



BRENNMILLER
THERMAL ENERGY STORAGE

Carbon-Free Heat

SEPTEMBER 2024

Nasdaq: BNRG +

ABOUT Brenmiller Energy Ltd.

Nasdaq listed: BNRG +

We are a Clean-Tech company that develops, manufactures and sells our Thermal Energy Storage solutions to decarbonize heat for industry and power plants

2012 Founded

\$118m Capital investments

50 Employees



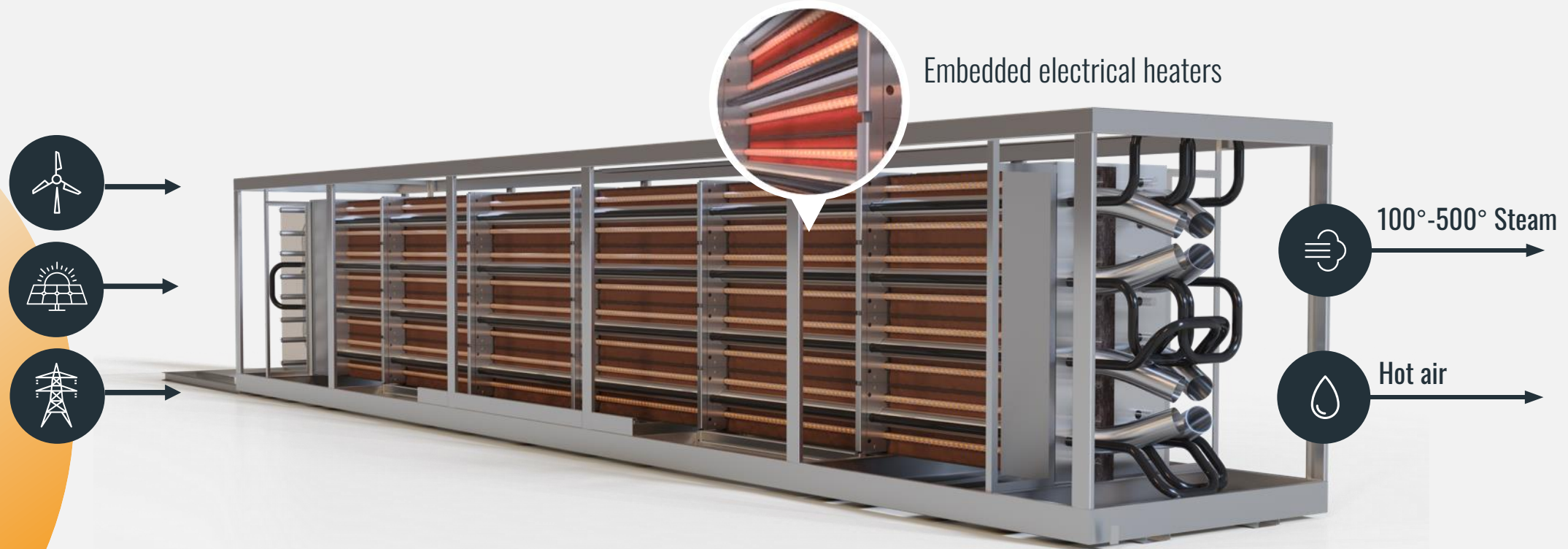
bGen



THERMAL ENERGY STORAGE

Heat battery based on crushed rocks enabling transition from fossil fuels to renewable energy

