BRENMILLER
THERMAL ENERGY STORAGE

Company Overview

FEBRUARY 2025

Nasdaq: BNRG

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This presentation of Brenmiller Energy Ltd. (the "Company", "Brenmiller" or "Brenmiller Energy"), any oral presentation of the information contained in this presentation and any question-and-answer session that may follow contain "forward-looking statements" within the meaning of the safe harbor provisions of the Private Securities Litigation Reform Act of 1995 and other federal securities laws. Statements that are not statements of historical fact may be deemed to be forward-looking statements. For example, the Company is using forward-looking statements in this presentation when it discusses: that the Company's serviceable available market potential exceeds 3,000 TWh ($155B), that the company will play a leading role in the Electrothermal Energy Storage market with over 100 MWh of capacity built or in progress, 4 GWh manufacturing capacity; benefits of the Company's technology to current and future customers, future revenues from the Company's ongoing projects, 2025 growth projections which are based on $10M pipeline; above $200M Europe commercial opportunities, Brenmiller Energy U.S. future pipeline growth, future grant opportunities, the Company's $200M in potential production capacity annually. Without limiting the generality of the foregoing, words such as "plan," "project," "potential," "seek," "target," "may," "will," "expect," "believe," "anticipate," "intend," "could," "estimate" or "continue" are intended to identify forward-looking statements. Readers are cautioned that certain important factors may affect the Company's actual results and could cause such results to differ materially from any forward-looking statements that may be made in this presentation. Factors that may affect the Company's results include, but are not limited to, the Company's planned level of revenues, capital expenditures and research, development and engineering expenses, the demand for and market acceptance of its products, impact of competitive products and prices, product development, commercialization or technological difficulties, the success or failure of negotiations and trade, legal, social and economic risks, the risks associated with the adequacy of existing cash resources, and political, economic and military instability in the Middle East, specifically in Israel. The forward-looking statements contained or implied in this presentation are subject to other risks and uncertainties, many of which are beyond the control of the Company, including those set forth in the Risk Factors section of the Company's Annual Report on Form 20-F for the year ended December 31, 2023 filed with the Securities and Exchange Commission's on March 18, 2024, which is available on the SEC's website, www.sec.gov. The information in this presentation, any oral presentation of it and any question-and-answer session that may follow does not constitute or form part of and should not be construed as an offer or the solicitation of an offer to subscribe for or purchase securities of the Company, and nothing contained herein or therein shall form the basis of or be relied on in connection with any contract or commitment whatsoever.

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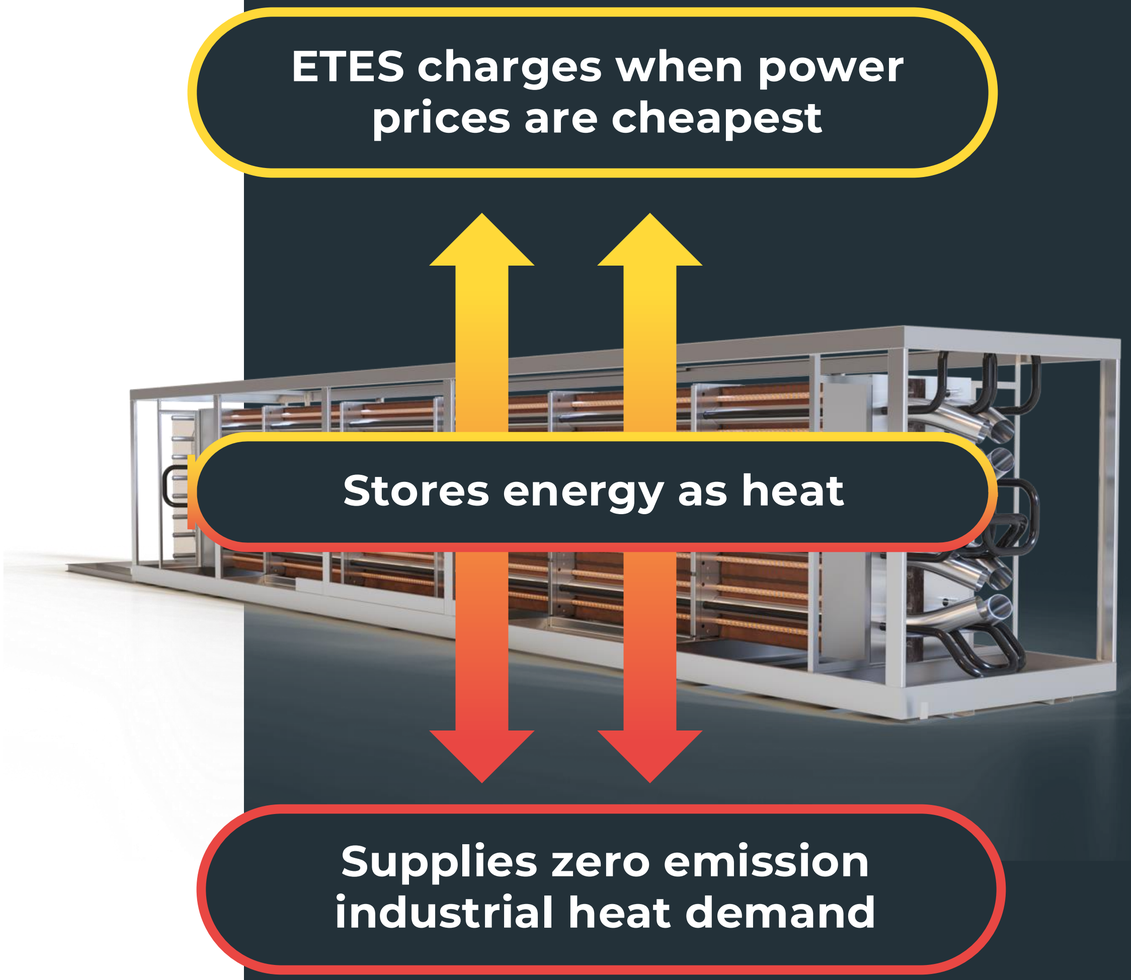
Key Company Highlights

