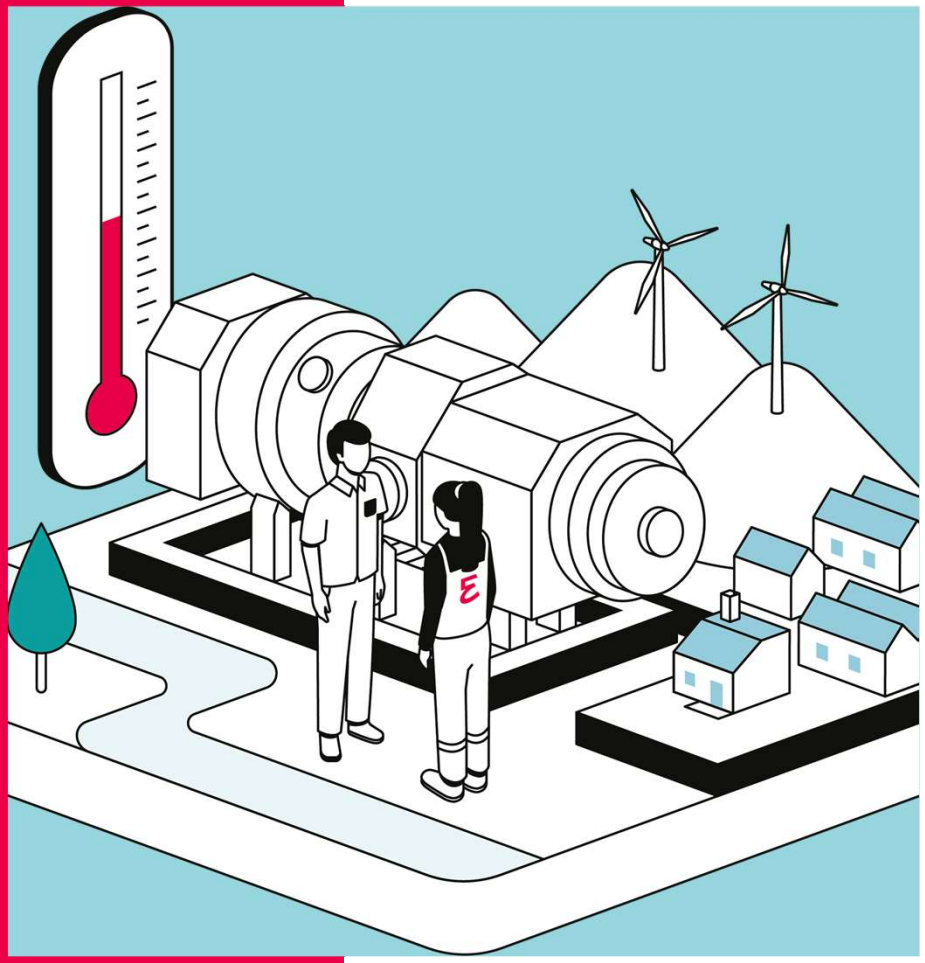
Everllence

Leveraging Heat Pumps for efficient heat decarbonization with thermal storage



Mobola Dosumu | National Sales Manager – Heat Pumps

July 31, 2025

Everllence in numbers

2025 MAN Energy Solutions becomes Everllence

2023 We sum up our strategy in our new purpose – 'Moving big things to zero'

2018 Our new strategy is launched, making decarbonization central to our business success

15,000 employees

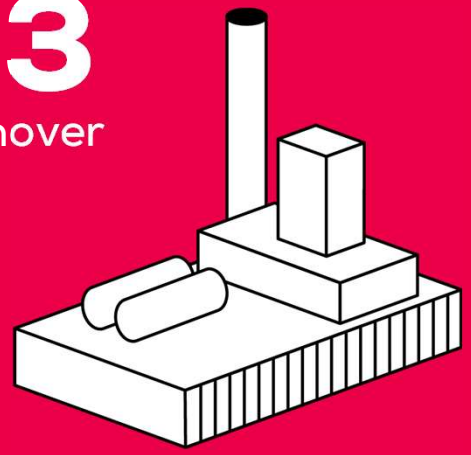
present in **50** countries

140 sites

260+ years of experience

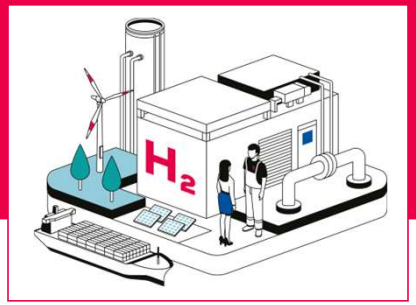
€4.3 bn turnover

50% reduction in CO_2 emissions in our production sites by 2030



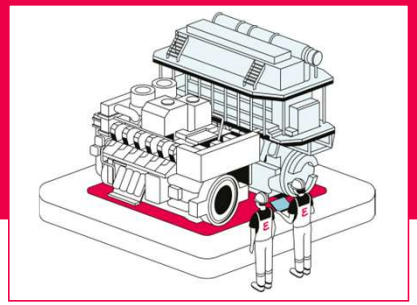
