

Calculated Cost Breakdown \$ per kWh Parameters for a U.S. Li-ion Standalone Storage System

Model Component	\$/kWh Parameters			Solar Installation Only				Solar & Wind		
				MWhr	8	16	18	3	8	15
				Duration	2	4	6	3	3	3
Capacity	4	4	3	1	2.7	5				
Intercept	Slope	R squared	\$/kWh	\$/kWh	\$/kWh	\$/kWh	\$/kWh	\$/kWh		
Li-ion battery	Fixed \$/kWh			209	209	209	209	209	209	
Battery central inverter	0.30348	69.8087	100%	35.2	17.8	11.9	23.6	23.6	23.6	
Structural BOS	10.6957	8.5913	99.95%	15.0	12.8	12.1	13.6	13.6	13.6	
Electrical BOS	20.6957	60.5913	100%	51.0	35.8	30.8	40.9	40.9	40.9	
Installation labor & equipment	9.69565	52.5913	100%	36.0	22.8	18.5	27.2	27.2	27.2	
EPC overhead	7.21739	18.4348	99.94%	16.4	11.8	10.3	13.4	13.4	13.4	
Sales tax	18.3913	14.7826	99.80%	25.8	22.1	20.9	23.3	23.3	23.3	
Σ EPC cost				388	332	313	351	351	351	
Land acquisition	Fixed total cost			0.00	0.00	0.00	0.00	0.00	0.00	
Permitting fee	Fixed total cost			0.00	0.00	0.00	0.00	0.00	0.00	
Interconnection fee	Fixed total cost			0	0	0	0	0	0	
Contingency	8	8	100.00%	12.0	10.0	9.3	10.7	10.7	10.7	
Developer overhead	8	8	100.00%	12.0	10.0	9.3	10.7	10.7	10.7	
EPC/developer net profit	14.6957	14.1913	99.97%	21.8	18.2	17.1	19.4	19.4	19.4	
Σ Developer cost				46	38	36	41	41	41	
Σ Total energy storage system cost				434	370	349	392	392	392	

NREL Energy Storage Benchmark Prices (\$millions)

	\$ 3.5	\$ 5.9	\$ 6.3	\$ 1.2	\$ 3.2	\$ 5.9
Number of battery storage systems needed	3	1	2	1	1	1
	\$ 10.4	\$ 5.9	\$ 12.6	\$ 1.2	\$ 3.2	\$ 5.9
Total cost \$	30.1				9.05	