BRENMILLER
THERMAL ENERGY STORAGE

green enesys

bGen™ Acumulación de Calor

Casos de éxito de descarbonización:
almacenamiento térmico

COGEN ESPAÑA – Jornada Perspectivas 2024
12 Diciembre 2023

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bGen™ – Key Advantages

Hybrid
Connects different Energy Sources

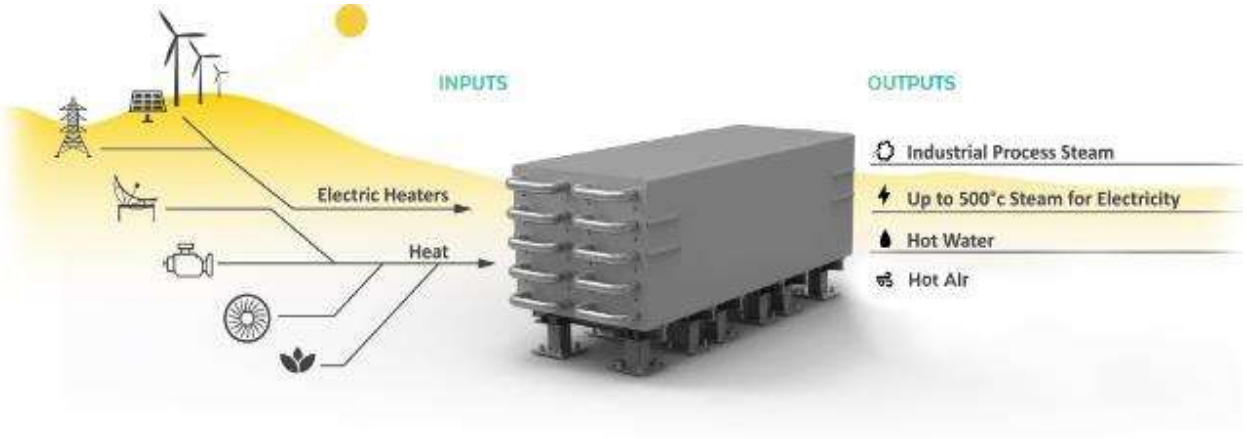
Modular
From Industrial to large-scale Power Plants

Lifetime
30+ Years

Flexibility
Decoupling Generation from Demand

Performance
Unlimited cycles with minimal daily losses

Clean
Environmentally friendly materials (crushed rocks)



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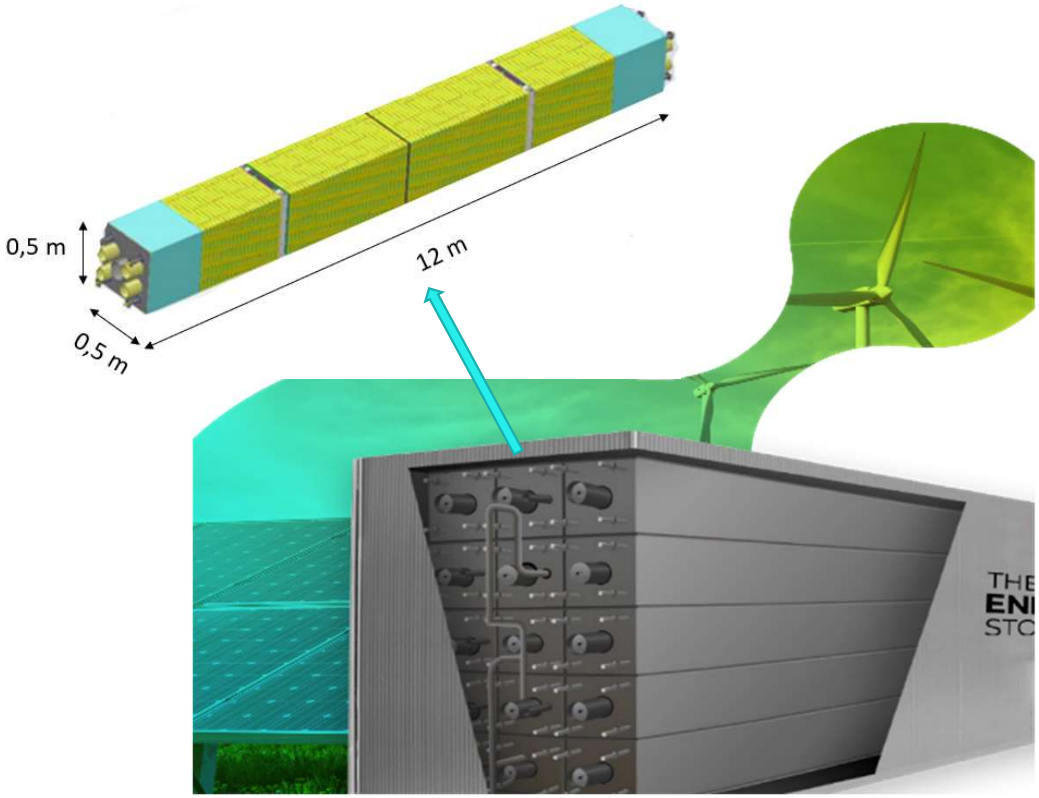
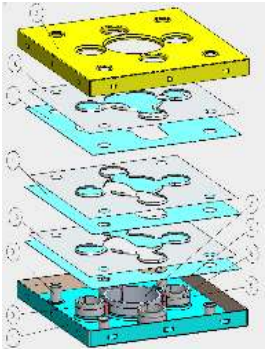
Basic principle of the bGen™

