



The world's fastest battery

A Breakthrough in
Ultra-Fast Grid Stability
and Resilience.

Roger Casals
CEO



Sep 2025

CENTRALIZED GRID

DISTRIBUTED GRID



DEMAND

AI, Blockchain, EV, ...



RENEWABLES

Intermittent,
decentralized and
heterogeneous



INSTABILITY

The grid suffers from
constant imbalance



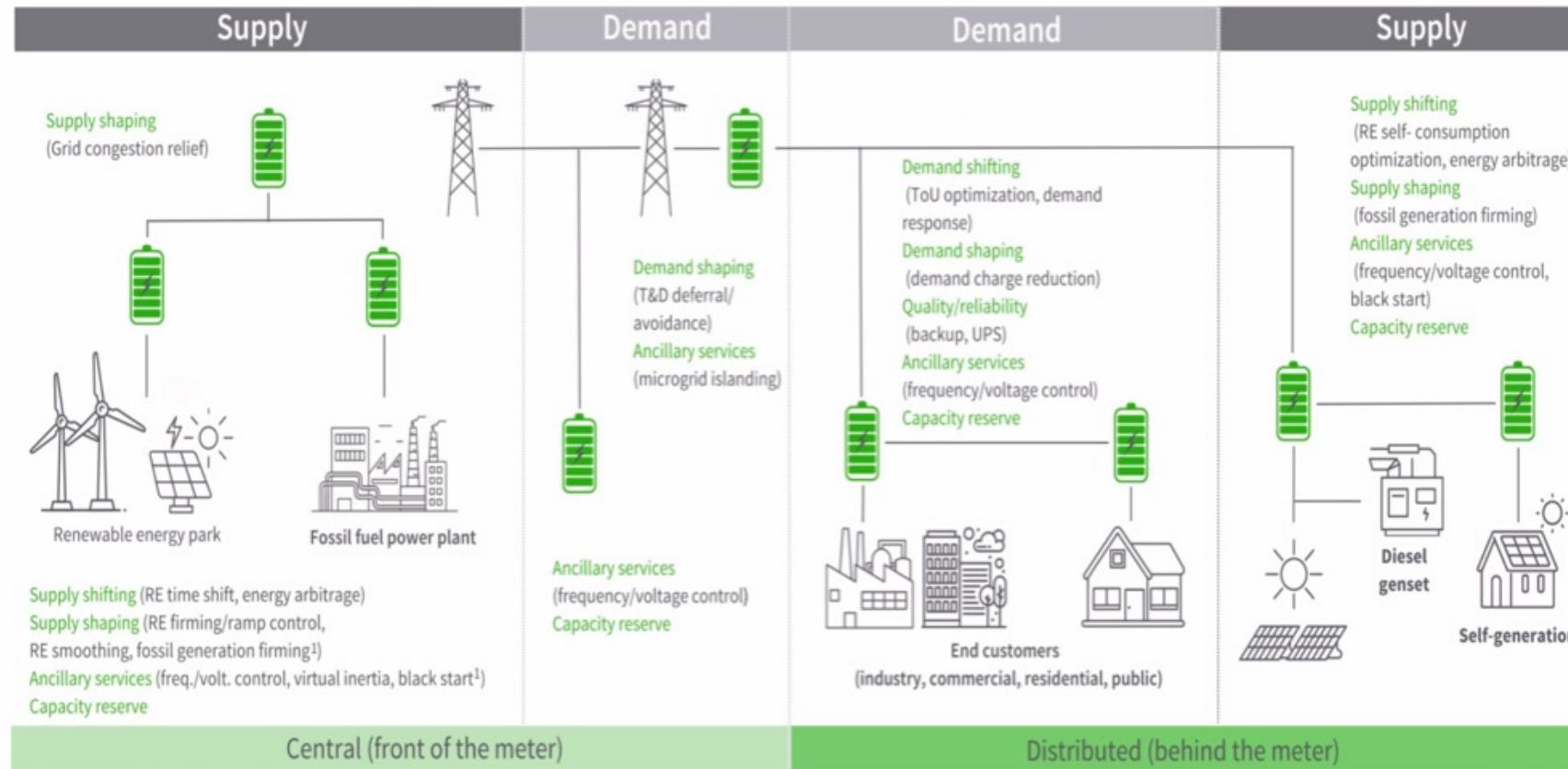
OPPORTUNITY

Storage,
stabilization, and
flexibility

CENTRALIZED GRID

DISTRIBUTED GRID

Structured overview energy storage use cases



OPPORTUNITY

Storage, stabilization, and flexibility



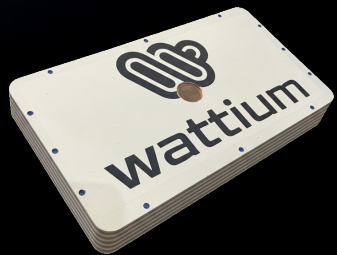
We design and manufacture **batteries** that **charge in 5 minutes**, react in **milliseconds**, at **sustained high power**, **last 30,000+ cycles**, **cost 5x less**, are **safe** (no Lithium or rare mat.), and solve the challenges of the electrical grid.



A new
energy storage
technology



Modular Architecture



POWER CELL

- 28 bi-polar sub-cells.
- 50 V (100 V to 0 V)
- 41.44 Wh
- 497.28 W



POWER MODULE

- 21 Cells in parallel.
- 50 V
- 870.24 Wh
- 10.4 kW



POWER RACK

- 20 Modules in series
- 1000 V
- 17.4 kWh
- 208.8 kW



MEGACELL

- 10 Racks in parallel.
- 1000 V
- 174 kWh
- 2.088 MW

Features

Secret Sauce

- Hyper-Fast Charging (12C) ●
- +30,000 Life Cycles ●
- 'Cell to Pack' Optimization ●
- Simple Manufacturing ●
- Simple Electronics ●
- Much Lower Capex ●
- Recyclable ●
- Safe & Stable ●
- Strategic Independence ●

- Paste Electrodes + Nanoparticles
- Thick Electrodes
- No Rare Materials & No Lithium
- Hybrid SuperCap Chemistry
- Unique Bipolar Cells Architecture
- Proprietary Injection-Based Manufacturing



3 Patents:

US-20240222038-A1: "Highly efficient electrical conductivity paste electrodes and cell stacking for high power electrical energy storage devices".