Power-to-heat bGen Zero



ZERO
EMISSIONS



UNLIMITED CYCLES
FOR 30+ YEARS



MODULAR
10MWH - 1000 MWH



COST EFFECTIVE
NATURAL MATERIALS

From rocks to Thermal Energy Storage

Rocks are crushed to small bits

Thin metal cells (“bCells”) are filled with the crushed rocks

bCells are stacked into 12-meter modules

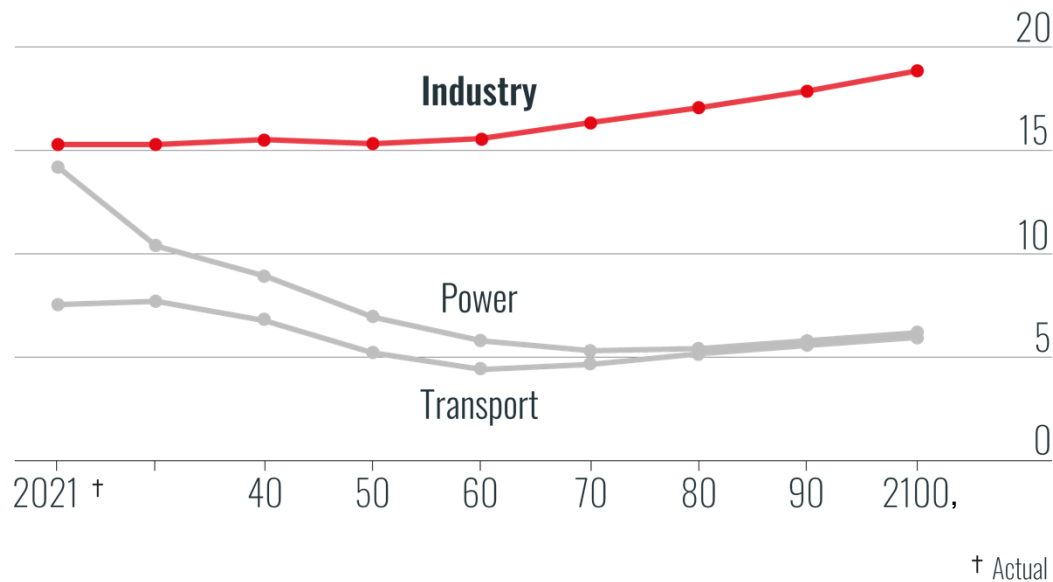
Modules are assembled on-site to a structure

Structure is insulated and connected to plant

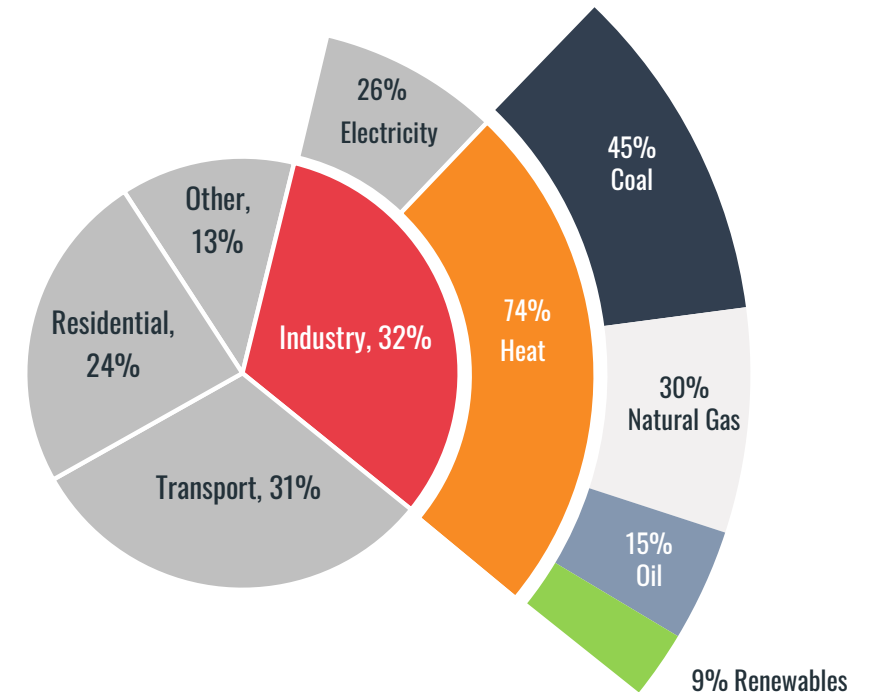


Renewable heat essential for net zero

Annual average global emissions forecasts¹
Selected sectors gigatonnes of CO₂ equivalent