- **$155B market opportunity -** 25% of global energy demand accounts for industrial heat. for the Electrothermal Energy Storage (ETES) market in Europe and the U.S. equivalent to 3,100 TWh;*
- **ETES (Heat Batteries) fill the gap –** They solve the variability between renewable energy supply and industrial heat demand;
- **250%+ difference between average and off-peak electricity costs –** Driven by renewable energy adoption;
- **Brenmiller is already generating revenue –** well-positioned to play a leading role in the ETES market with over 100 MWh of capacity built or in progress.



*Source: System IQ, Catalysing the Global ETES Opportunity Feb 2024

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Net-Zero within Reach

Industrial heat accounts for 25% of global emissions*

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*International Energy Agency, Renewable energy for industry, 2017.

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PILOTS:

NEW YORK STATE OF OPPORTUNITY. | NY Power Authority

enel

COMMERCIAL PROJECTS:

ppf. | Hungarian pet food manufacturer

Heineken | Tempo Israeli beverage manufacturer

Edit Wolfson Medical Center | Israeli Medical Center

CUMULATIVE PROJECTS TO DATE:

103 MWh

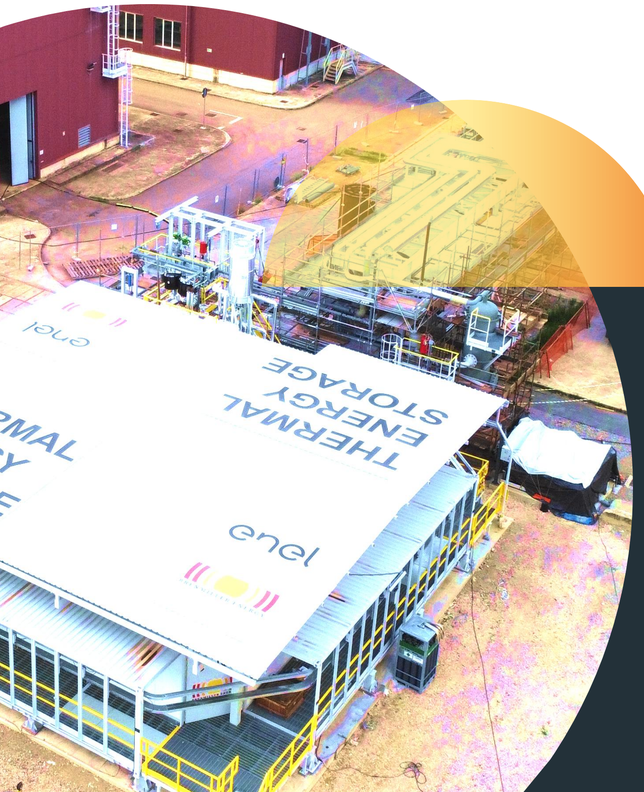
MANUFACTURING CAPACITY (AT FULL SCALE):