The bGen™ is comprised of multiple bCubes:





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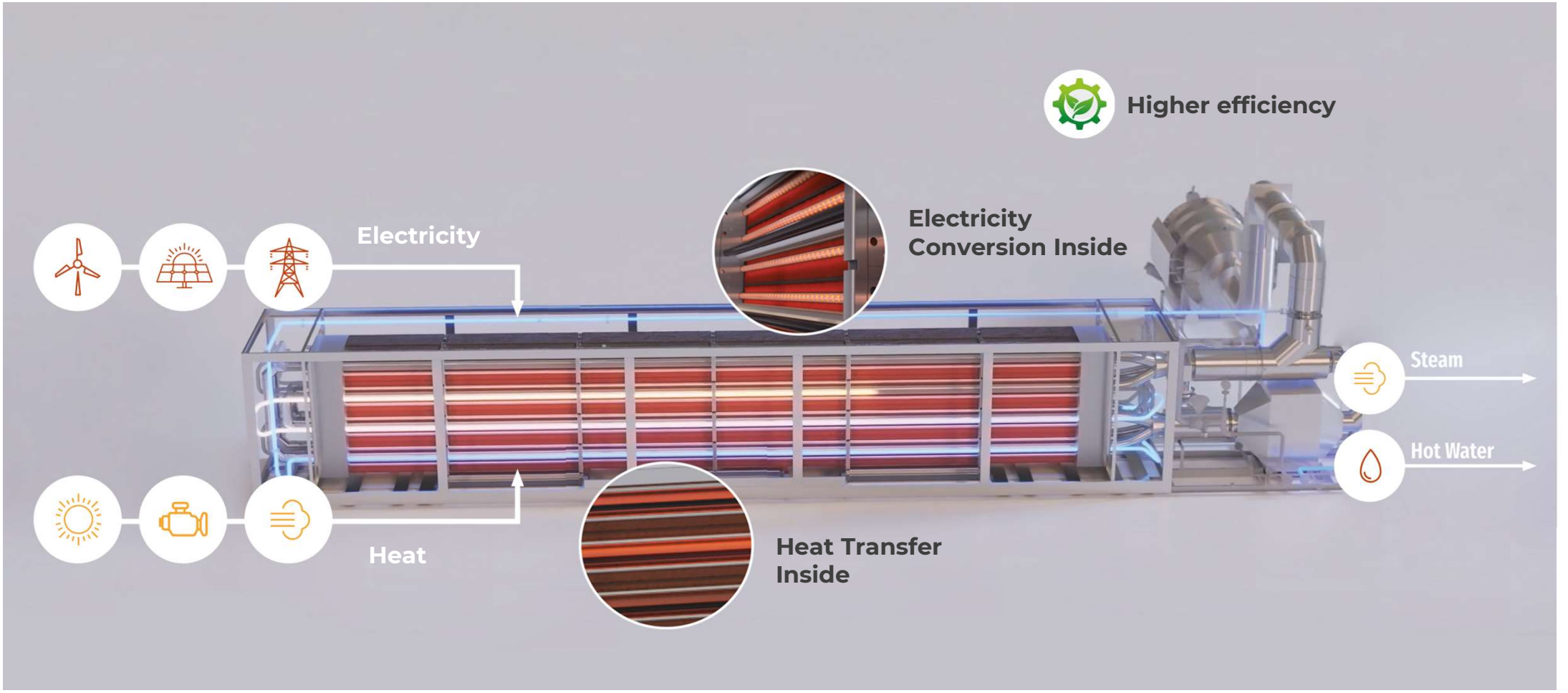
How it works



