

STABL

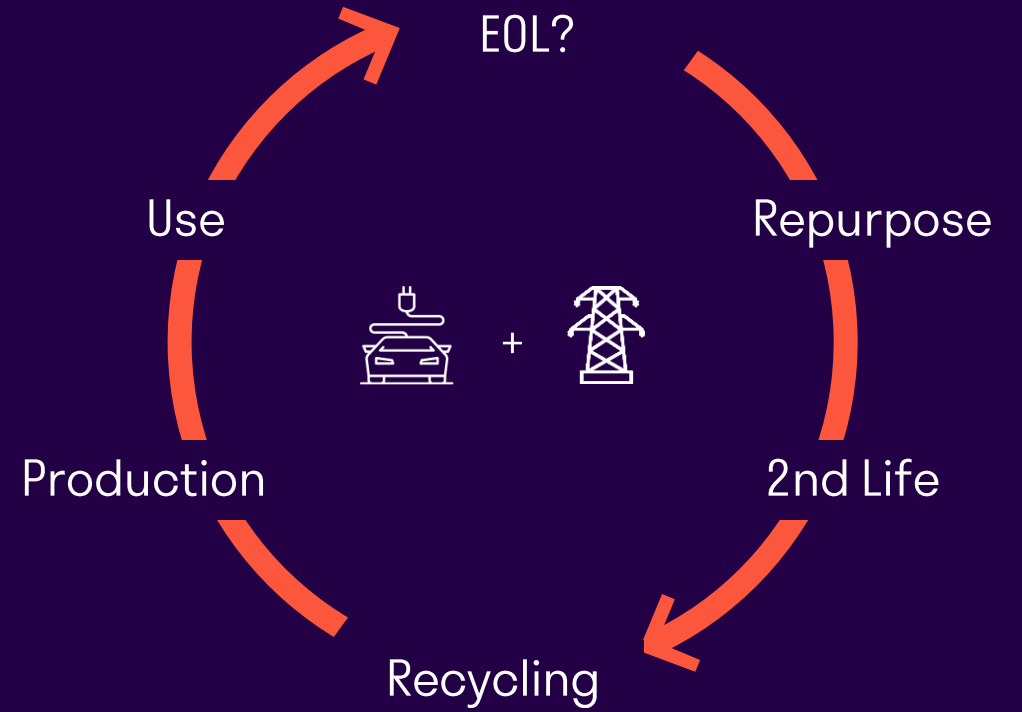
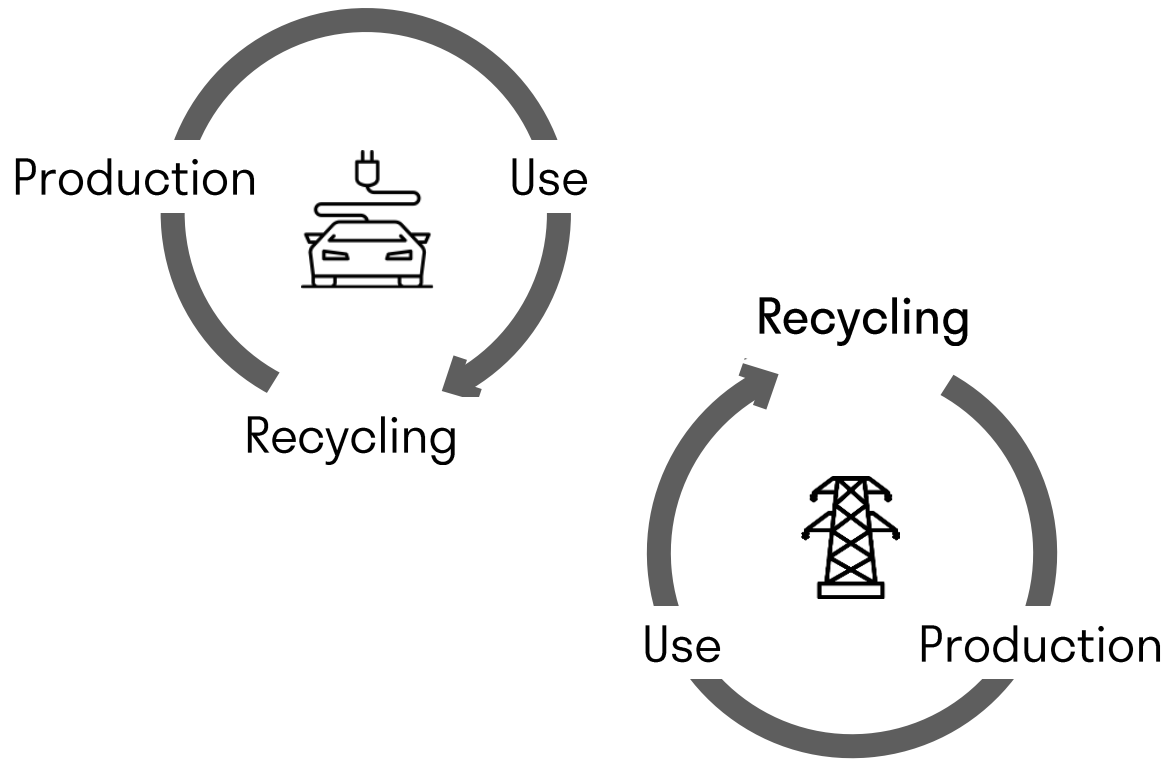
Every battery deserves a 2nd chance