4 GWh

EMPLOYEES:

54

(As of February 2025)



AWARDS AND RECOGNITION:

- **European Commission –** Seal of Excellence for Horizon 2020 Project
- **BIRD Energy –** Approval for U.S.-Israel Clean Energy Project
- **TIME Magazine –** Best Inventions of 2023
- **BloombergNEF –** BNEF Pioneers 2024 Finalist
- **European Investment Bank –** Innovation Champion
- **Edison Awards 2025 –** Finalist

BIRD Israel-U.S. Binational Industrial Research and Development Foundation

Bloomberg NEW ENERGY FINANCE

European Investment Bank

European Commission

TIME

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LEADERSHIP

Management Team

AVI BRENMILLER

Chairman & CEO

DORON BRENMILLER

Director & CBO

NIR BRENMILLER

Director & COO

OFIR ZIMMERMAN

CFO

GILAD WALKER

Chief Growth Officer

Partners

ROCK ENERGY STORAGE

Distributor in the Northeast U.S.

VIRIDI

green enesys

International developers of renewable energy projects

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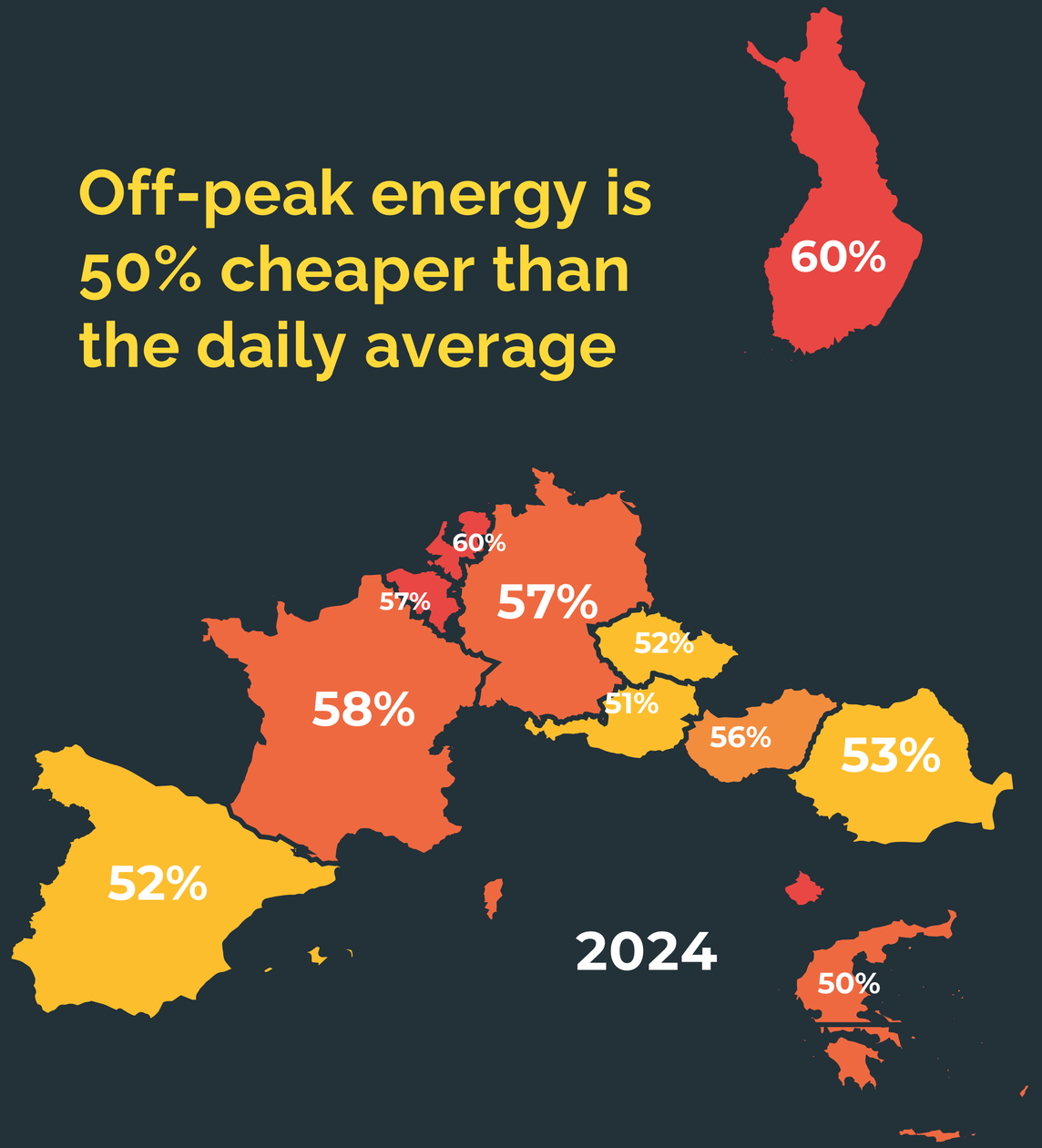
Off-peak energy is 50% cheaper than the daily average