EP-4086980-A1: "Hybrid nanogel electrodes and cell stacking in distributed architectures for high power electrical energy hybrid storage systems".

EP-4044269-A1: "Winery-waste-derived graphene-like carbon for potassium energy storage".

Our Team



Roger Casals

CEO

Entrepreneur with 5 exits
UPC, IES, Harvard



PhD. Daniel Rueda

Co-Founder: R&D

PhD. Nanoscience, UB
CSIC, ICN2



Jordi Aibar

Co-Founder: Engineering

MSc Telecommunications UPC
Founder of Energy Startups



PhD. Eduard Alarcón

Co-Founder

Ph.D. | Electrical Engineering
UPC & CU Boulder



PhD. Pedro Gómez-Romero

Co-Founder

Ph.D. | Chemistry (Georgetown Univ)
ICN2 Research Leader



**Chemical Engineers
Lab Technicians**



TESLA - MEGAPACK

Energy: 3.9 MWh

Power: 1.9 MW

Charging Speed: **2 hours = 0.5C**

Unit Price: \$1,000,000

- You need **25 Megapacks**



\$25,000,000

Benchmark

You need to manage

3.9 MWh

in

5 minutes

generated by a
solar powerplant

or

discharge to the grid

WATTIUM - MEGACELL

Energy: 3.9 MWh

Power: 46.2 MW

Charging Speed: **5 minutes = 12C**

Unit Price*: 5,000,000 €

- You Only need **1 Megacell**



5,000,000 €

* TBD

Benchmark

Feature / Model	Wattium Megacell 2	Tesla Megapack 2 XL	CATL EnerC	BYD Cube T
Chemistry	Na-ion + Carbon	LFP (LiFePO ₄)	LFP (LiFePO ₄)	LFP (LiFePO ₄)
Power/Energy (C-rate)	12C up to 24C	0.5C–1C	0.5C–1C	0.5C–1C
Max. Continuous Power	2 MW	1.9 MW	1.5 MW	1.5 MW
Energy Storage Cap.	167 kWh	3.9 MWh	3.5 MWh	3.3 MWh
Fastest Full Charge	5 min (0–100%)	2 h	2 h	2 h
Round-Trip Efficiency	93%	92–94%	90–92%	90–92%
Cycle Life (@100% DoD)	30,000+	6,000–10,000	10,000	10,000
Safety	Non-flammable	BMS + fire suppression	BMS, fire protection	BMS, fire protection
Maintenance	Minimal	Remote diagnostics	Remote diagnostics	Remote diagnostics
Environmental	No Li+ No rare mat.	Li+-based	Li+-based	Li+-based
Energy Density (Wh/L)	24.7	96	104	168
Power Density (W/L)	296	24	52	84
€/MW·cycle	8,3	52,6	53,3	50