Re-using EV batteries in stationary applications

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Idea of 2nd life batteries



Why 2nd life batteries?

Use of 2nd life batteries

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graph TD; A[Use of 2nd life batteries] --> B(<50% battery costs); A --> C(-70% CO2); A --> D(Trash / Available battery supply); B --> E[De-risked use with proprietary STABL technology]; C --> E; D --> E;
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<50%
battery
costs

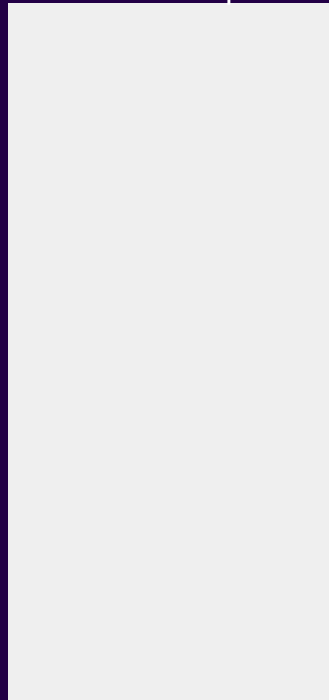
-70%
CO₂

Trash /
Available
battery supply

De-risked use with proprietary STABL technology

2nd life reduces CO₂ footprint

185 kgCO_{2eq}/kWh



Conventional system with "first life" batteries

-70%

50 kgCO_{2eq}/kWh



STABL system with "second-life" batteries



2nd life Daimler Batteries



Only 50 % of all lithium-ion
batteries are being recycled.



2 million tons of discarded electric
vehicle batteries until 2030

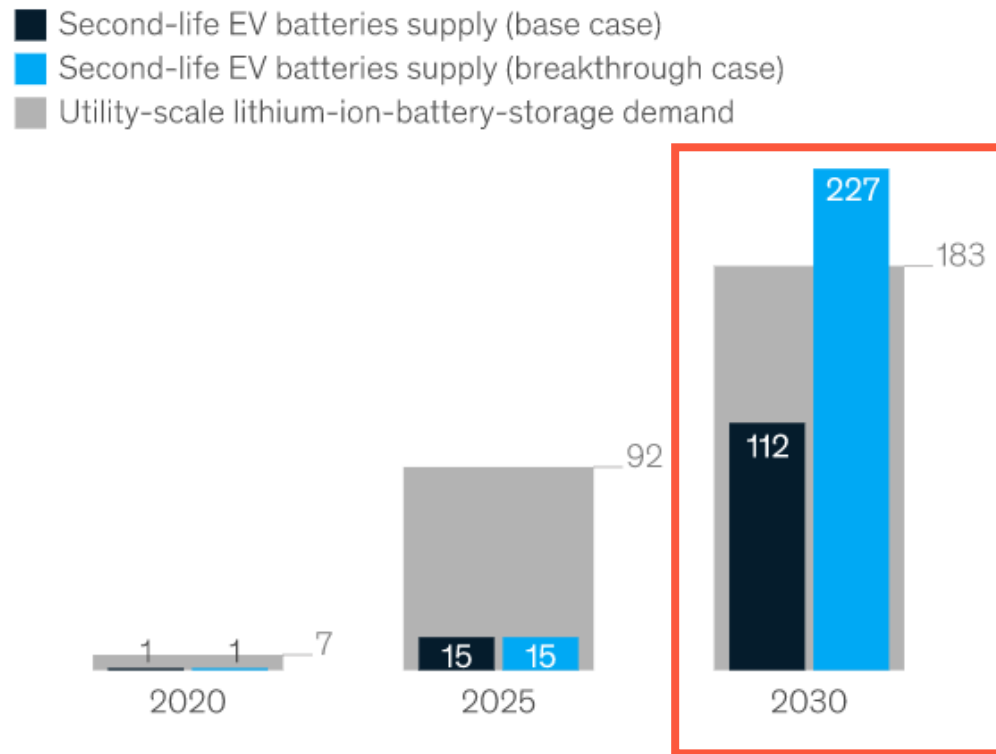
A photograph showing a large stack of used battery modules, likely lithium-ion, arranged in several vertical columns. A single module is being processed in a central machine, possibly a shredder or a sorting unit. The modules are dark grey and have a distinctive wavy, layered appearance. The background is a plain, light-colored wall.