→ 50%+

Saving with stored off-peak energy

- REDUCES ENERGY COST VOLATILITY
- INCREASE IN RENEWABLE ENERGY INTEGRATION
- NEGATIVE PRICES OF ELECTRICITY IS INCREASING EVERY YEAR

Company modelling using data from https://transparency.entsoe.eu/"

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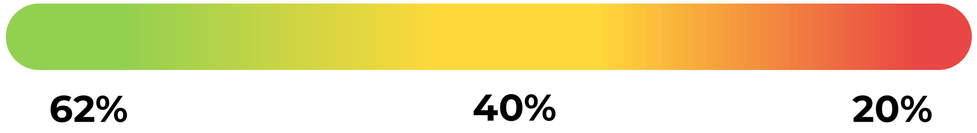
Renewable Energy Penetration Drives Off-Peak Electricity Significantly Lower in Most European Countries

	AUST	BELG	CZEC	DEN	FIN	FRAN	GER	GRC	HUNG	ITLY	NETH	NORW	POL	ROM	SPN	SWDN	SWTZ
2020	35%	39%	36%	48%	60%	35%	44%	31%	36%	28%	37%	16%	22%	37%	22%	49%	28%
2021	30%	33%	33%	36%	48%	30%	36%	28%	33%	20%	33%	18%	24%	38%	20%	42%	23%
2022	32%	33%	30%	35%	61%	25%	37%	29%	30%	21%	35%	21%	30%	35%	22%	60%	20%
2023	36%	38%	36%	43%	54%	35%	45%	37%	38%	23%	46%	25%	26%	45%	34%	47%	25%
2024	51%	58%	52%	54%	60%	58%	57%	50%	56%	24%	62%	29%	43%	53%	52%	48%	42%

Heat map of yearly gaps between lowest 4-hour prices and 24-hour average prices by country.



KEY INSIGHTS

- **Renewable adoption** drives greater peak-to-off-peak price gaps.
- **Peak-to-off-peak** variability is a sustained trend.
- **Green** marks the largest price gaps and most attractive markets.

Company modelling using data from https://transparency.entsoe.eu/"

