

APPENDIX A - USABC Goals for Advanced Batteries

USABC Goals for Low-Cost / Fast-Charge Advanced Batteries for EVs - CY 2023

End of Life Characteristics at 30°C	Units	Cell Level
Peak Discharge Power Density, 30 s Pulse	W/L	1400
Peak Specific Discharge Power, 30 s Pulse	W/kg	700
Peak Specific Regen Power, 10 s Pulse	W/kg	300
Usable Energy Density	Wh/L	550
Specific Usable Energy (defined at power target)	Wh/kg	275
Calendar Life	Years	10
Cycle Life (25% FC)	Cycles	1000
Cost (@ 250k annual volume)	\$/kWh	75
Normal Recharge Time	Hours	< 7 Hours, J1772
Fast Rate Charge	Minutes	80% U.E. Target in 15mins
Minimum Operating Voltage	V	>0.55 Vmax
Unassisted Operating Temperature Range	Wh/kg	70% Specific Useable Energy at -20°C
Survival Temperature Range, 24 Hr	°C	-40 to +66
Maximum Self-discharge	%/month	<1

NOTES

- i. Values correspond to End-of-Life (EOL) at 30°C.
- ii. Refer to USABC EV testing manual for the definitions and testing procedur