“Each day, we recycle up to 2 MWh of batteries of which at least 50 % are still good enough for second-life”

2nd life batteries will be available

Second-life lithium-ion battery supply could surpass 200 gigawatt-hours per year by 2030.

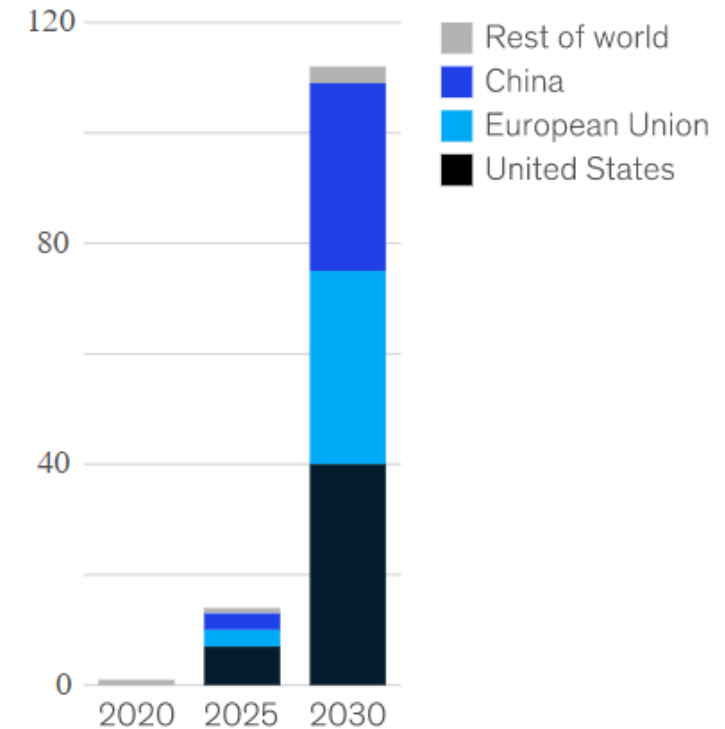
Utility-scale lithium-ion battery demand and second-life EV¹ battery supply,² gigawatt-hours/year (GWh/y)



¹Electric vehicle.

²Only for batteries from passenger cars.

Second-life EV battery supply by geography (base case²), GWh/y



How 2nd life batteries are being reused

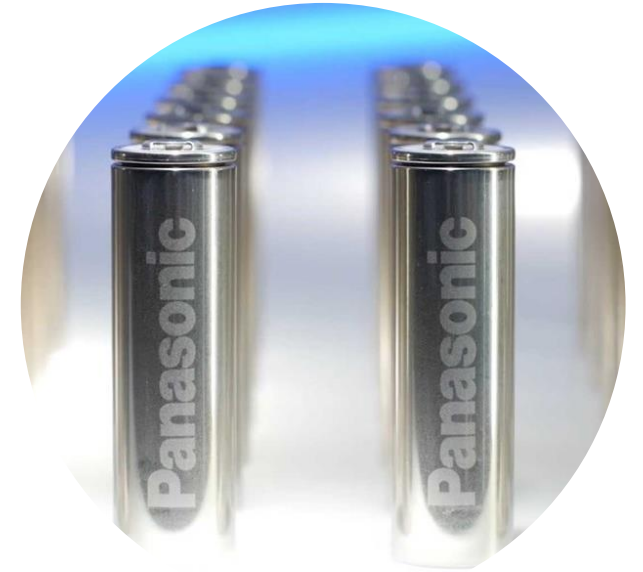
Three distinct ways to built up 2nd life storage systems