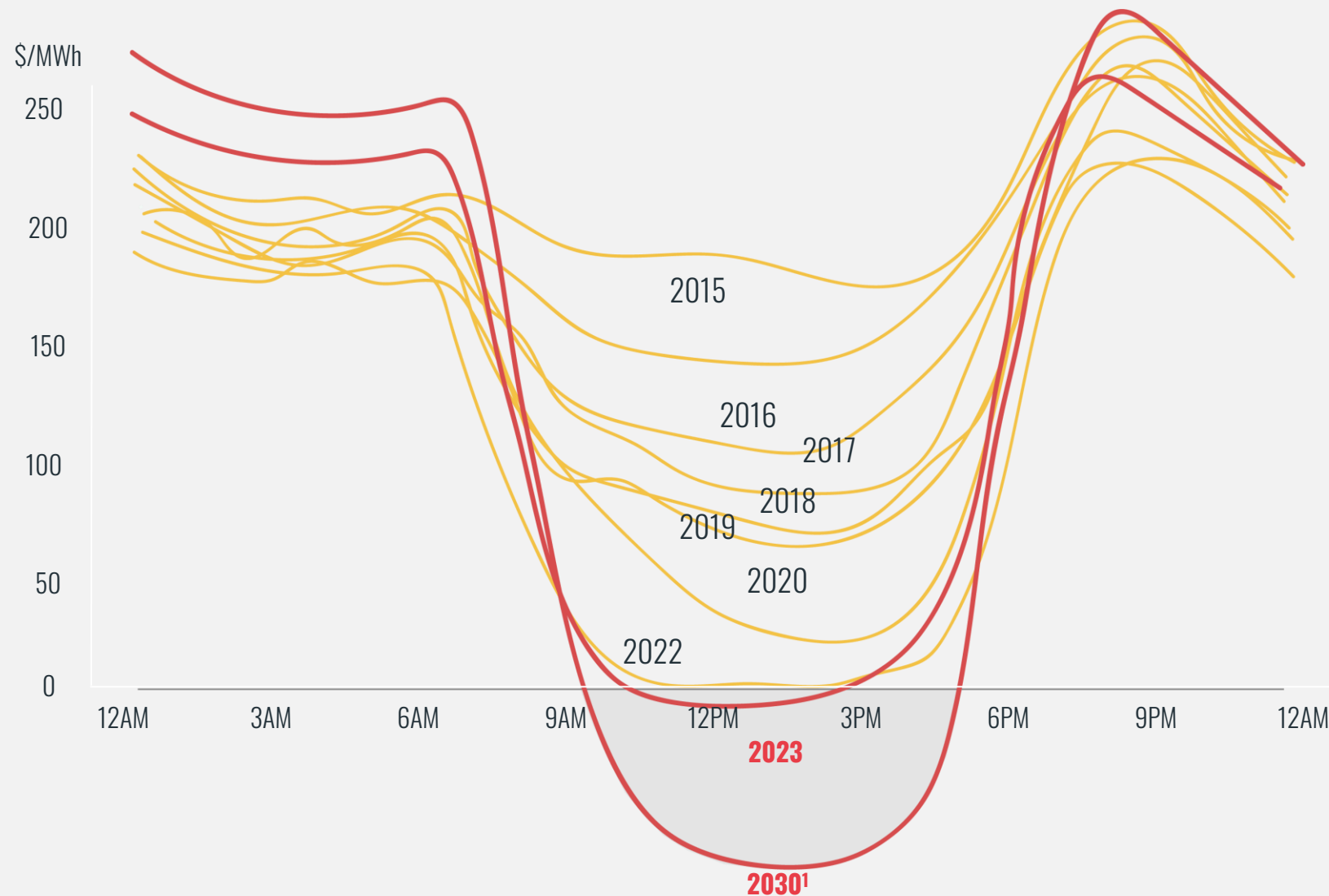


Global energy consumption



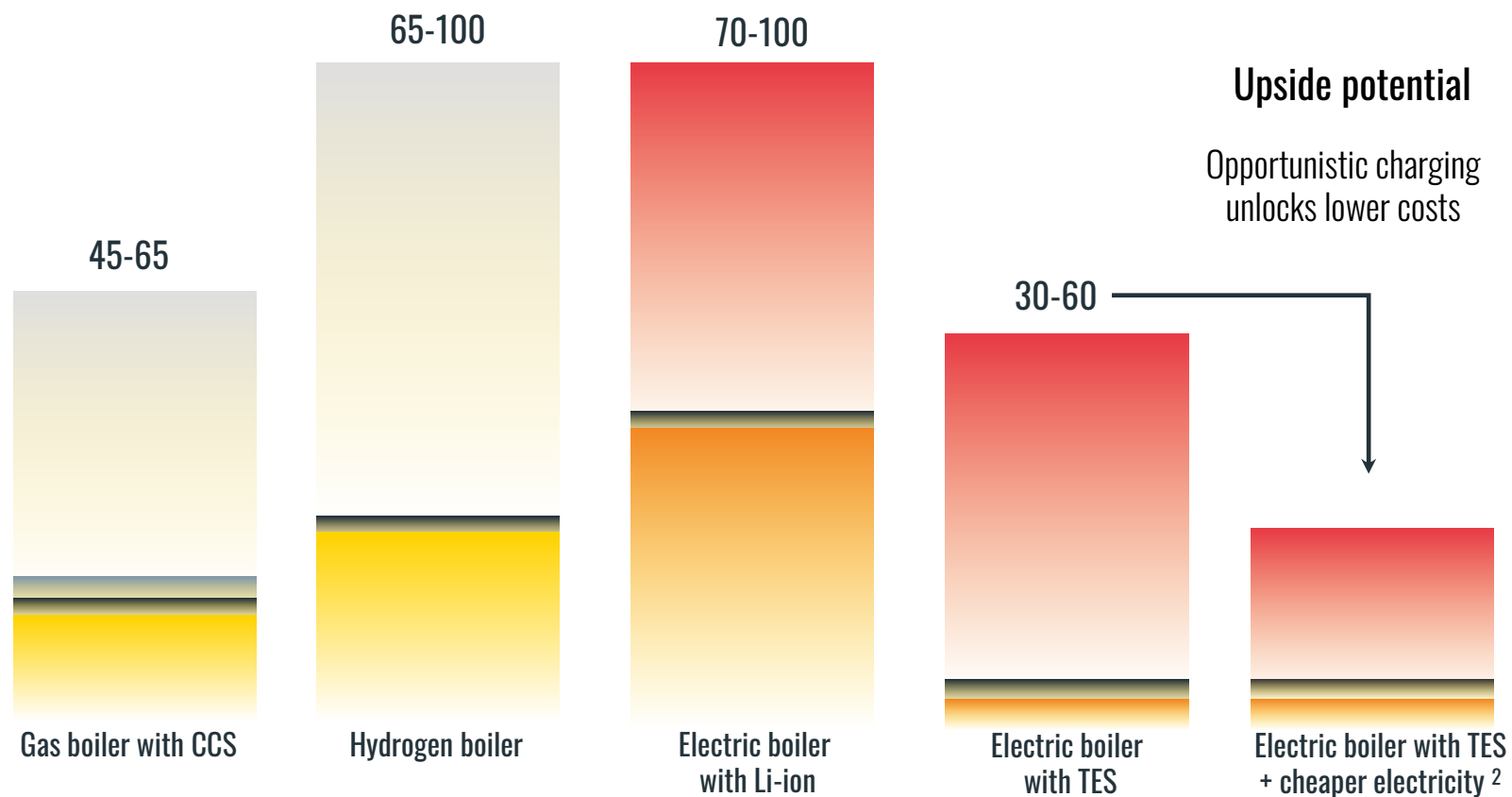
Industrial heat accounts for $\frac{1}{4}$ of global energy consumption²