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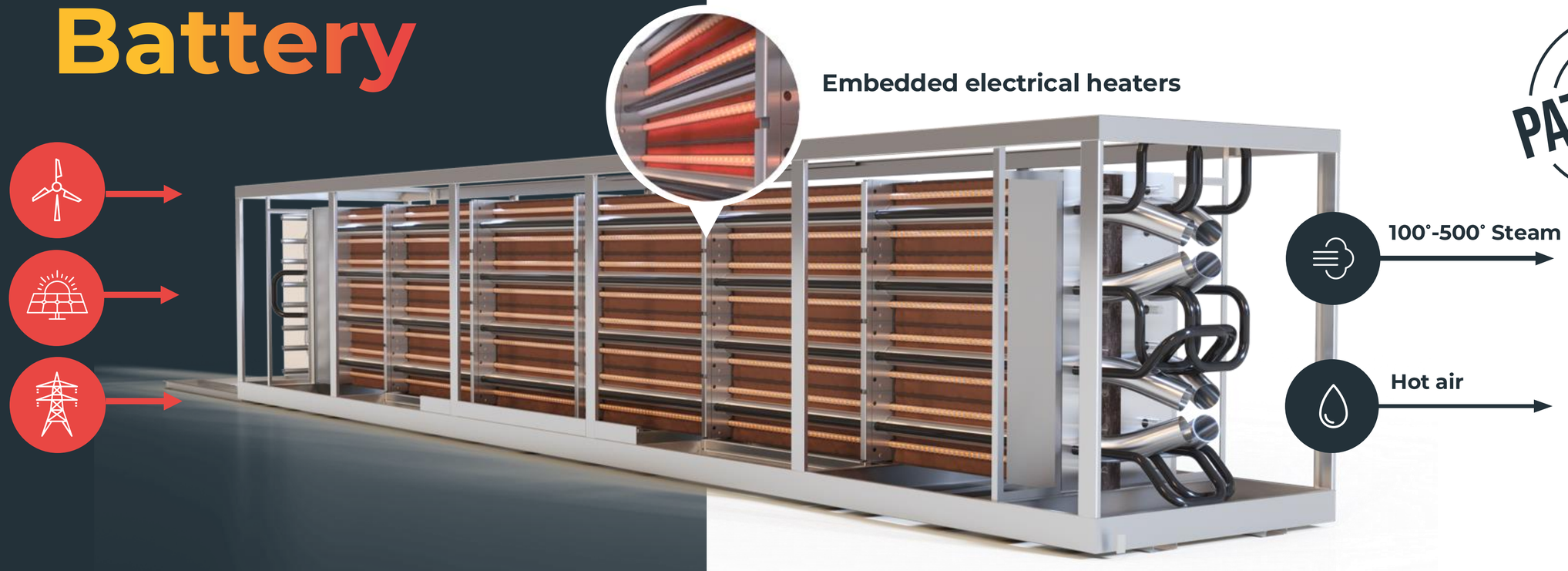
PRODUCT

bGen™ Zero Heat Battery

- **Delivers energy as heat**, tailored for industrial applications.
- **Stores excess energy** during off-peak hours and supplies it during peak demand at a fraction of the cost.
- **Power to Heat:** Electrification of heat for zero-carbon steam.



PATENTED

Zero Emissions

30+ Unlimited Cycles for 30+ Years

Modular
10 MWH – 1000 MWH

Cost Effective
Natural Materials

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Technology: Turning Rocks Into Heat Batteries

ZERO EMISSIONS

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

Electrical heaters are embedded

Structure is insulated and connected to plant

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Case Study:

PARTNER IN PET FOOD

CUSTOMER PROFILE

- European private-label pet food producer supplying 35+ countries.
- 12 production facilities producing 700,000+ tons of pet food annually.
- Operations in Hungary, Netherlands, Slovakia, Czech Republic, and Poland.

BRENMILLER SOLUTION

- Replaces fossil fuel boilers to cut costs and emissions.
- 12-year Heat as a Service (HaaS) agreement.
- Electricity charging at wholesale prices, combined with payments from grid operators for grid balancing.
- 30 MWh bGen ZERO system at PPF's Hungary plant.
- Low-cost, low-carbon steam at a fixed rate.

DRIVERS

- 42% emissions reduction target by 2030.
- High energy costs and reliance on fossil fuel boilers.
- Need for sustainable energy and grid stability.

SAVING ESTIMATES

- Annual Energy Cost Savings: $1.9M
- Annual CO_2 Abatement: 1,400 Metric Tons

PROJECT DETAILS

- Location: Dombovar, Hungary.
- Duration: 12 years.

COMMERCIAL TERMS

- Projected Annual Project Cash Flow: $0.7M
- Projected Project IRR*: 18%+
- Expansion Potential: 11 factories (up to 1.2 GWh)