Our key technologies

These are the technologies we rely on to help our clients achieving the target of ‘net zero’



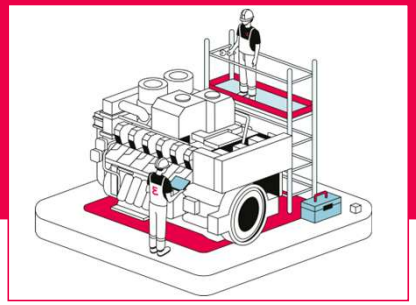
PEM electrolysis and Power-to-X

We offer expertise in PEM electrolyzers for producing green hydrogen and in reactors for Power-to-X processes (eco-friendly e-fuels).



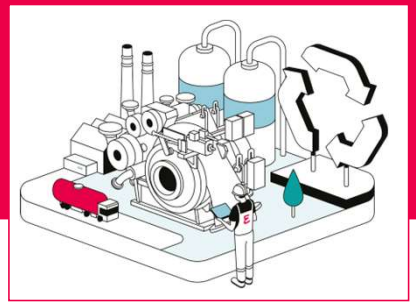
Future fuel engines

Our engines can run on a variety of climate-neutral fuels, including synthetic natural gas, methanol and ammonia.



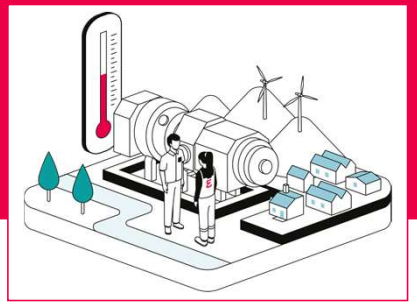
Retrofits

Ocean-going vessels and power plants are long-term investments. Through our retrofit programs, we convert engines to make them future-proof – so they can run on low-emission fuels.



