



carbonclean

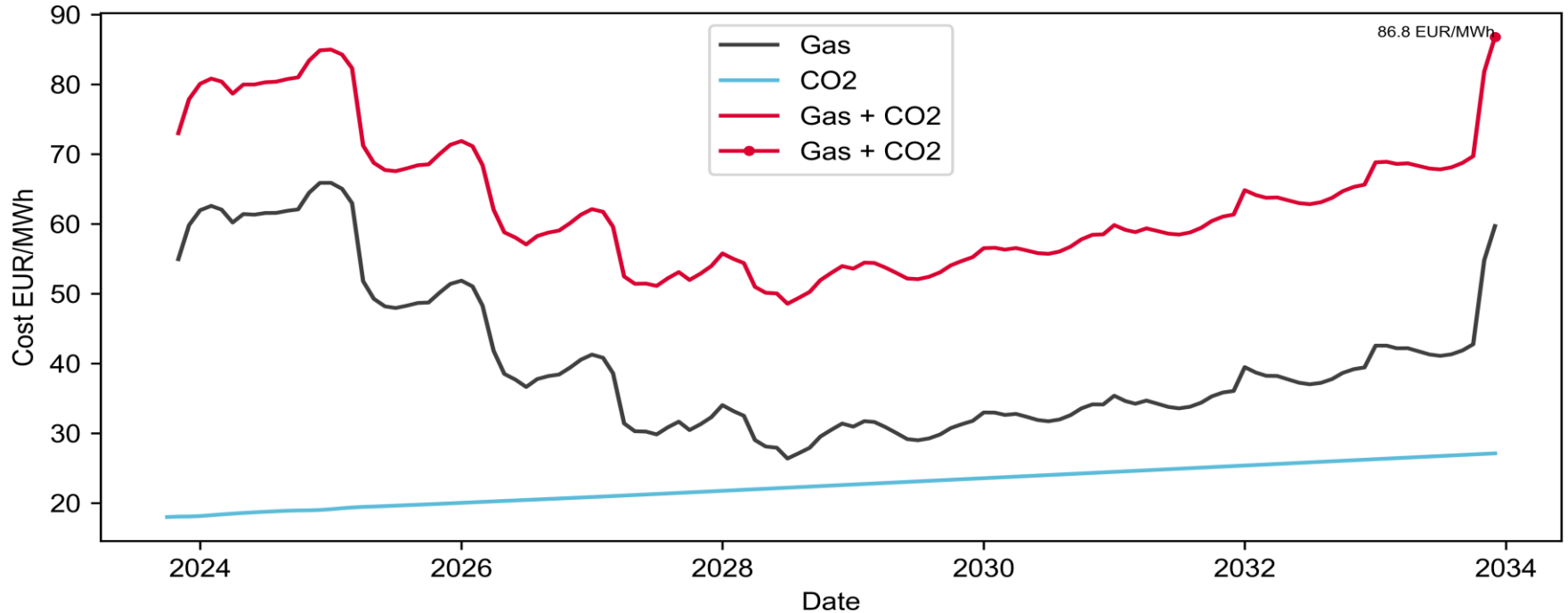
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24 October 2023

