



From Risk to Resilience

Defence as the Catalyst for Europe's Battery Industry

Lessons learned from developing and producing high-performance cells

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CustomCells at a glance

A decade of cell engineering | built to perform



Since 2012

Fraunhofer spin-off

60 MWh

Electrode production in
Germany + Assembly

German HQ

and German family-office
ownership

Certified

ISO 9001 and German VG
Norm

>100 staff

delivering IP and quality



Resilient

NDAA aligned supply chain

High-performance cells for demanding applications – backed by experience and a resilient supply chain.

When the supply stops



2023

Graphite

Export licence for natural flake and high-grade synthetic graphite

2024

Cells for Skydio

US drone maker sanctioned. Battery supply cut overnight.

2025

Cathode know-how

LFP/LMFP cathode and lithium refining technology licences

2025

Cells & lines

Cells ≥ 300 Wh/kg, anodes, NCM precursors, selected production lines.
(Paused to Nov 2026)

The risk

! Time

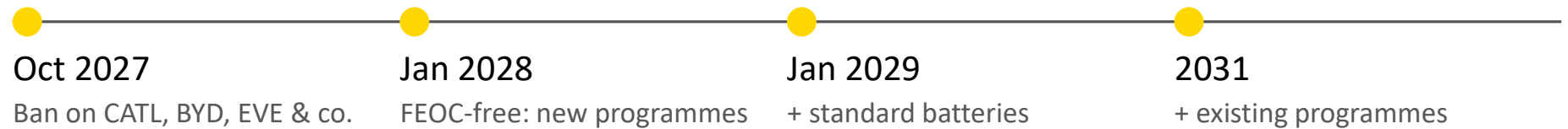
New cell capacity takes years to ramp up

! Range

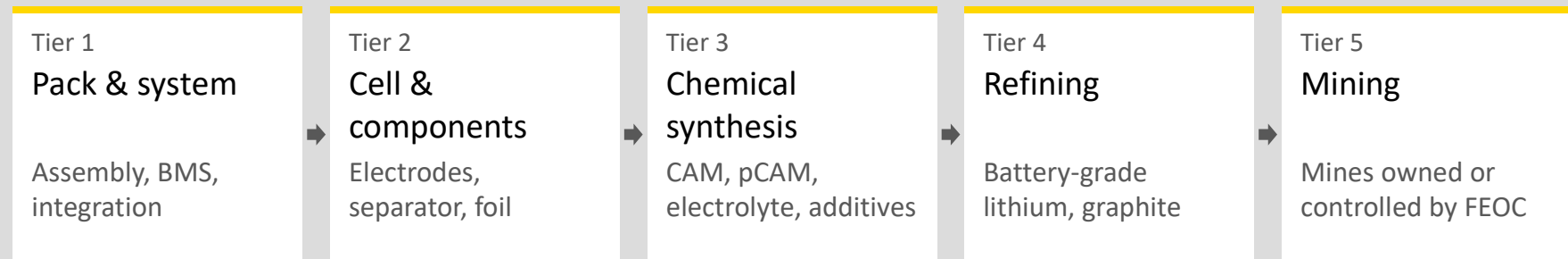
Without local high-performance cells, systems fly shorter – a tactical disadvantage

Battery supply is no longer a market question. It is a security question,

The US has already drawn the line



Where FEOC-free applies – on every tier, from pack to mine (FEOC = Foreign Entities of Concern)



Same rule on every tier: who owns and controls the step – not where it is. Safe harbour: >95 % non-FEOC cost.

From 2028, US defence buys only FEOC-free cells – from pack to mine.

Lessons learned as a MWh player



01

Technology is ready

R&D is well funded. Cells and know-how exist in Europe.

02

GWh is binary

Price competitiveness means 0 to 20 GWh in one step.

03

Awareness varies

Awareness of cell supply risk varies between customers.

04

Collaboration is key

Build and use your network.
Especially for trouble shooting.

05

Focus

Set clear boundaries for tech and markets.

06

One anchor is a risk

A single high-risk customer can put the whole company at risk.

Technology is not the bottleneck. Scale and reliable demand are.