Market: **BESS**

Customer:

FTM: *front of the meter*

Generation / Distribution



10 MWh – 200MWh +

BTM: *behind the meter*

Industrial



30 kWh – 10MWh

Residential

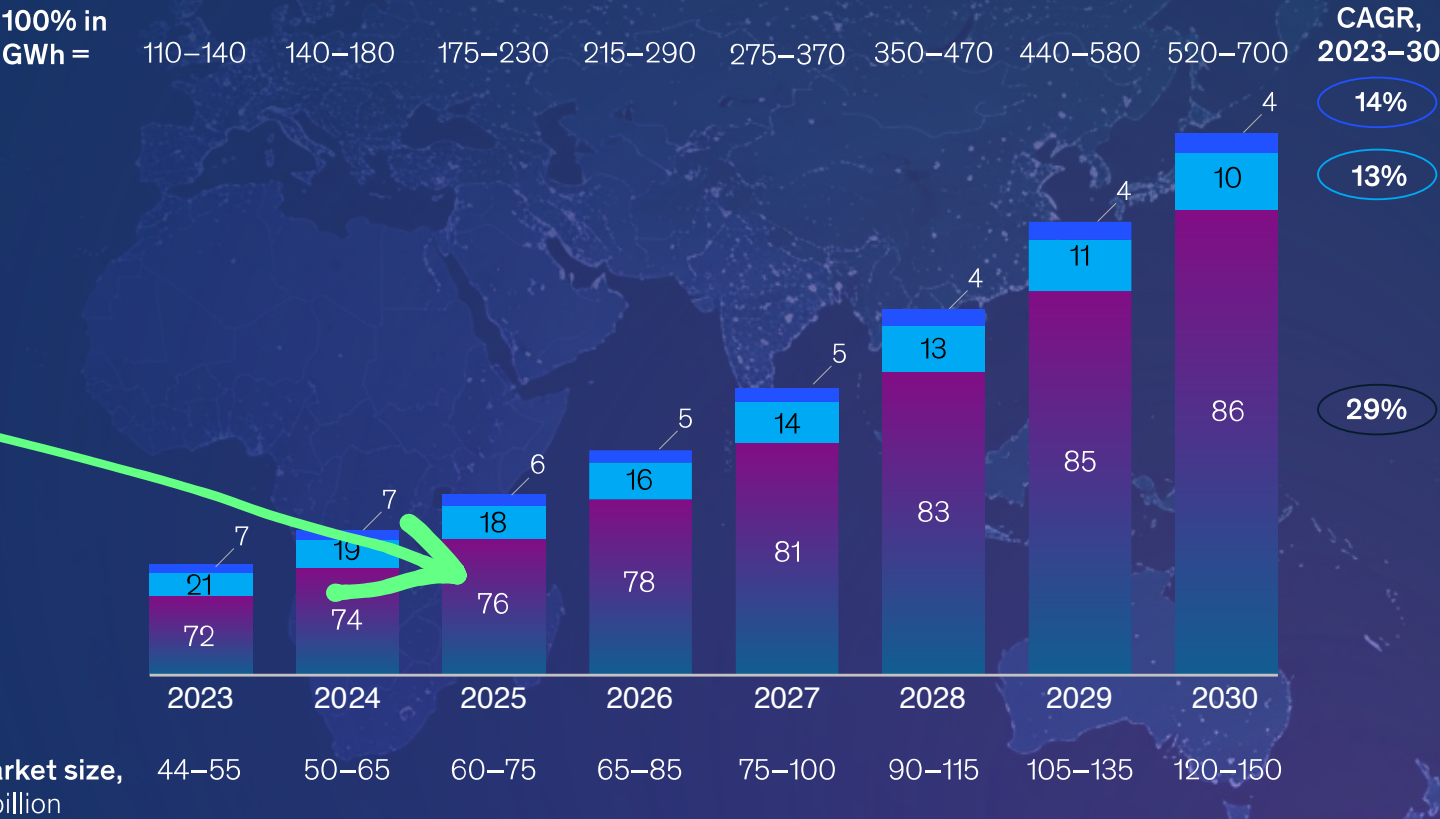


30 kWh

Battery energy storage system capacity is likely to quintuple between now and 2030.

