	Cal	<b>Poly Electric V</b>	ehicle and Cart Tes	ting Matrix	
Efficiency Comparison		Conventional			Lithium
	GEM el xd	Miles ZX40ST	Tropos Able Trade		Eride EXV2 Maint.
Battery Type	AGM	AGM	AGM		Li
Battery Quantity	8	6	6		24
Voltage (VDC)	6	12	12		3.2
Pack Voltage (VDC)	48	72	72		76
Battery Capacity (ah)	224	150	120		100
Curb Weight lb.	1600	2200	1900		1675
GVRW lb.	3000	3000	3000		3000
Total Energy (Watt/Hour)	10752	10800	8640		7600
Range (mi)	22	18	23	1	25.6
Efficiency (W/mi)	489	600	376		297
	2016 base model el xd - 2 seat utility truck with flatbed - no toolboxes or ladder rack.	2009 2 seat pickup - no toolboxes or ladder rack. Out of business.	2018 2 seat pickup "trade body" with stakeside flatbed - no toolboxes, yes ladder rack.	_	2018 2 seat pickup with "maintenance body" with toolboxes and a ladder rack.

With 600lb ballast	х		Х		Х
Street legal?	yes NEV	yes NEV	yes NEV	1	yes NEV

## **Battery Technology**

Conventional Batteries = Flooded Lead Acid, Absorbed Glass Mat Lithium Iron Phosphate are newer, lighter, and more efficient.

Testing was done with 600 pounds of ballast on a pallet over the rear axle. Driver was 150-200lb. Route started on Truckee towards PCV and out to ranches then back to University and up and around Cerro Vista and back to Fleet Services 071 for 1 loop. This was continued until the battery reached dimished usefulness, or in essence could not climb campus grades at speed successfully or safely with knowledge of return. The Lithium powered vehicle maintained its full torque output down to 6% battery, while the conventional battery loses its torque as the battery drains quite rapidly, affecting performance even at 75% charge.

SEE MAP ON PAGE 2