Technology options for tactical advantages



Platform	High Energy	Ultra High Power	High Cycle & Power
Energy	> 375 Wh/kg > 920 Wh/L	> 130 Wh/kg > 400 Wh/L	> 130 Wh/kg > 390 Wh/L
Power	Peak 11C · 3C cont.	Peak 157C · 40C cont.	Peak 40C · 15C cont.
Cycle life	> 600	400	>> 20,000
Temperature	-40 to +60 °C	up to +80 °C	-40 to +60 °C
Segments	Long-range UxV, ISR	Weapons & effectors	Arctic, on-board power
Availability	Available	On demand	Q1 2027

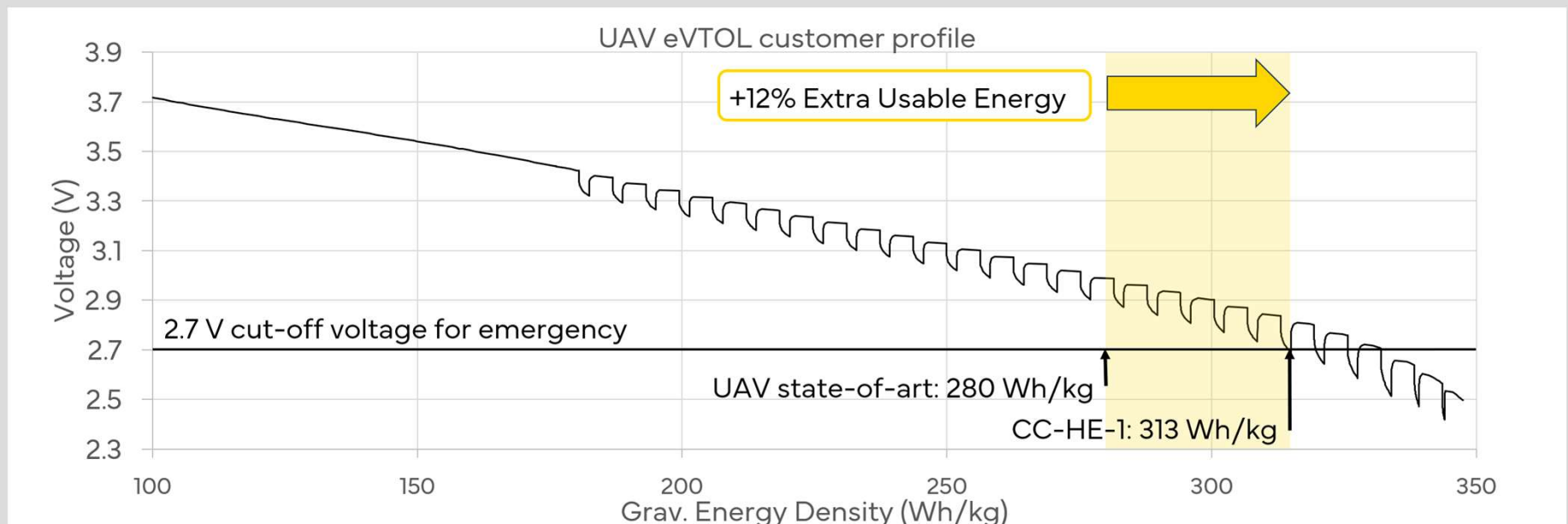
Trade-off between energy and cycle life; derating possible, temperature dependent.

Three platforms – for range, for power, for persistence.

Usable energy is a tactical advantage



More usable energy | more range, endurance and payload



12 % more usable energy under real load than the benchmark. 87% usable energy vs. nominal energy value.

Defence as the spearhead for resilience



R&D is funded.

Industry is ready.

Investors are ready.

01

Defence commits

Long-term demand signal

02

Capability and skills
stay & grow

MWh cell makers keep
investing – know-how
stays in Europe

03

Value chain follows

Materials, components,
equipment – across NL
and DE

04

Resilience

Sovereign cell supply for
defence and critical
applications

Windfall: a running base for future GWh scale-up – instead of starting from zero.

Commit to demand – keep MWh capability in Europe, and resilience follows.

Meet me at the show – or get in touch

Let's build Europe's battery resilience – together.



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