Pack level



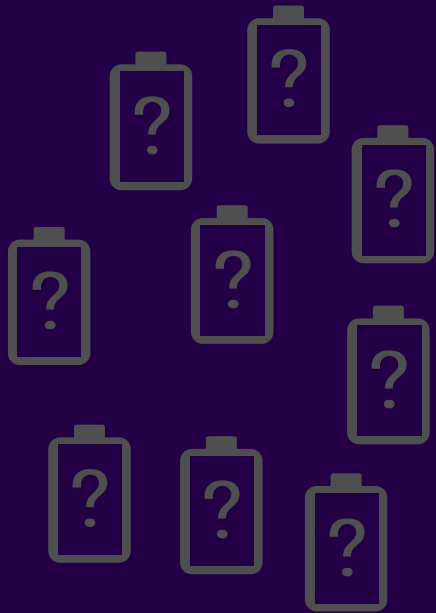
Module level



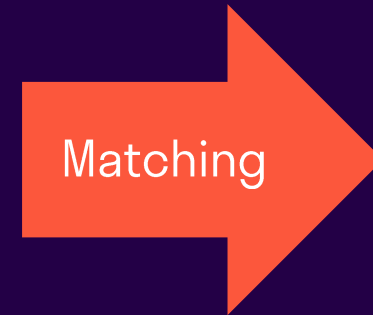
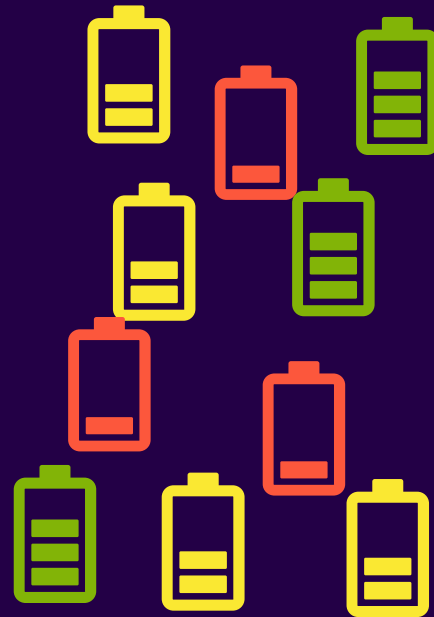
Cell Level

Refurbishment-process

Unknown batteries.



Known batteries.



Clustered batteries.



Matching may be short-lived



Initial state.



Diverged batteries.