Higher RE penetration allows more hours for electrical charging

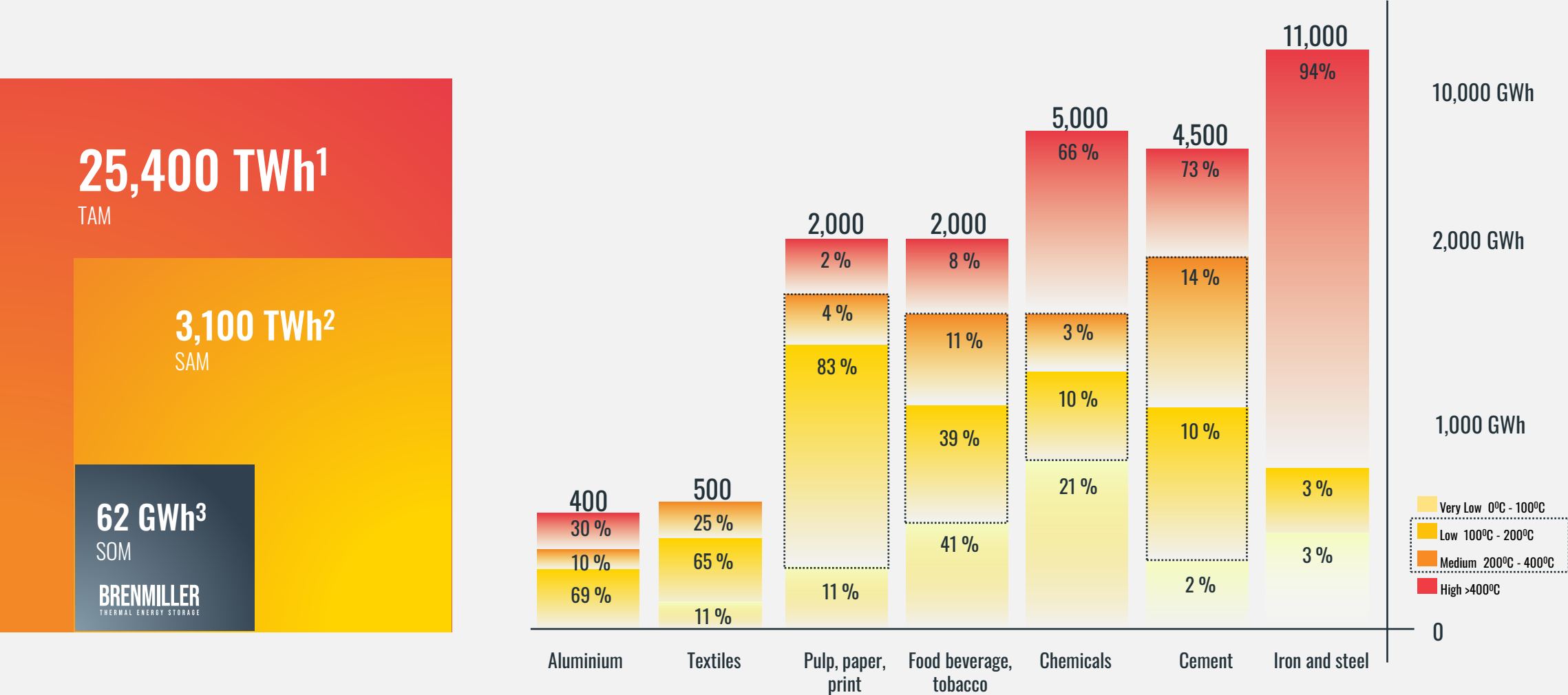


Renewables + TES is competitive now

Levelized cost of heat for selected technologies, \$/MWh ¹



Medium temperature heat in different sectors



Business models

Diversified income stream from multiple services,
tailored to customer



Equipment sales
One-off sale with O&M contract

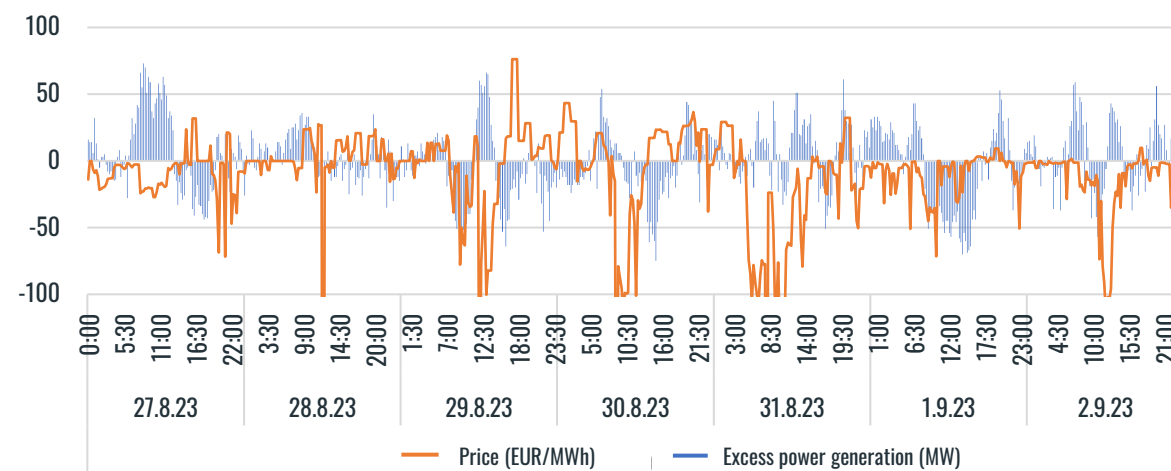


Heat-as-a-service
Supply clean heat at agreed price



Grid services
Take excess electricity from grid
frequency and load shifting support

Opportunistic fast charging at off-peak prices
enables low average cost of energy