Carbon Capture, Utilization & Storage

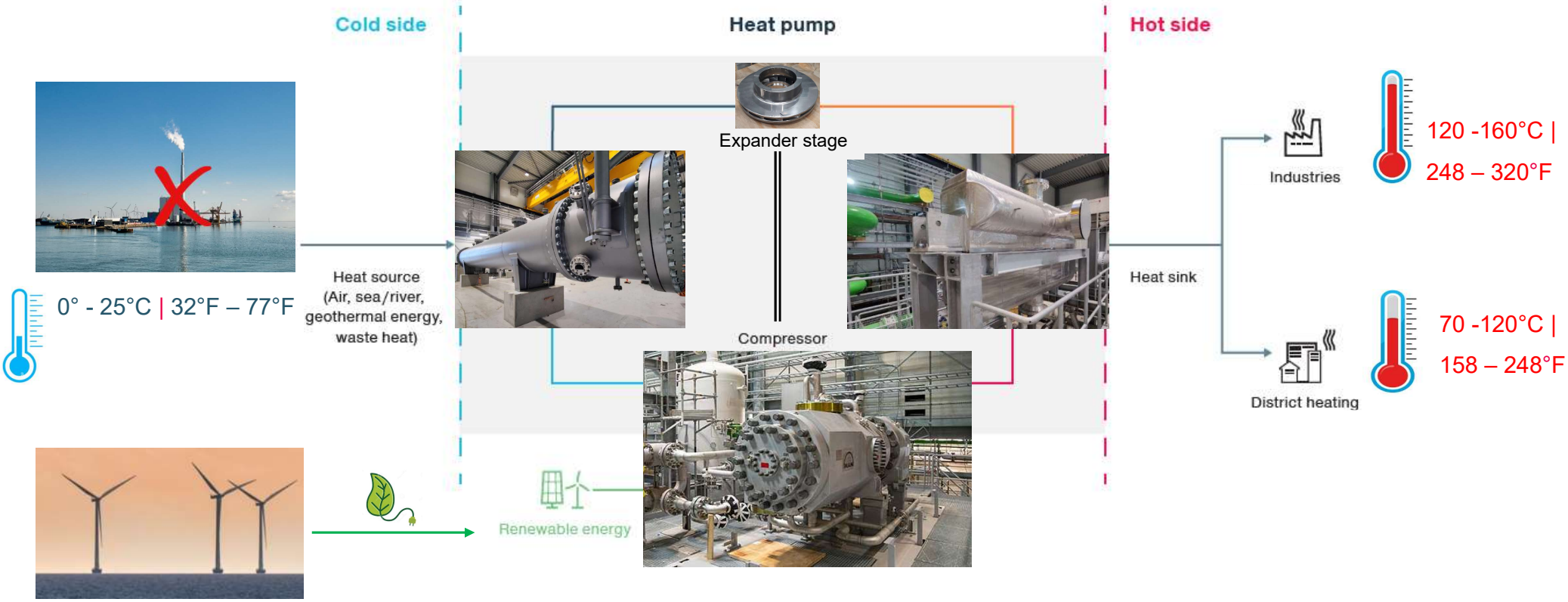
We offers technologies for processing CO_2 from industrial processes safely. Once it has been captured, CO_2 can be stored or reused, creating a circular carbon economy.



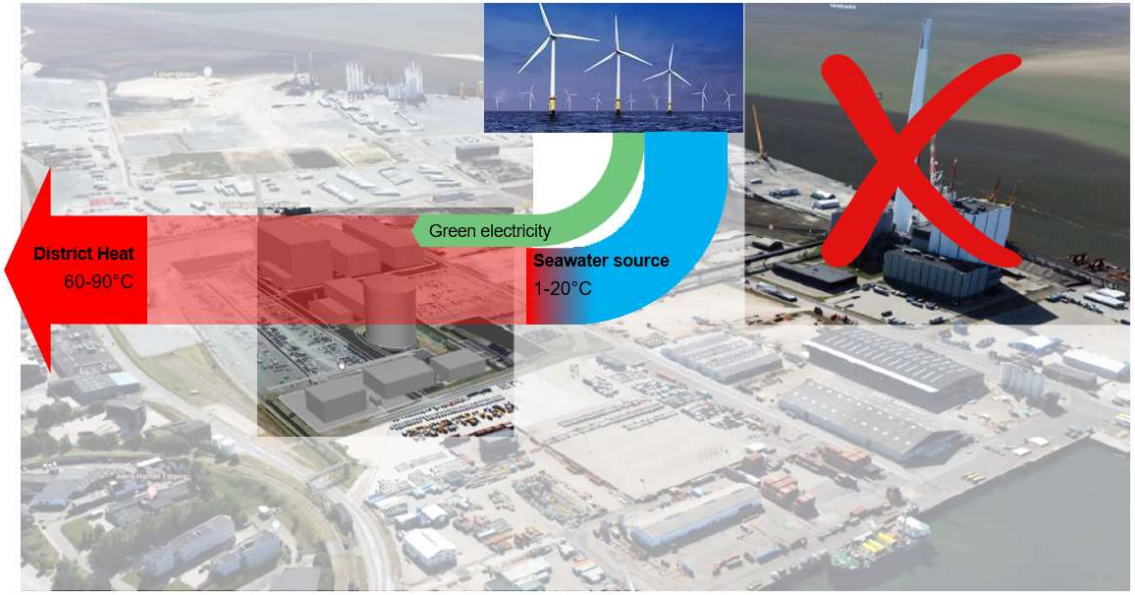
Large-scale heat pumps

Our large-scale heat pumps use heat sources such as rivers, oceans, industrial waste heat or ambient air to decarbonize industry and households.