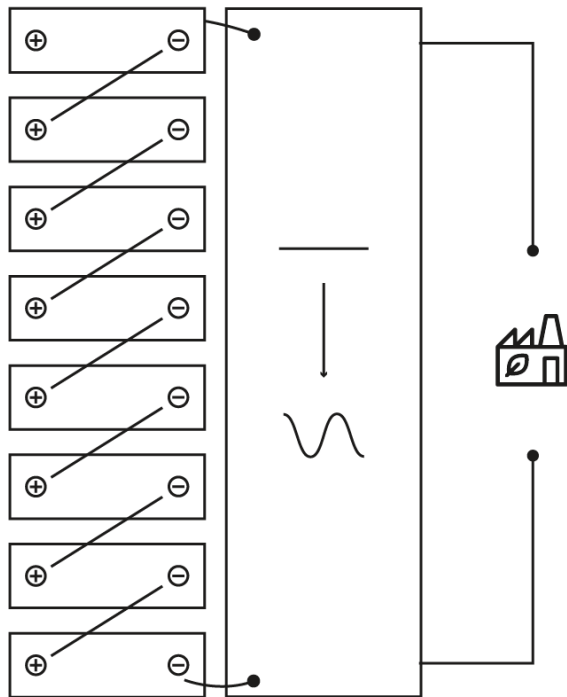


Battery breakdown =
System breakdown

**High-voltage batteries are used
for high efficiency**

Classical approach

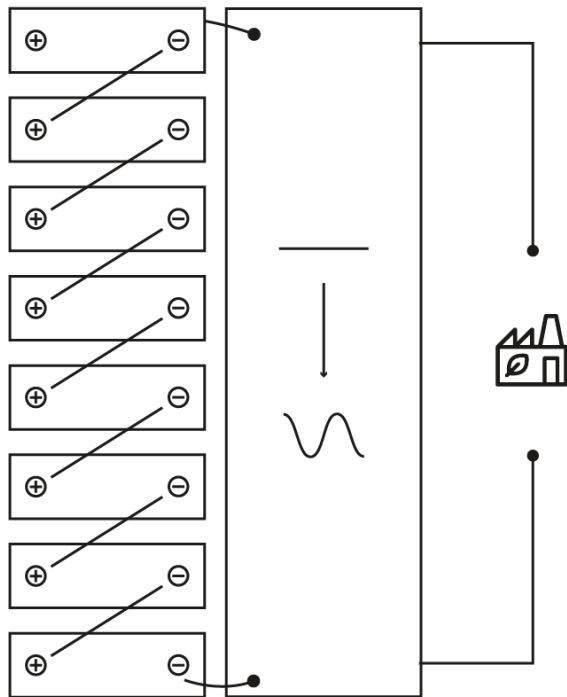
Common battery storage



Vulnerable chain. Battery aging is a problem and replacement is costly.

Classical approach

Common battery storage

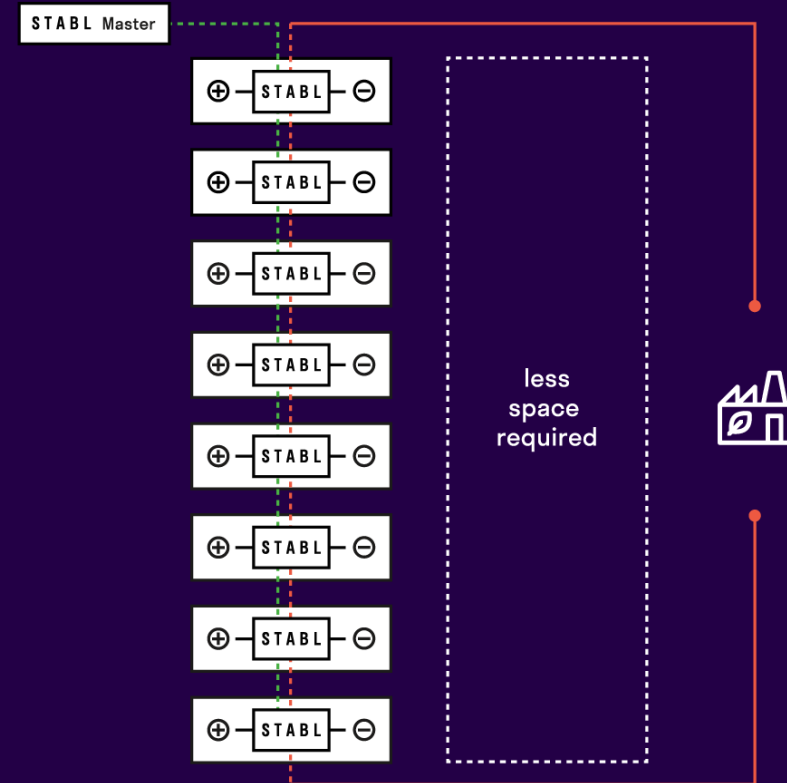


Vulnerable chain. Battery aging is a problem and replacement is costly.