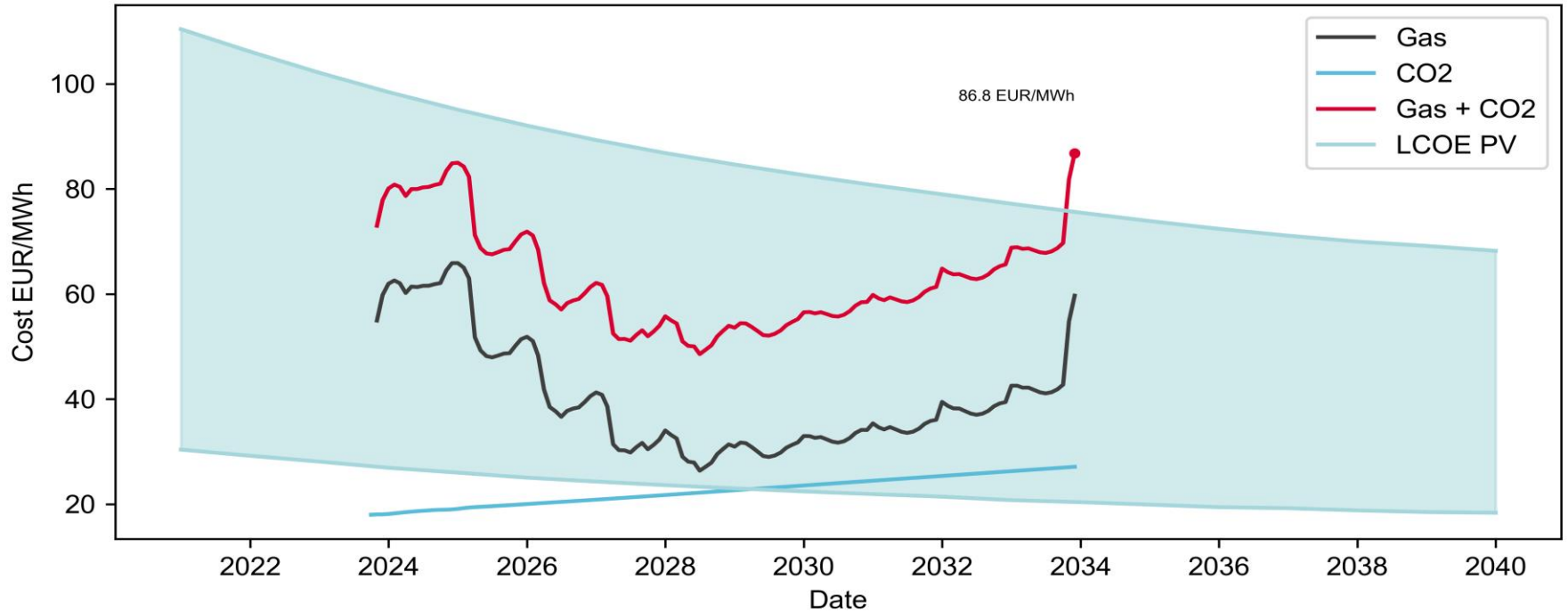
High Temperature Thermal Storage for Industrial Process Heat



