

Positive Energy's Lithium vs. Lead Acid EV Battery Quick Guide

Factor	Lithium (LI)	Lead Acid (PB)	Meaning	Benefit from Lithium
Recharge Time	2 - 3 Hours	8 - 10 Hours	75% Less AC energy consumed each day	Lower Electrical Bill
Energy Efficiency	100%	55%	PB loses energy from sulfation, charging, external heat, which compounds sulfation and energy loss	LI @ 100AH = 100AH vs. PB @ 100AH = 55AH
Weight	30 Lbs/each	60 Lbs/each	EV motor must work 2x as hard with PB	Less stress on motor, reducing maintenance costs, increasing output
Maintenance	NONE	Monthly watering; corrosion removal	Overwatering and corrosion lower PB efficiency even more; adds cost of labor	No watering or corrosion. Employee labor costs go to 0%
Deep Cycles (80% DOD)	7,000	450	LI has up to 15x longer life expectancy	Up to 20 years w/ LI vs. 2.5 years w/ PB
Regular Cycles (50% DOD)	13,000	900	LI has up to 15x longer life expectancy	Up to 30 years w/ LI vs. 3.5 years w/ PB
Warranty	7 Years	1 Year	---	---
Portability	May outlast EV. Easy to reinstall in new EV	NA	---	Lower new EV price with no batteries
Cost (36V) @ Retail	\$2,800	\$960	PB costs the same after 6 years*. LI still will have over 14 years left!	LI = \$140/year @ 20 years vs. PB = \$480/year
Cost (48V) @ Retail	\$4,000	\$1,080	PB costs the same after 8 years*. LI still will have over 12 years left!	LI = \$200/year vs. PB = 540/year

* Does NOT take into consideration employee costs of replacing PB batteries and cables or maintaining PB batteries!