



End of Life Characteristics at 30°C	Units	System Level	Cell Level
Peak Discharge Power Density 30 s Pulse	W/L	1000	1500
Peak Specific Discharge Power, 30 s Pulse	W/kg	470	700
Peak Specific Regen Power, 10 s Pulse	W/kg	200	300
Useable Energy Density @ C/3 Discharge Rate	Wh/L	500	750
Useable Specific Energy @ C/3 Discharge Rate	Wh/kg	235	350
Useable Energy @ C/3 Discharge Rate	kWh	45	N/A
Calendar Life	Years	15	15
DST Cycle Life	Cycles	1000	1000
Cost @ 250k Units	\$/kWh	125	100
Operating Environment	°C	-30° to +52°	-30° to +52°
Normal Recharge Time	Hours	< 7 Hours, J1772	< 7 Hours, J1772
High Rate Charge	Minutes	80%ΔSOC in 15 min	80%ΔSOC in 15 min
Maximum Operating Voltage	V	420	N/A
Minimum operating Voltage	V	220	N/A
Peak Current, 30 s	A	400	400
Unassisted Operating at Low Temperature	%	>70% Useable Energy @ C/3 Discharge Rate at -20°C	>70% Useable Energy @ C/3 Discharge Rate at -20°C
Survival Temperature Range, 24 Hr.	°C	-40° to +66°	-40° to +66°
Maximum Self-discharge	%/month	<1	<1

**APPENDIX B –Attributes of Cell Technology
Proposed for EVs for FY 2020 Commercialization**

Cell Level Attributes (supplied by developer)	Units	Current State (baseline) (BOL)	End of Program Target (BOL)
Cell Capacity (C/3 Rate discharge)	Ah		
Cell Volume (without terminals/tabs)	Liter		
Cell Mass	kg		
Vmin continuous, Vmax continuous (0 and 100% SOC)	V, V		
Vmin pulse, Vmax pulse (10 sec pulses)	V, V		
Vnominal (Wh/Ah)	V		
Energy Density (volumetric)	Wh/l		
Specific Energy	Wh/kg		
Power Density (10 sec. HPPC power), 50% SOC	W/l		
Specific Power (10 sec. HPPC power), 50% SOC	W/g		
Target Cost / unit (>10 million cells/annum rate)	\$		
Cell format (cylindrical/prismatic)	can/pouch/etc		
Cell dimensions: (height x width x thickness)	mmxmmxmm		
Proposed Architecture to Achieve System Targets			
Battery Size Factor (BSF) – No. of Cells	#		
Parallel-Series Configuration	__p__s		