Fossil heat is expected to remain expensive for the foreseeable future

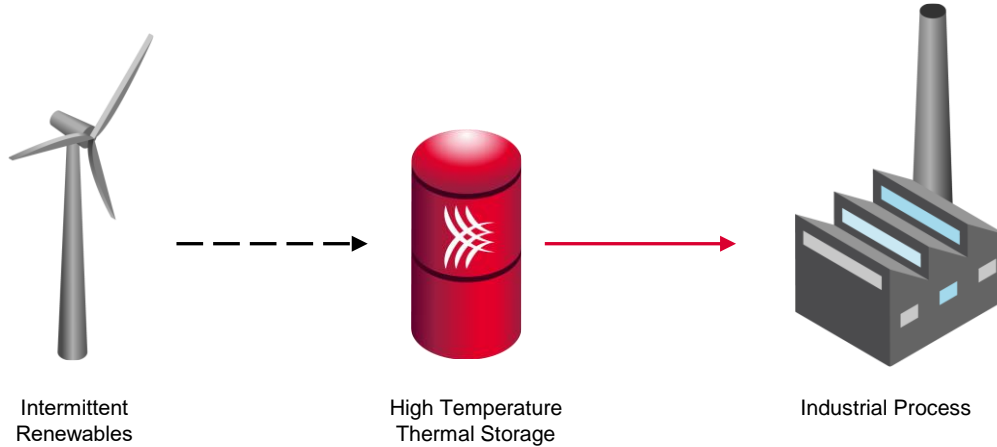


PV LCOE is already cheaper than gas



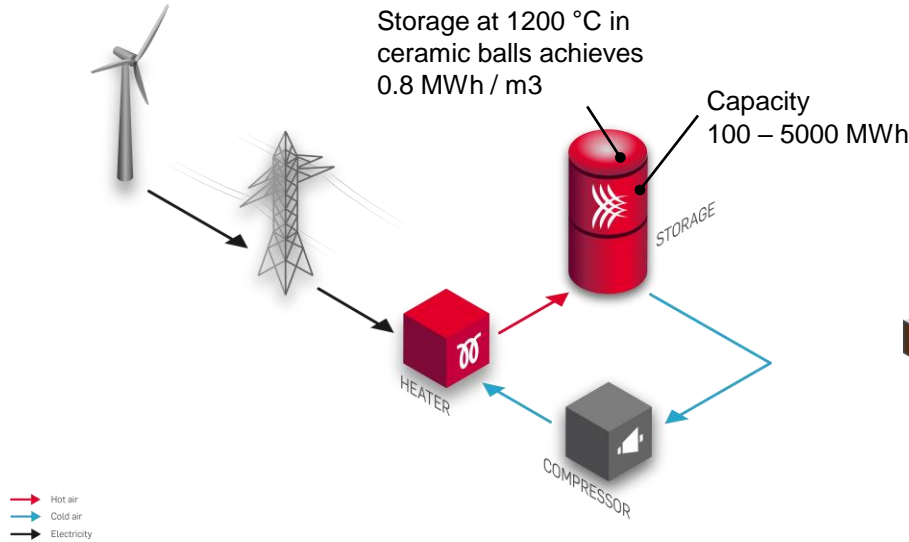
The solution is simple

We believe that cheap, renewable electricity buffered by storage provides a cost-competitive solution