Based on the current financial model

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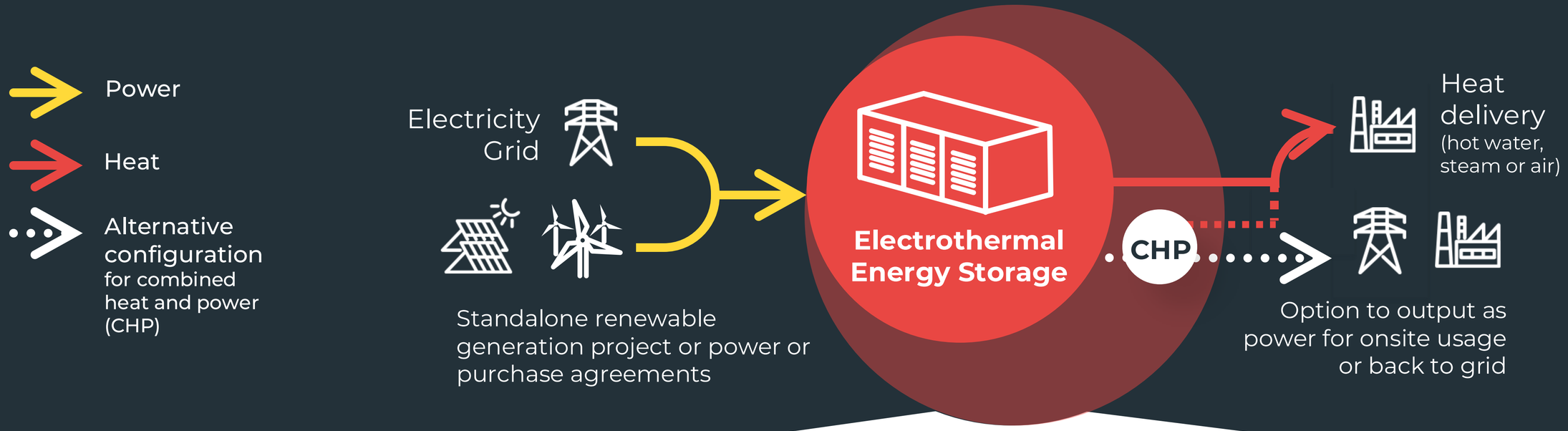
Serviceable Available Market Potential Exceeds 3,100 TWh ($155B*)

1 **ETES charges** when power prices are cheapest

2 **ETES stores** the energy as heat

3 **ETES can output heat** or power



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*Source: System IQ, Catalysing the Global ETES Opportunity Feb 2024, *Assuming cost of energy of $50/MWh

Monetization

H1 2025: H1 2025: In the final stages of securing the sale of 2 commercial projects.

H1 2025: Reach Tempo 2nd payment milestone (~$0.6M)

H1 2025: Expected to recognize revenue from the Enel project

2025 Expected Sales - $10M+

based on current pipeline

- **H1 2025:** Sign additional agreement through Brenmiller EU
- **Q3 2025:** Sign a multi-million dollar agreement with industrial client in Eastern Europe
- **Q4 2025:** Sign a multi-million dollar agreement with an industrial company in Europe
- **Q4 2025:** Sign term sheet for first U.S. commercial project
- **Q4 2025**: Achieve commercial close for the Hungarian project