The magic key

Our IP protected battery control system

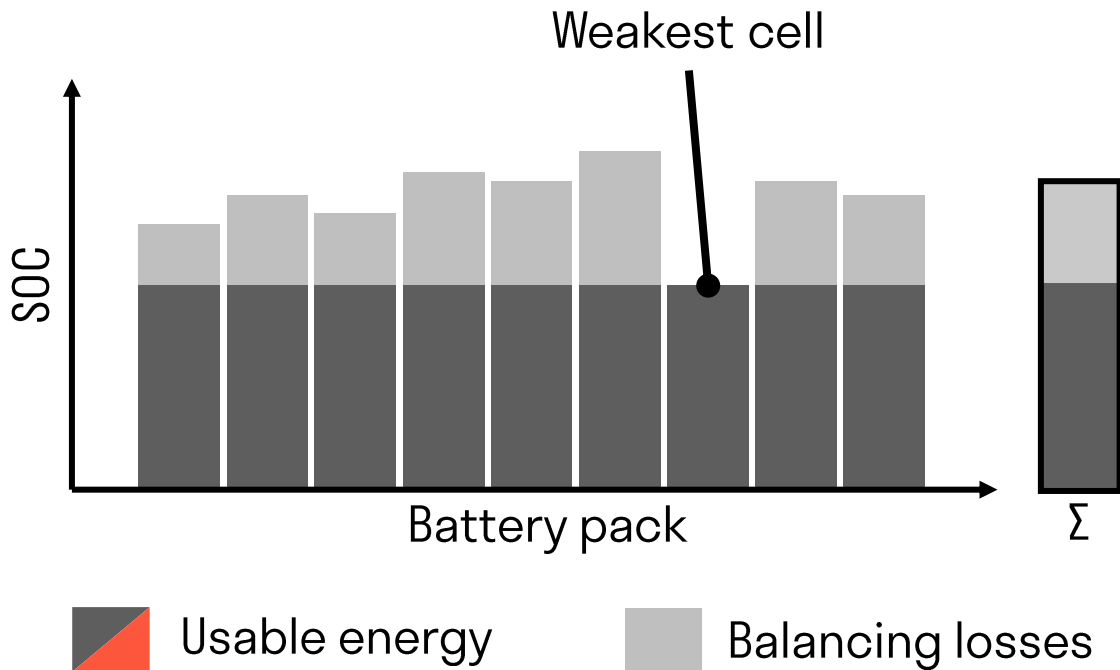
STABL controlled battery storage



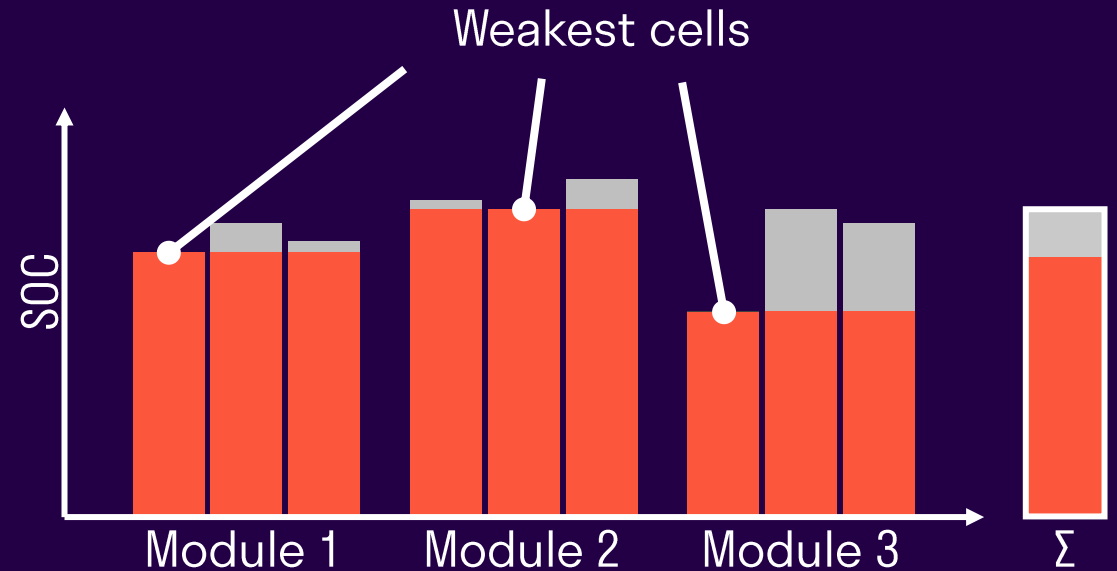
Independent module control. Aging is limited to one instance and replacement is easy.

Precise battery control

Weak battery cell affects whole pack



Weak battery cells only affect module



Broken module does not prevent system operation.

**We give electric vehicle
batteries a second life.**



Pilot system in Berlin electrified by STABL Energy with our partners
encore | DB and KIA and others.

Our Offering: Energy Storage as a Service

A subscription service for battery storage systems made of repurposed vehicle batteries



Lower Capex

Smaller financial barrier to become a sustainable business



No Own Risk

Battery storage with peace-of-mind guarantee



Sustainable

Re-Use of 2nd-life car batteries offsets the carbon footprint

STABL

Raising Series A



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STABL Energy is the breakthrough for 2nd life systems



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