Everllence sCO2 "Mega Heat Pump"



Esbjerg: CO_2-based Large-scale Heat Pump for district heating



Key Facts:

End customer: DIN Forsyning (Denmark)

Scope of delivery: 2 heat pump units with HOFIM® compressors with CO_2 refrigerant

Heat source: seawater at 1 – 20 °C | 34 – 59°F

Heat sink: 60 – 90 °C | 140 – 194°F

COP: ~ 3.3 – 4

Heat output	Heat for	CO_2 savings
Up to 65 MW	25‘000 households	120‘000t p.a.

Transfer energy from the seawater to the district heating using renewable energy from the grid

Esbjerg Site Layout

Site layout

DIN FORSYNING

Esbjerg SAT (2025)

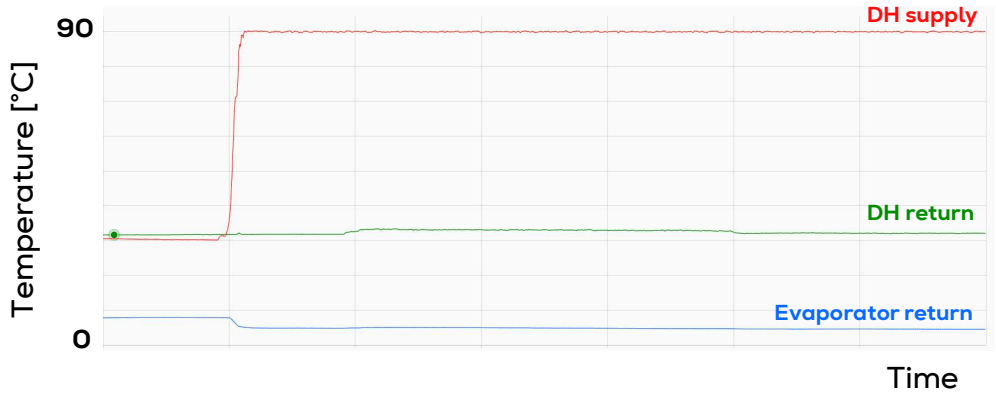
Status
First machine rotation in November 2024
Functional, reliability and performance test completed in 2025

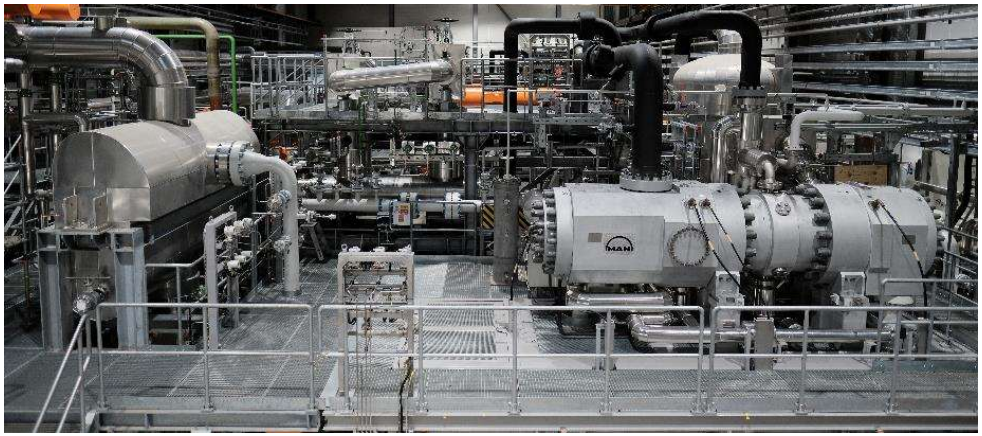
Conditions
Minimal seawater temperature at inlet ~ -0.5°C
Heat production ~ 33 MWth (each)
Minimum load ~ 13 MWth
Highest temperature lift achieved ~ 90K

Real time monitoring of performance (lots of data) Everllence CEON

Validation
Overall cycle performance
Vibrations
HEX and turbomachinery performance

