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# 2ND-LIFE BATTERY STORAGE SYSTEMS

Making battery storage accessible  
for every company

Dr.-Ing. Arthur Singer

as@stabl.com

A decorative graphic in the bottom right corner consisting of numerous vertical bars of varying heights and colors (shades of blue and purple) arranged in a wavy, rhythmic pattern.

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A landscape photograph showing five wind turbines on a rolling green hill under a cloudy sky. The turbines are white with three blades each, spaced out across the horizon. The foreground shows the texture of the grassy hills.

The clean energy age  
**NEEDS BATTERY STORAGE**

# Businesses need batteries

STABLE  
STABLE

## Energy supply has become unreliable



Soaring electricity prices



Volatile electricity prices



Risk of power outages

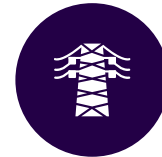
## Things will get more volatile



Increasing renewables



More EVs



Slow grid-reinforcement

## Batteries bring stability



Energy independence



Lower energy costs



Blackout protection



# Our vision

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**Paving the way to a sustainable energy world.**



# Problem: Purchasing battery storage is risky

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STABLE

Battery storage requires a  
large upfront investment

## COSTS



&



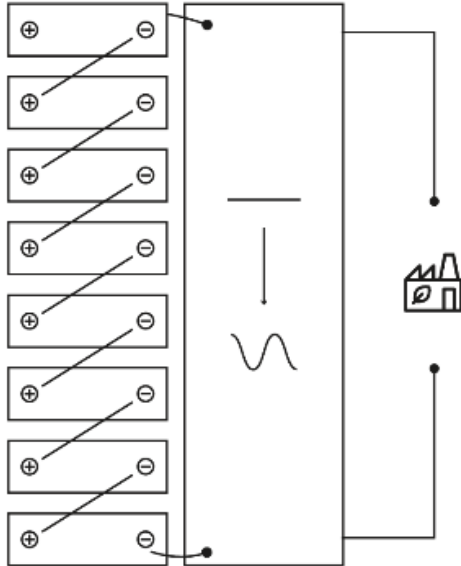
## RISK

Limited lifespan and complex  
warranties make batteries  
an **unsafe investment**

# Classical vs. STABL approach

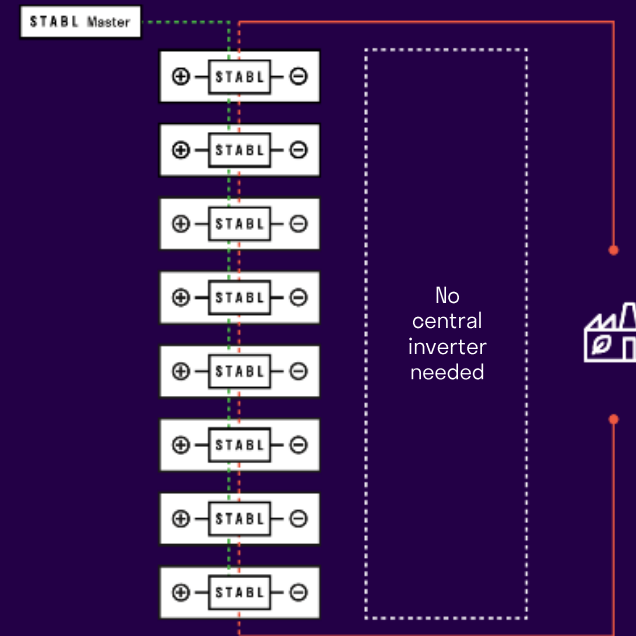
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## Conventional battery storage system



Vulnerable chain. Battery aging **affects the whole system** and replacement is expensive.