Annual added battery energy storage system (BESS) capacity, %

Utility Commercial and industrial Residential



Note: Figures may not sum to 100%, because of rounding.
Source: McKinsey Energy Storage Insights BESS market model

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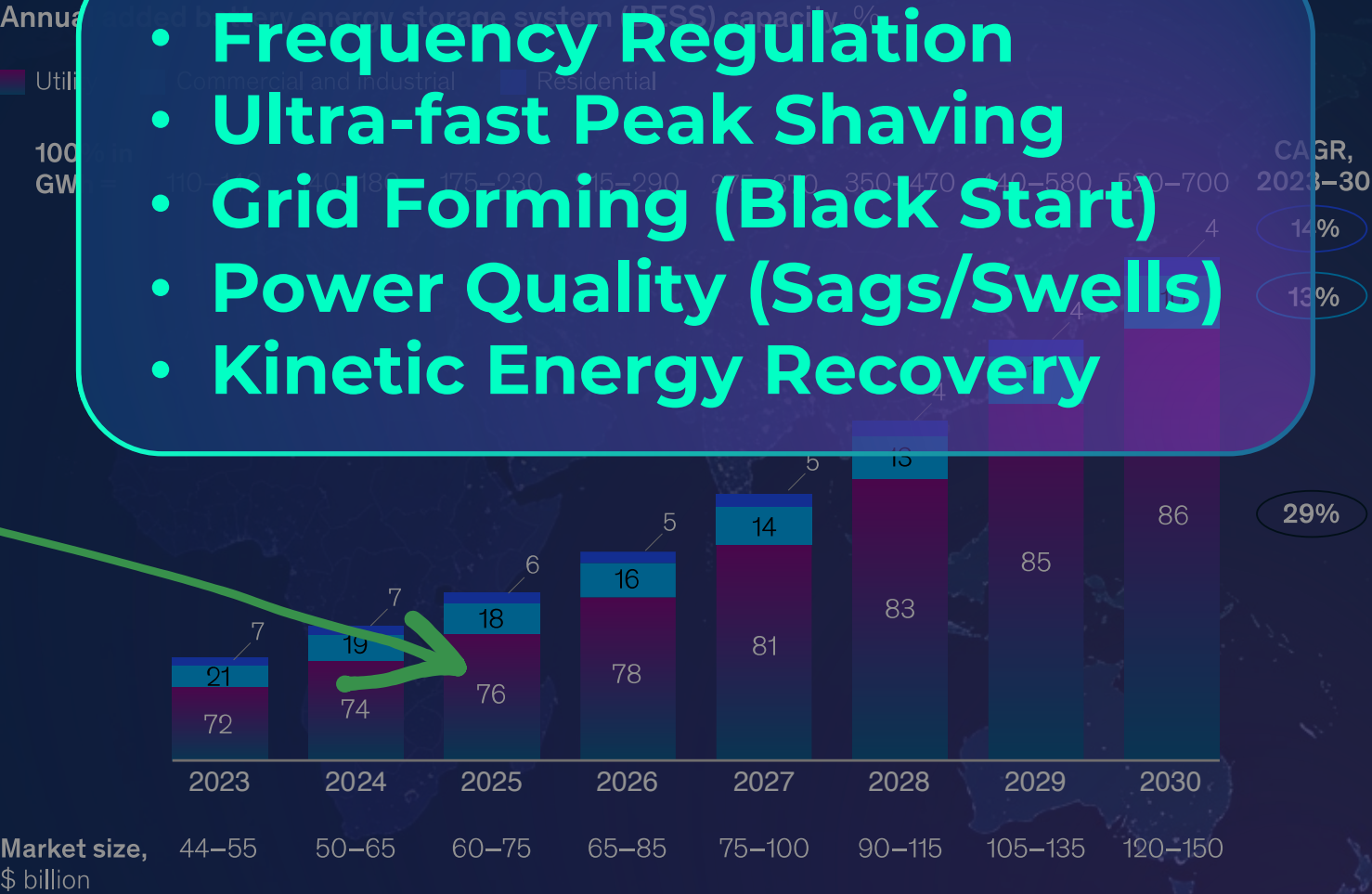
Residential



