

Long Lasting BAtteries

H2020 GA n° 963576 LOLABAT project



17 Partners
7 European countries

5 Advisory board
member companies
3 countries

Strengthening of a competitive European supply chain for RNZB production



A new promising battery chemistry stands out: RNZB (Rechargeable NiZn Battery) has been developed, addressing properly the requirements of stationary energy storage. Developing RNZB for grid applications and preparing it for a production in Europe, the demonstration will be made with upscaling 100Ah capacity cells, integrating BMS and sensors in battery packs of 2.5, 5, 10 and 10kWh via 6 use cases in utility grids and industrial sites. LCA, LCCA, recycling studies, assessment of norms, standards and grid compliancy, realisation of business model and market studies will extend the demonstration of the LOLABAT project.

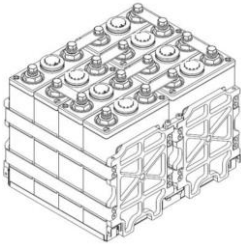
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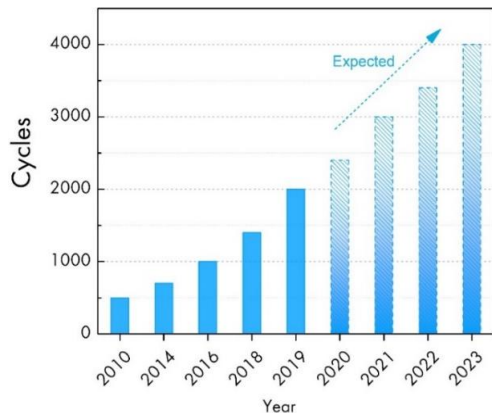
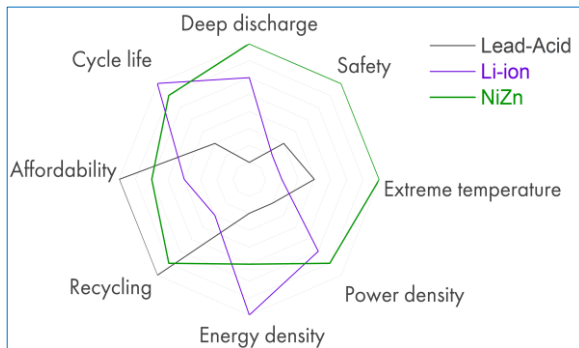
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New NiZn Technology Breakthrough

Upscaling 100Ah cells in Battery Pack 1.25kWh



Month	M0	M39
KPI – cost reduction	0%	30%
cell cost (€/kWh)	200-260	140-180
KPI – increase in N° of cycles	0%	100%
Number of cycles – 100% DoD	2000	4000
cell cost-cycled (€/kWh/cycle)	0.12-0.15	0.04 - 0.05



Comparative objectives

	Li-ion (High energy)	Lead acid	NiZn (Prismatic)
Nominal voltage	3.0V - 3.7V	2.0V	1.6V
Volumetric energy density	350-550Wh/L	65-120Wh/L	100-200Wh/L
Gravimetric energy density	150-250Wh/kg	40-60Wh/kg	50-90Wh/kg
Safety	Poor	Medium	Excellent
Recycling	Only high-value elements	95% recycled	90% recycled
Operating temperature	0°C - +45°C	-40°C - +60°C	-40°C - +75°C

NiZn batteries advantages :

- ◆ Low Cost
- ◆ Reliable and robust
- ◆ Safe
- ◆ Abundant raw materials
- ◆ Recyclable
- ◆ Temperature Resistant
- ◆ Low environmental impact
- ◆ High cycle Life