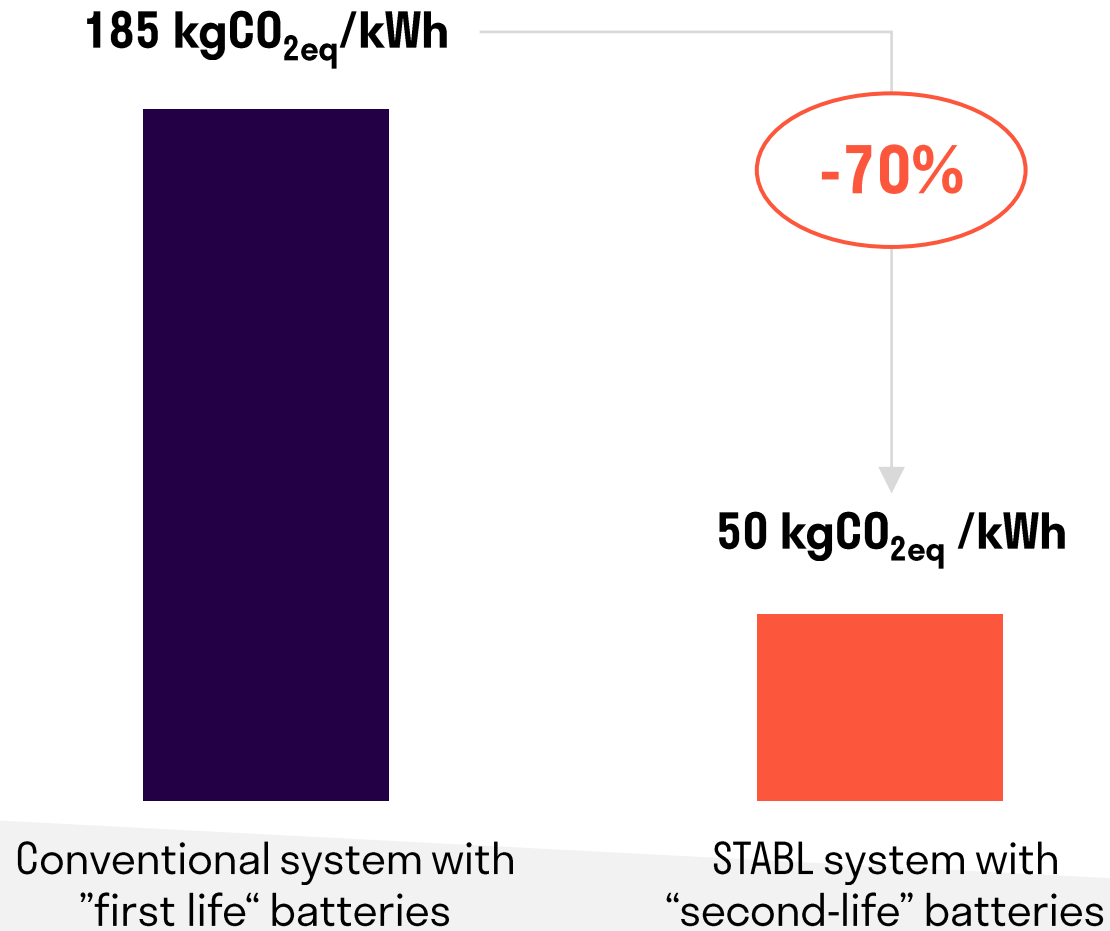
## STABL controlled battery storage



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

# 2nd life reduces CO<sub>2</sub> footprint

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Source: Mayordomo, C Pueyo, L. Canals Casals, "Greenhouse gas emissions comparison between new versus second life batteries", Digital Proceedings of the 15th Conference on Sustainable Development of Energy, Water and Environment Systems, SDEWES2020.0644, 1-9 (2020)

