

Efficiency	97.5%	90%	92%	94%	75%	80%	87%	95%
Depth of Discharge (DOD)	100%	70%	70%	90%	N/A	N/A	90%	90%
Loss in Capacity (1 cycle/day) 15 years	Negligible	60%	70%	10%	None	50%	20%	10%
Loss in Capacity (2 cycles/day)	Negligible	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Air Conditioning % Energy Capacity Loss	1%	5%	3%	2%	10%	N/A	4%	3%
Air conditioning energy capacity loss	Nil	High	High	Low	High	Low	Low	Low

Zenaji LTO batteries excel in cycle life, charging speed, and safety, but their energy density is lower compared to Solid-State or Li-ion technologies. The cost-effectiveness must be evaluated over a long-term operational period.

2. Energy Storage and Warranty Comparison

This section highlights the performance and longevity differences across various battery Chemistry, emphasising long-term reliability and total cost of ownership (TCO) as key factors.

Metric	Zenaji LTO	Lithium-Ion (NiMh)	Lithium Iron Phosphate (LFP)	Solid-State	Vanadium Flow	Aluminium-Air	Sodium-Ion	Graphene
Actual Warranty Period	20 years or 22,000 cycles	10 years	15 years	10-15 years	3 years	Single-Use	10 years	15 years
Actual Energy GWh per MWh Stored Capacity (1 cycle/day)	5.10 GWh	8 GWh	6.24 GWh	15 GWh	0.25 GWh	1 GWh	4.5 GWh	15 GWh
Actual Energy GWh per MWh Stored Capacity (2 cycles/day)	10.3 GWh	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Actual Energy GWh per MWh Stored Capacity (Warrantied Period)	22 GWh	8 GWh	11.2 GWh	15 GWh	0.25 GWh	1 GWh	4.5 GWh	15 GWh
Actual Energy GWh per MWh Stored Capacity (Battery Cell Cycle Life)	60 GWh	8 GWh	11.2 GWh	15 GWh	0.25 GWh	1 GWh	4.5 GWh	15 GWh

Zenaji LTO batteries lead in longevity, reliability, and total energy output, making them an optimal choice for high-cycle and long-duration applications.