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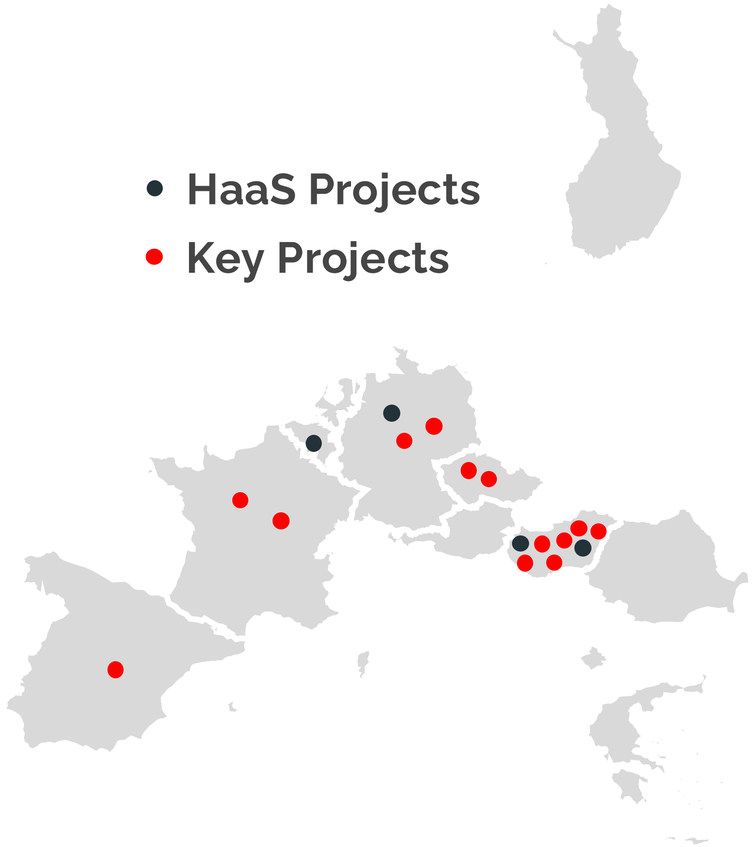
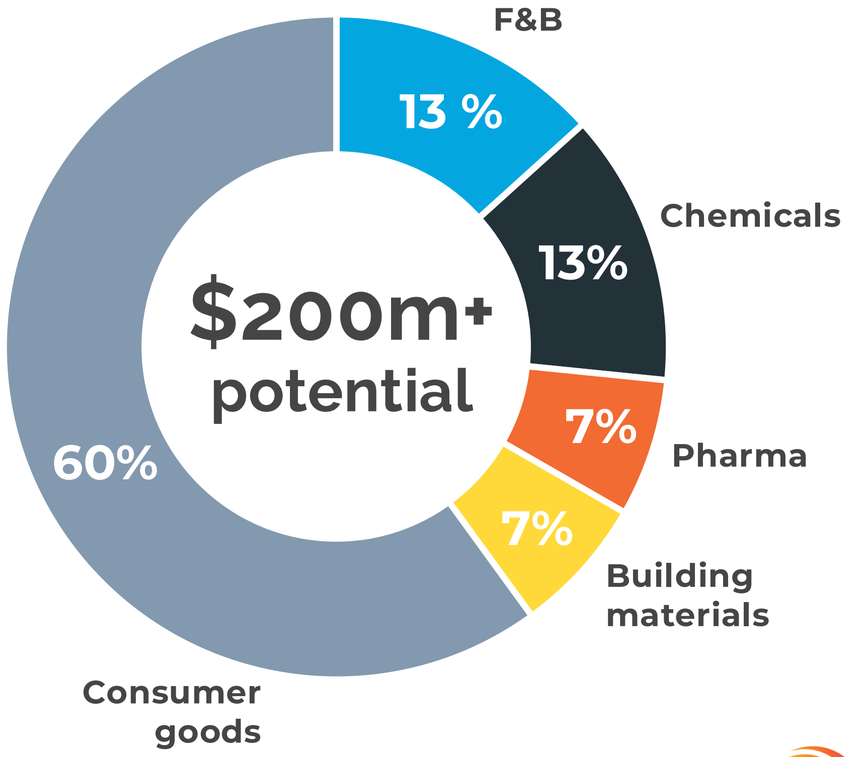
$200m+ Europe commercial opportunities – HaaS only





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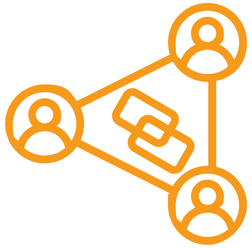
Brenmiller Energy U.S. Pipeline Growth

PIPELINE VALUE

Brenmiller Energy's commercial pipeline in the U.S. has grown to over $210 million in collaboration with its exclusive distribution partner, Rock Energy Storage.

GRANT OPPORTUNTIES

State and federal grants identified for bGen™ ZERO TES systems, enabling potential project financing in 2025.



STRATEGIC PARTNERSHIPS

Since the June 2024 exclusive agreement with Rock Energy Storage, dozens of opportunities are under development, focusing on favorable economics and high U.S. market interest.

MARKET GROWTH

Energy storage deployments in the U.S. grew by 80% (Q3 2023–Q3 2024), driven by increasing demand for TES solutions.

(Source: U.S. Energy Storage Monitor, Wood Mackenzie Power & Renewables and the American Clean Power Association.),

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Aiming to Lead the Industry

~100MWh in operation and construction; proven tech

COMMERCIAL PROJECTS – UNDER DEVELOPMENT					
Capacity	**Business Model**	**Description**	**Location**	**Annual CO_2 Abatement**	**Life Time Energy Cost savings**
30 MWh	HaaS	ppf – large pet food manufacturer	Hungary	1.4MT	$1.9M
32MWh	HaaS (50%/50)	Tempo – Beverage manufacturer	Israel	6.2MT	$7.5M
12MWh	Haas	Wolfson Medical Center	Israel	3.9MT	$6.5M

COMMERCIAL PILOTS		
Capacity	**Description**	**Location**
24 MWh	Enel – Flexible operation of thermal power plant, shifting excess energy to peak hours	Italy
1 MWh	NY Power Authority	New York, USA

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World’s First Heat Battery Gigafactory

- Market leader in live production capacity, giving Brenmiller an operational capability edge.
- 4 GWh manufacturing capacity at full scale, supported by European Investment Bank funding.
- Tested approach creating a template to launch localized manufacturing in key geographies.
- $200m in potential production capacity annually.