# Third party validation: Unparalleled efficiency

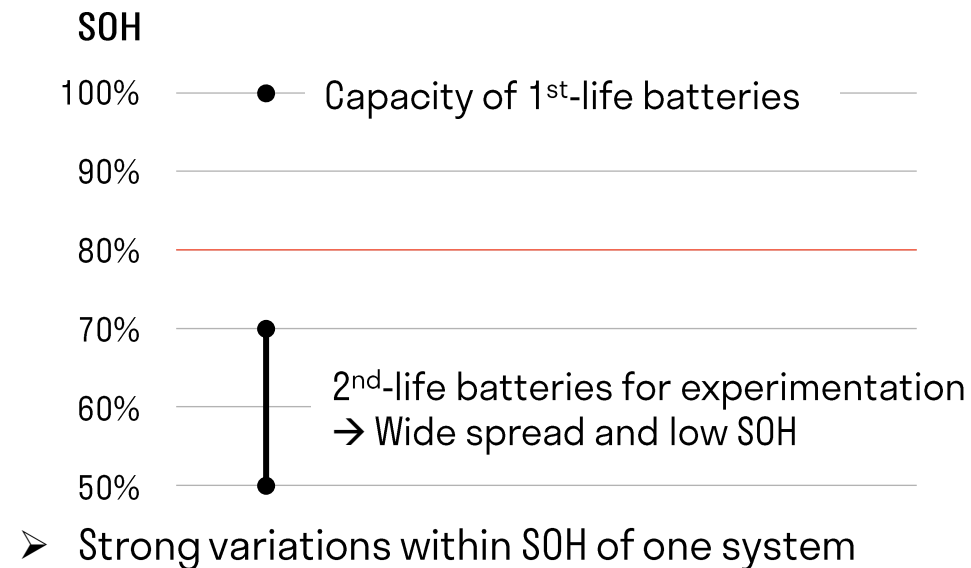
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Technical validation and commercial integration project

## Goal: Validation of claims

**Objective:** Validation of technical claims of STABL technology - Operation with high SOH (state of Health) spread, efficiency & performance

**Focus Area:** STABL balancing of unequal SOH battery modules



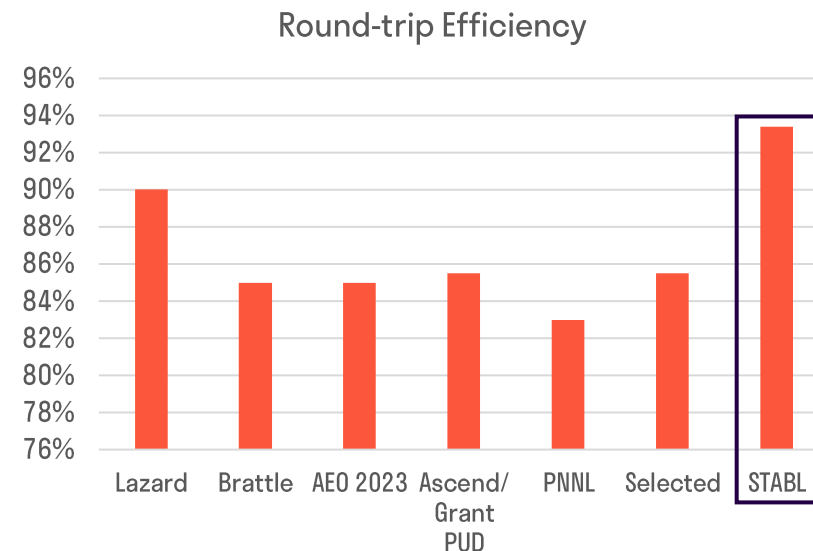
## Results: Best Efficiency in market

STABL system working as intended with

**93,4% Round Trip Efficiency**

➤ ~5% higher than competitors

Usable capacity vs. claimed (20% SOH range fully used)



Source: NREL/TP-6A40-85332 June 2023



# Massive feedstock available for STABL

European battery scrap availability forecast to reach 176GWh by 2030, led by End-of-Life EVs rho motion

EU & EFTA & UK battery scrap market, 2030



\*Excludes ESS which we forecast 9GWh of scrap material in EU & EFTA & UK in 2030

[www.RhoMotion.com](http://www.RhoMotion.com)

Battery Recycling Quarterly Outlook

Page 1

- Competitors can use only „virgin“ batteries
  - STABL tech lowers battery quality requirements
- more batteries available for use & less competition for those batteries