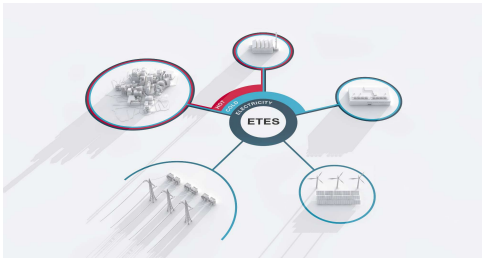
On-going
Validation of steady-state and transient modelling





ETES development journey

From ETES full to Heat pump



ETES Full

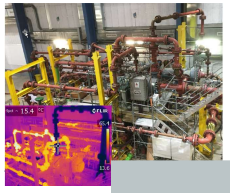
ESBJERG PO 01/2021

AALBORG PO 09/2023

PATOLA PO 2024

CO_2 Heat pump

1st Pilot



FAT Esbjerg

SAT Esbjerg

Testing

MAN Diesel & Turbo

2018

MAN Energy Solutions

2020

2022

2024

2025 Everllence

Vicinity Energy district energy transformation to eSteam™

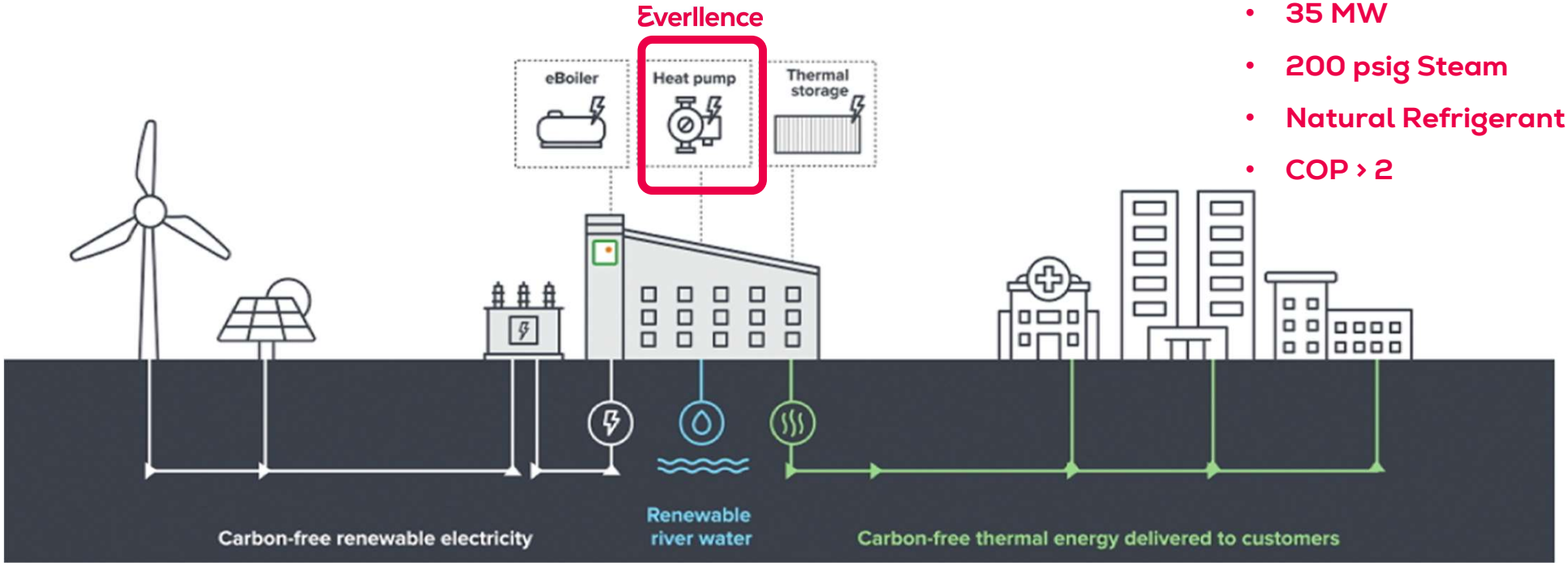


Image courtesy of Vicinity Energy

Key Facts:

- 35 MW
- 200 psig Steam
- Natural Refrigerant
- COP > 2

Location of Heat Pump

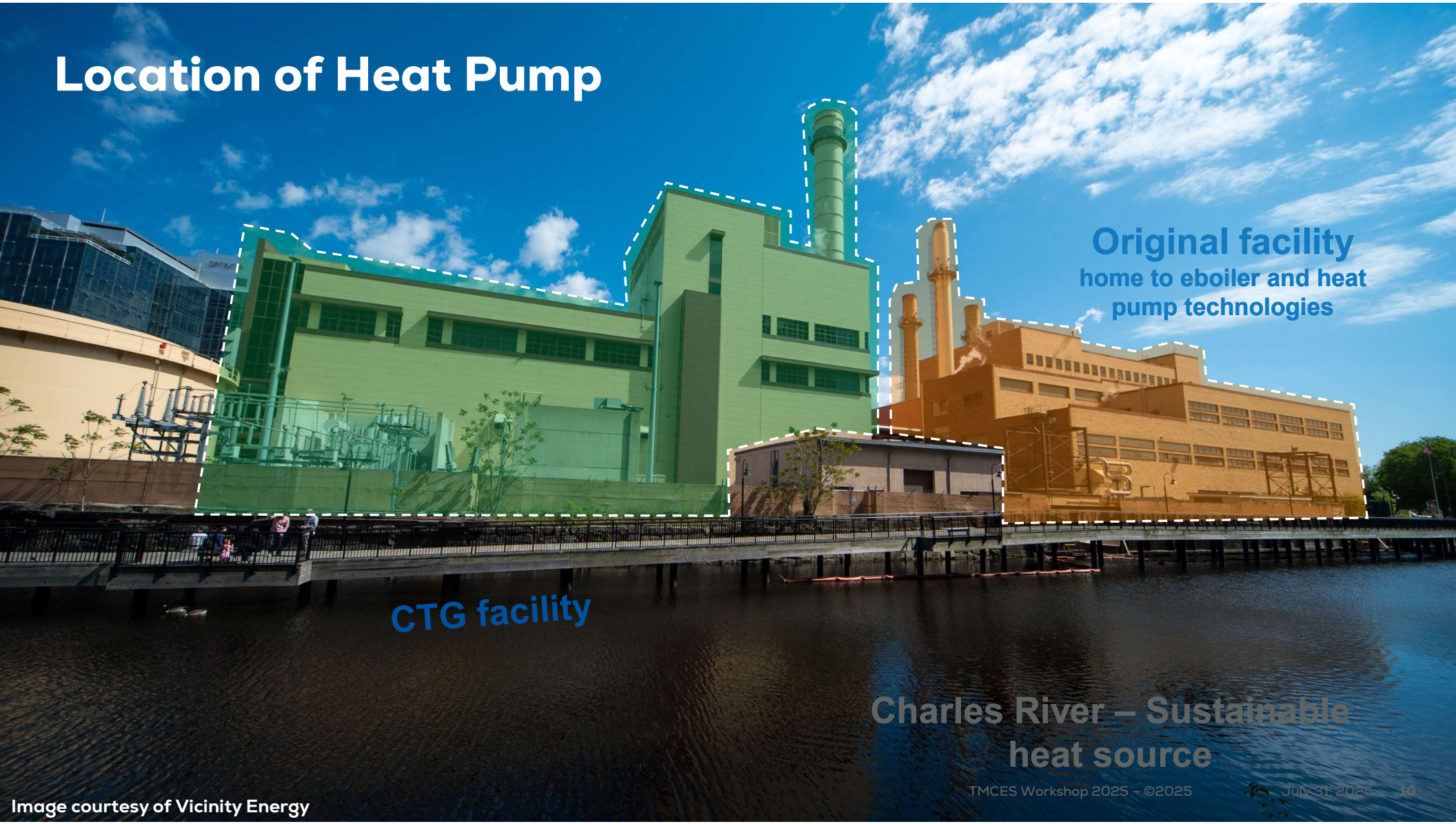


Image courtesy of Vicinity Energy

Thank You!

Everllence

Mobola Dosumu

National Sales Manager – Heat Pumps

omobolanle.dosumu@everllence.com

+1 346 795 7413

Disclaimer

All data provided in this document is non-binding.
This data serves informational purposes only and is especially not guaranteed in any way. Depending on the subsequent specific individual projects, the relevant data may be subject to changes and will be assessed and determined individually for each project.

This will depend on the particular characteristics of each individual project, especially specific site and operational conditions.