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bGen™ – Competitive Edge in Thermal Energy Storage

Technology

EFFICIENCY

97% Patented RTE, **75KW/m³** Power Capacity, **3.2 Ton/m³** Density, AI Optimization

INTEGRATED STEAM GENERATOR

Real-time steam peaking, **no external heat exchangers / Fans** = Reduced auxiliary power

REDUNDANCY

Multiple heaters, **dividable modules**, enable high availability / partial utilization

FOOTPRINT

Flat or tower-based, custom sizing for price and efficiency, **3MWh/m², 30Y** lifespan

Efficiency

BALANCING RESPONSE

bGen™ instantly aids grid balancing by **charging** TES with excess grid energy

GRID VERSATILITY

bGen™ offers limitless energy absorption from grid with **cycle-independent** lifespan

OPTIMIZED CHARGING

Efficient charging even near full capacity, through **full control** of selected TES blocks

GRID-SILENT OPERATION

Embedded heaters, no rotating devices, **99.9% Active Factor**, Harmonics Free

Operations

WARRANTY

Side-to-Side warranty, easy maintenance, **independent** local service providers

LOCALIZED MANUFACTURING

Rapid local deployment of **automated manufacturing** lines, Industry 4 aligned

SUSTAINABLE COMPLIANCE

Adherence to global ESG standards, **< 25 KgCO2e** per manufactured KWh

CERTIFIED EXCELLENCE

Approved for Environmental, Safety, Quality, and local **Regulatory Standards**

Strategy

MATURITY

Extensive test sites deployed; competitive heat pricing and **Commercial ready**

EXPERTISE

Heat electrification, Energy-as-a-Service, responsibility **including steam production**

PARTNERSHIPS

Partnering with electricity suppliers, grid operators, service providers, **regionally**

SUPPLY CHAIN

Optimized CapEx, **in-house manufacturing** and supply chain management

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Business Models

Diversified income stream from multiple services, tailored to customer

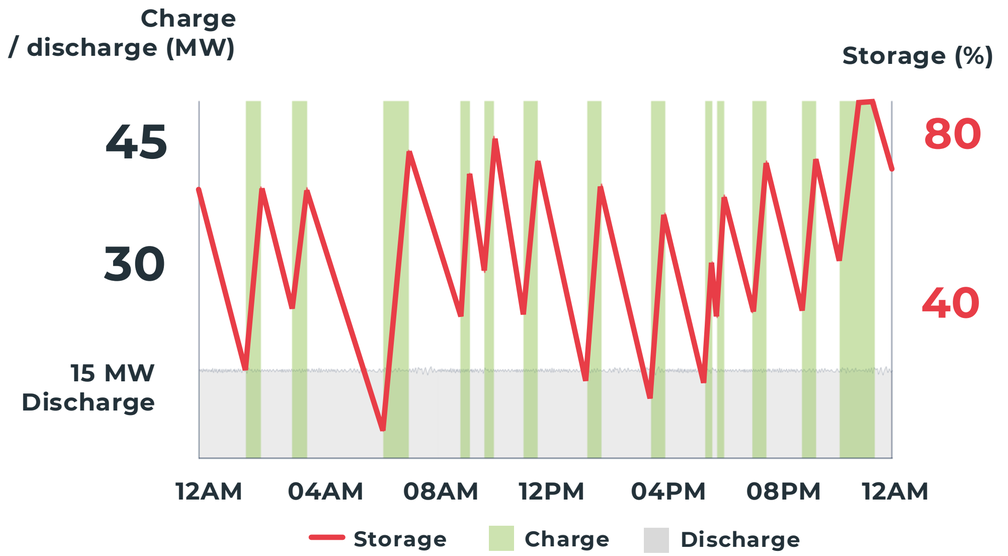
EQUIPMENT SALES
One-off sale with O&M contract

HEAT-AS-A-SERVICE
Supply clean heat at agreed price

CAPACITY PAYMENTS
Take on excess electricity from grid

GRID SERVICES & CAPACITY PAYMENTS
Take excess electricity from grid frequency and load shifting support

Opportunistic fast charging at off-peak prices enables low average cost of energy[1]



Source : [1] Company Materials for an EU country in 2024

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Thank you

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