# Enough battery supply for the energy transition?

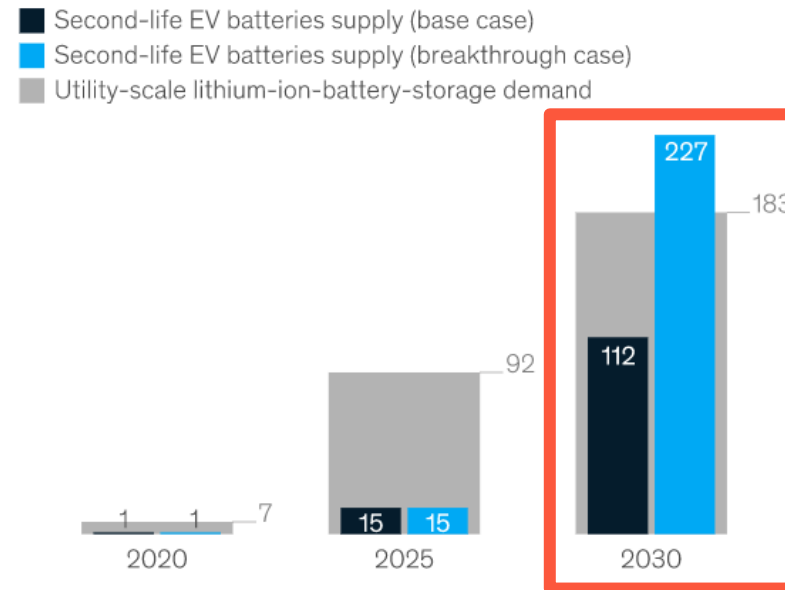
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STABL does not have to fear any supply bottlenecks for batteries.

- Dependency on Asian manufacturers high for new batteries
  - Rising number of EVs in EU
  - 112-226 GWh/y on 2nd life batteries available by 2030
- Lower dependency of battery supply by re-using EV batteries

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

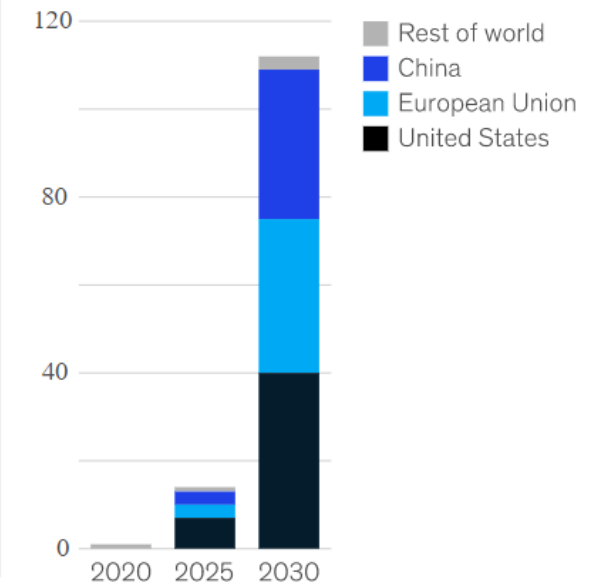
Utility-scale lithium-ion battery demand and second-life EV<sup>1</sup> battery supply,<sup>2</sup> gigawatt-hours/year (GWh/y)



<sup>1</sup>Electric vehicle.

<sup>2</sup>Only for batteries from passenger cars.

Second-life EV battery supply by geography (base case<sup>2</sup>), GWh/y



# Commercial storage installations

Currently active in the DACH region with focus on SME



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energie360°



**Bischof**  
LEBENSMITTELLOGISTIK





# Why businesses go for a **STABL BESS**

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Electricity bill is too high



Only 30 % of self-generated electricity is used



EV-charging and heat pumps are prohibited by the grid connection



CO<sub>2</sub> footprint is damaging the business



# Want to cut your energy bill?

STABL Energy storage systems could be the answer!

You could benefit from:

- ✓ Autarky rate up to 85%
- ✓ Break-Even Customer Investment: 5-7 years
- ✓ Increased PV self-consumption

Family-owned smart meter **manufacturer**:

- **peak shave** their load
- increase **self-consumption** rate
- **Second-life** suits customer's values

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BESS: 337,5kW & 490kWh

Self-consumption increase: 50.000 kWh

Autarky rate: 67%

Break-Even Customer Investment: 6 years

Sonderaktion bis  
zum 31.5.2024

Want to  
cut your  
electricity  
bill?



Dr. Arthur Singer



arthur.singer@stabl.com



+49 89 2153 6316



www.stabl.com

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