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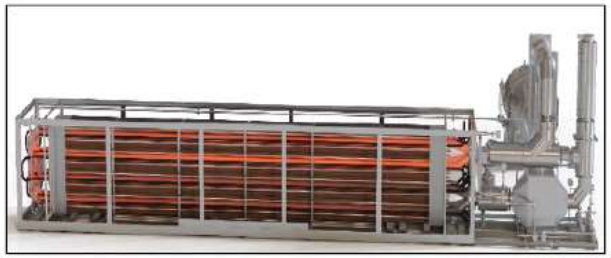
Site Decarbonization - Electrification to Heat

Wolfson Children's Hospital

Wolfson Hospital, Hulon (Israel) - 12 MWh TES

- ✓ TES will supply steam for the use of the hospital
- ✓ TES charged with electricity from the grid (off-peak prices)
- ✓ TES expected to eliminate 95 % of local GHG in the city center
- ✓ Existing boiler will be downsized to use for back-up purposes only
- ✓ Integration with existing steam distribution infrastructure
- ✓ 20-40% reduction in the price for each ton of steam produced
- ✓ System implemented under Energy Service Company (ESCO) model



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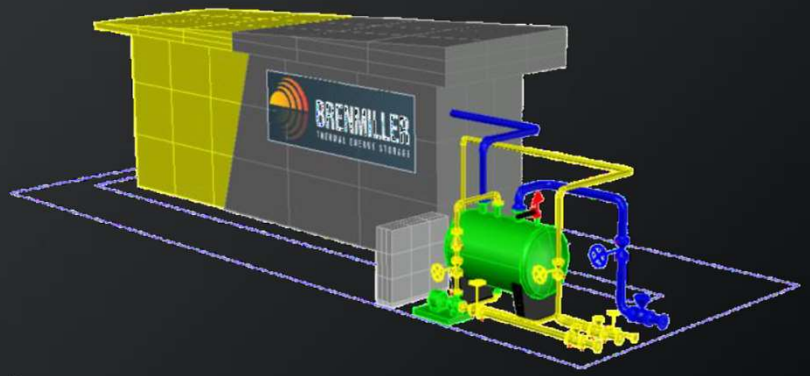
Site Decarbonization - Electrification to Heat

Tempo Beverage (Israel) - 32 MWh TES



- ✓ Tempo Beverage Company, Netanya (owned by Heineken)
- ✓ TES will supply base load and peaks process steam
- ✓ Charged with 5.6 MWe from the grid (off-peak prices) and PV sources
- ✓ Discharge max steam flow of 14 tn/h at 7 bara and 168 °C
- ✓ Dimensions (L x W x H): 13 x 5 x 6 meters
- ✓ TES will replace 85 % of current fossil fuel burning
- ✓ Eliminate 6,200 tn CO2eq emissions anually
- ✓ Implementation of Energy Service Company (ESCO) mode
- ✓ Expected cost savings of $7.5 million for Tempo over the span of 15 years

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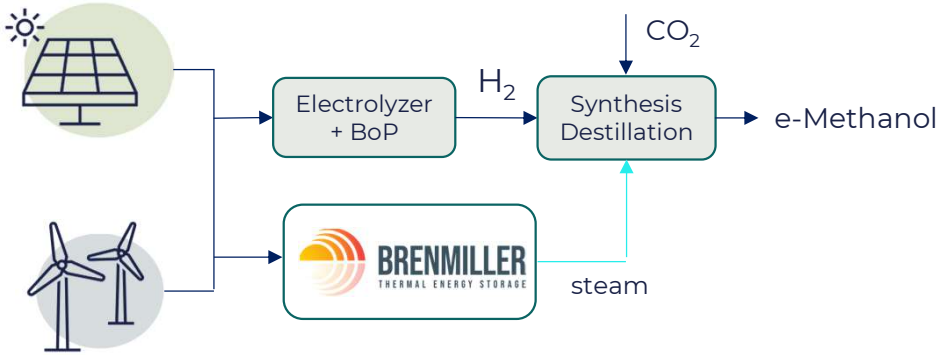
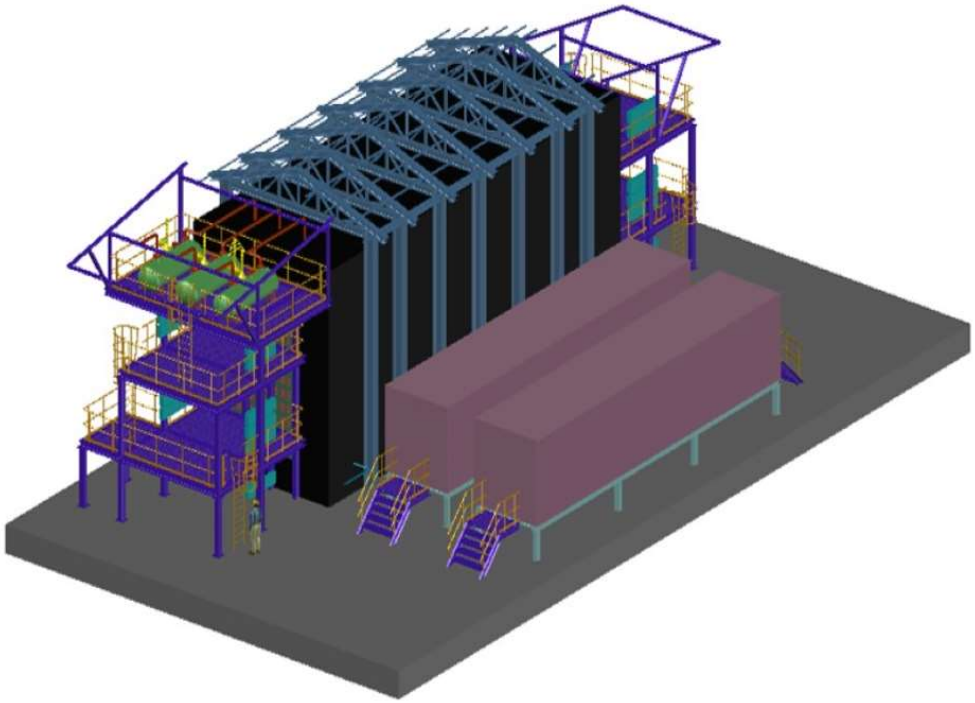
Green Hydrogen and e-Methanol Plant - Electrification to Heat