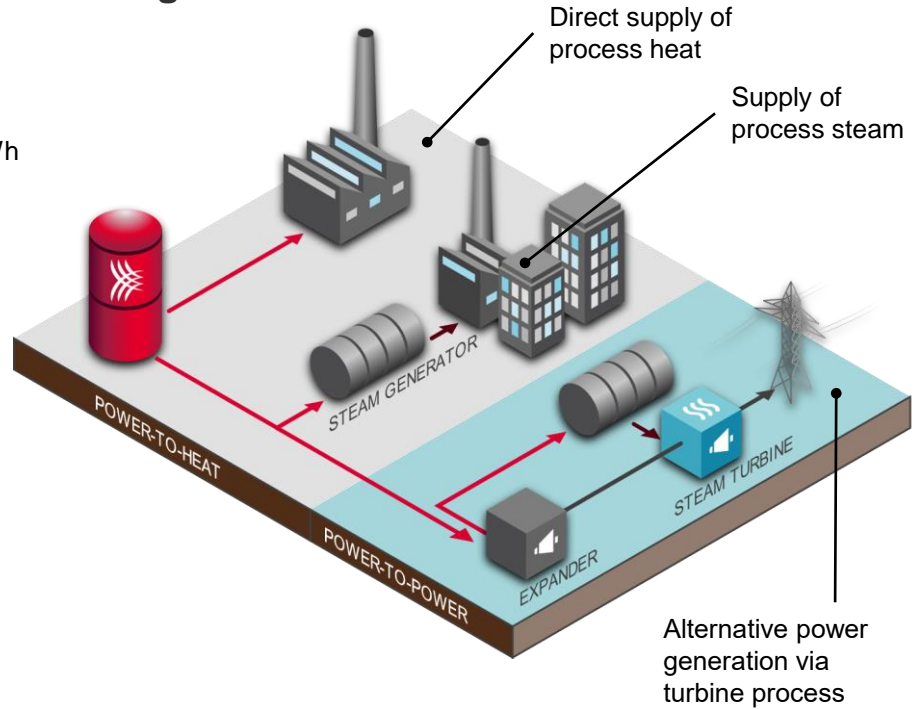


Our technology

Charge

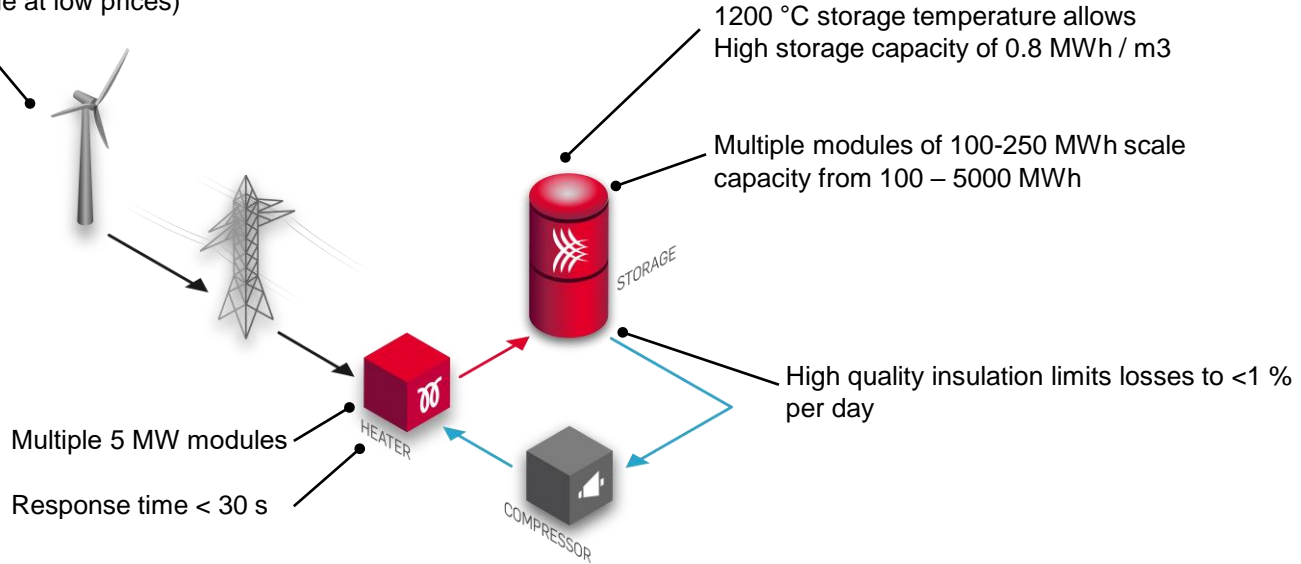


Discharge

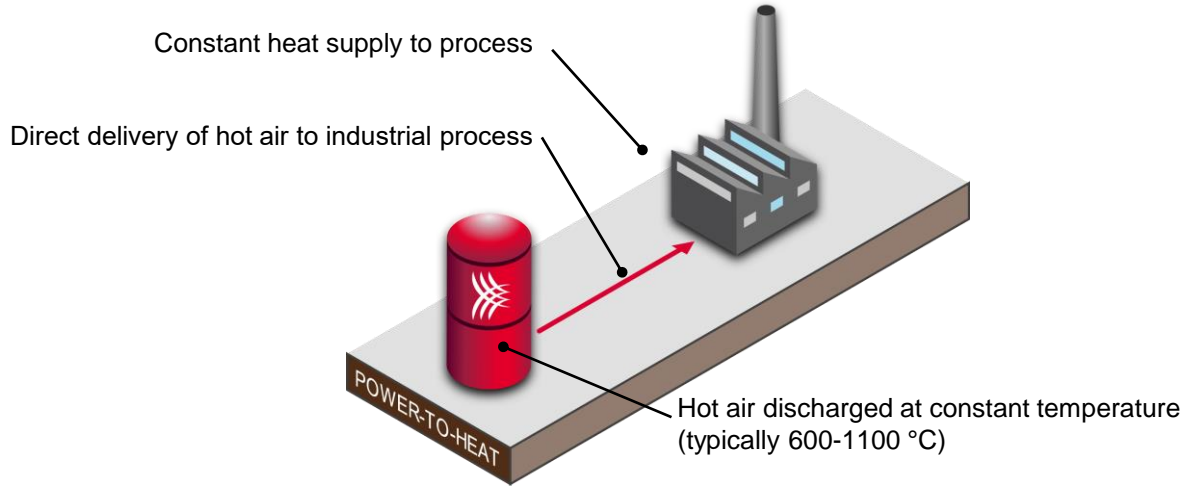


Key features

System is charged during high availability of renewables (ie at low prices)