Collaborations



Collaborator	Geography	Collaboration scope	Traction	
 Global gas & electricity distributor		Decarbonize industrial heat across Enel client base	24 MWh project	
 Distributor of photovoltaic products		Brazil	1 MWh biomass to steam project	
  Green energy project developers		Spanish JV to explore EU opportunities	In discussions for 2.5 GWh opportunities	
 A leading industrial Group in India		Submitted Tender Bid to Potential Client	Bid opportunity of 200 MWh	

Tested manufacturing approach

Market leader in live production capacity

4 GWh manufacturing capacity at full scale, supported by EIB funding



Tested approach creates template to launch localized manufacturing in key geographies



World's first TS Gigafactory

Pilots – Power plant



Tuscany, Italy



24MWh TES at the Santa Barbara Power Plant (CCGT)

Flexible operation of thermal power plant, shifting excess energy to peak hours

Our TES enables flexibility required in a CCGT plant with a high penetration of renewables market, providing unique combined thermal and electrical charging capabilities

bGen is specialized in utilization of high temperature / high pressure plant steam for TES charging while also using the embedded steam generator for on demand steam back to the plant cycle

Pilots – Commercial & Industrial

New York Power
Authority



New York, USA

500 KWh Hybrid charging

- Thermal Storage Based Co-Generation
- Hybrid charging: Exhaust gas and electricity

FORTLEV



Anápolis, Brazil

4 MWh Biomass charging

- Biomass to Heat Storage System
- Continuous biomass combustion while delivering fluctuating output

Signed commercial projects



Netanya, Israel

32MWh bGen Power-to-Heat



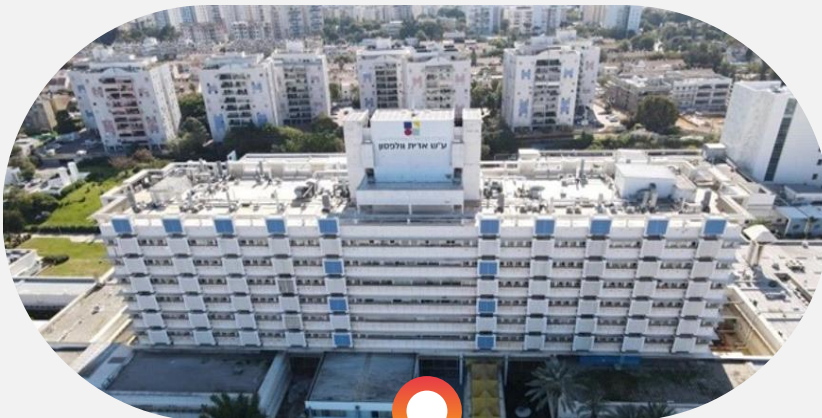
15 year
PPA



\$7.5m
Customer's
energy savings



6.2 MT
Annual abatement



Holon, Israel

12MWh bGen Power-to-Heat



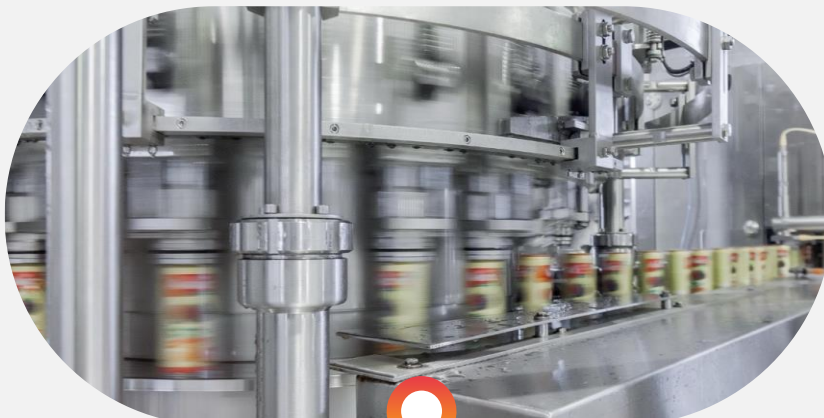
7 year
PPA



\$6.5m
Customer's
energy savings



3.9 MT
Annual abatement



Dombovar, Hungary

30MWh bGen Power-to-Heat



12 year
PPA



€ 1.9m
Customer's
energy savings



1.4 MT
Annual abatement



65% Revenues expected from grid services



Thank You