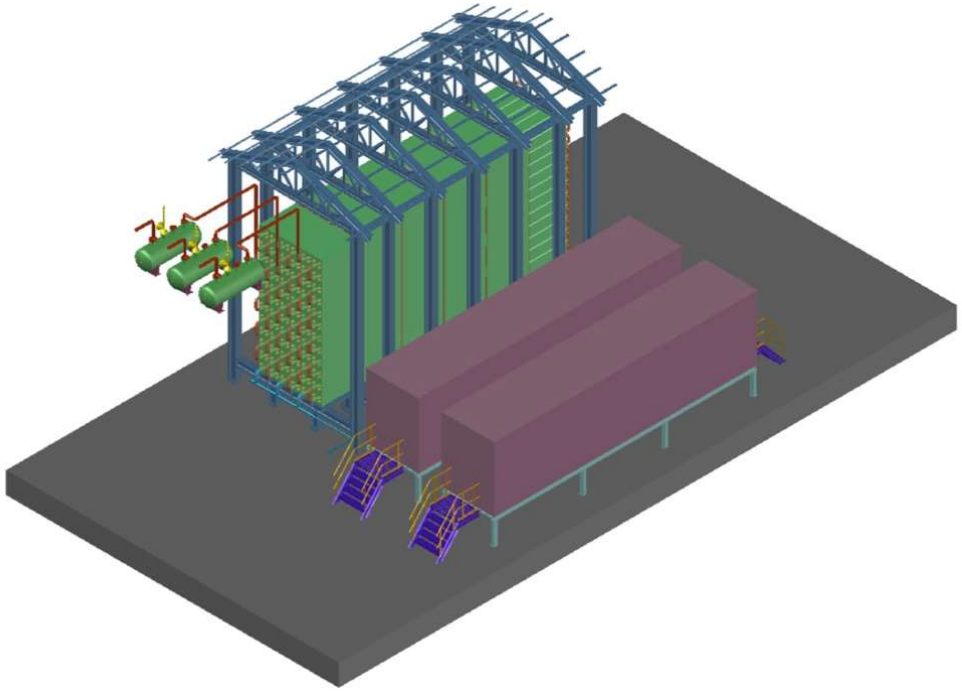
SolWinHy Cádiz (Spain) - 50 MWh TES

- ✓ Green hydrogen and e-methanol plant - COD in 2026
- ✓ Process Plant disconnected from the grid
- ✓ TES will supply steam required for methanol distillation
- ✓ Possible to charge the TES with excess energy (daytime) and discharge steam 24/7 at partial loads
- ✓ Charge: 8.6 MWe from the PV+Wind excess energy
- ✓ Discharge: max steam flow 8.5 ton/h at 6 bara and 160 °C
- ✓ Dimensions (L x W x H): 28.5 x 17 x 10.5 meters



SolWinHy Cádiz (Spain) - 50 MWh TES





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Contact Information

Thank you

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