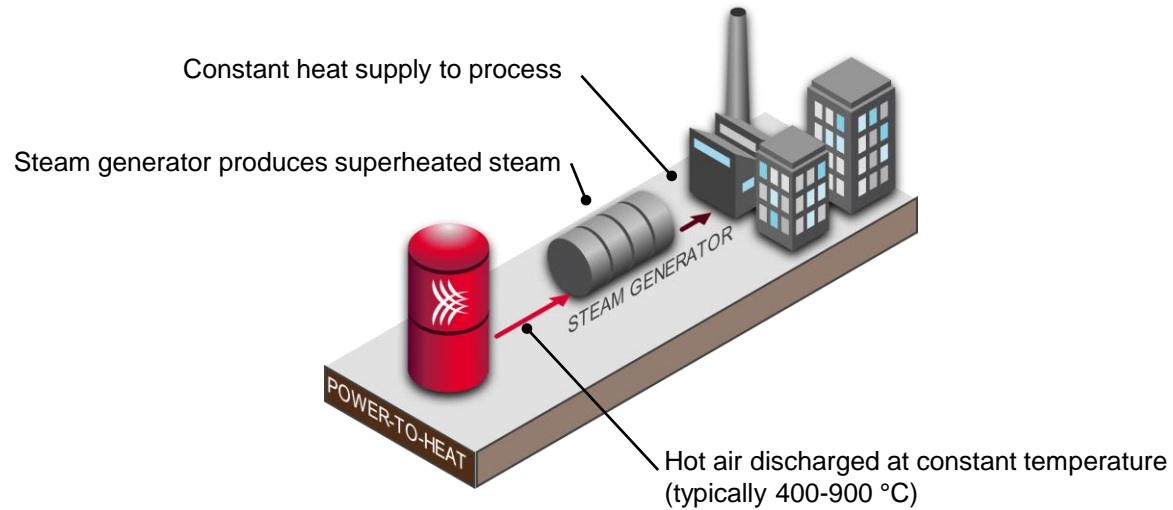


Integration into high-temperature processes



High Temperature Thermal Storage for Industrial Process Heat

Integration into steam processes



Business Model

1

Customer Acquisition

- » We help customers identify and plan business cases for thermal energy storage
- » We analyse their specific needs and the dynamics of the energy market to optimise their ROI using an in-house software analysis tool (24h x 365d)

2

Engineering

- » We design and engineer the storage systems, holding all IP

3

Supply & Construction

- » We supply a turnkey plant to our customers
- » We sub-contract the construction of the storage systems to EPC contractors

Experienced Management team



Lars Zoellner
CEO

- » Founder of carbonclean
- » Experienced entrepreneur & investor
- » CEO of €50M family office fund
- » Successful MBO of the fund
- » Dipl. Kfm WWU Münster, AMP IESE Business School



Dr. Robert Pfab
COO

- » Technology transfer for UK's STFC
- » Visiting Associate, BCG
- » Internship Emerald Technology Ventures
- » MBA IESE Business School, PhD Dr. sc ETH Zürich, MSci, BA (hons) Cambridge University



Dr. Klaus Knop
Inventor

- » Inventor of the thermo-electric storage technology
- » Internationally recognised process engineer
- » Former Director for process engineering at MAN GHH und Ferrostaal, responsible for multi-billion € steel mill projects

Our Partner for technical development & demonstration



Energy Systems
and Technology
Prof. Dr.-Ing. B. Epple



TECHNISCHE
UNIVERSITÄT
DARMSTADT

- » Leading European institute for power plant and CHP-plant design
 - » Prof. Dr. Bernd Epple (Director)
 - » Dr.-Ing. Falah Alobaid (Research Team Lead)
- » 1 MWh demonstrator in operation.
- » Scale-up of heater is underway

Let's talk

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