30 kWh

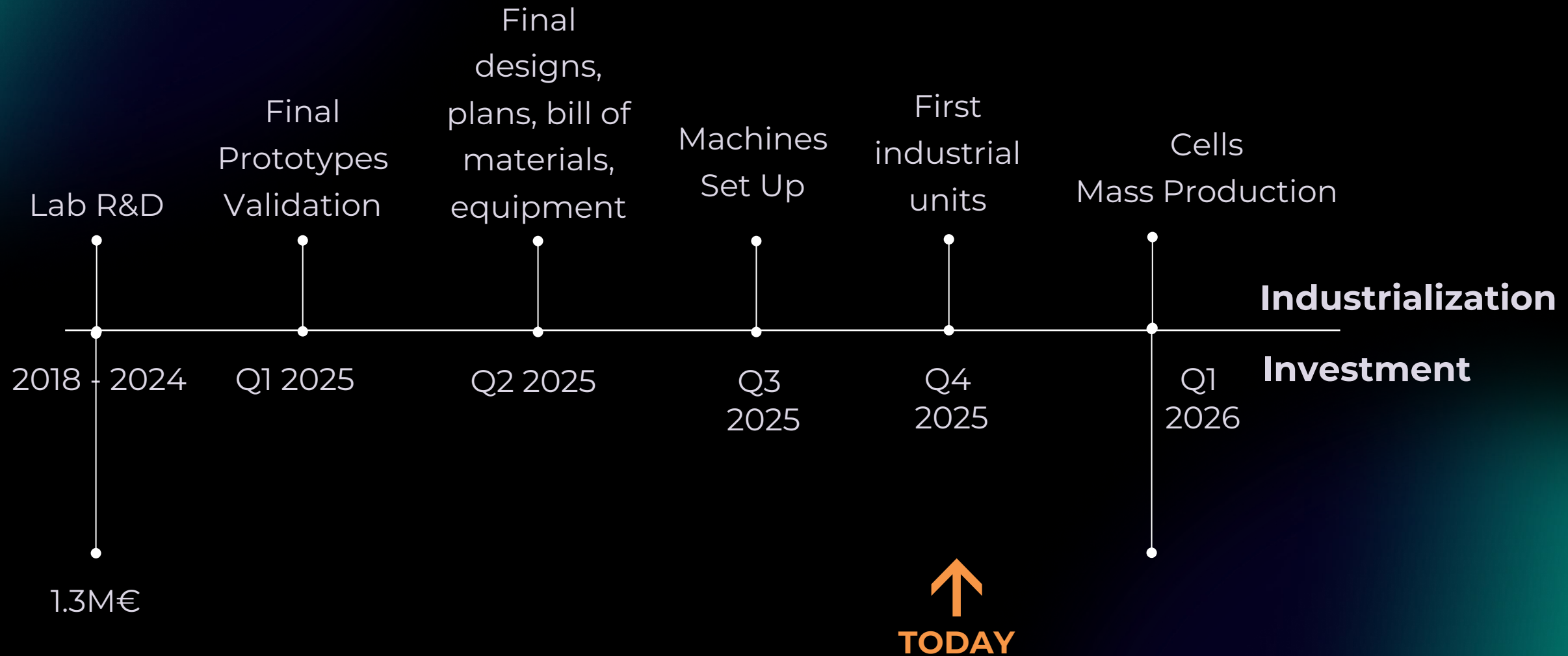
Battery energy storage system capacity is likely to quintuple between now and 2030.

- Frequency Regulation
- Ultra-fast Peak Shaving
- Grid Forming (Black Start)
- Power Quality (Sags/Swells)
- Kinetic Energy Recovery



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Source: McKinsey Energy Storage Insights BESS market model

Timeline



Ultra-fast batteries— at very-high power.

Thank You !

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