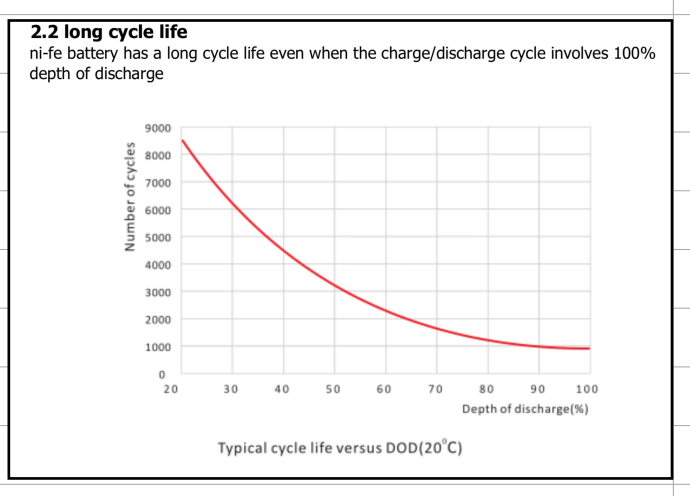
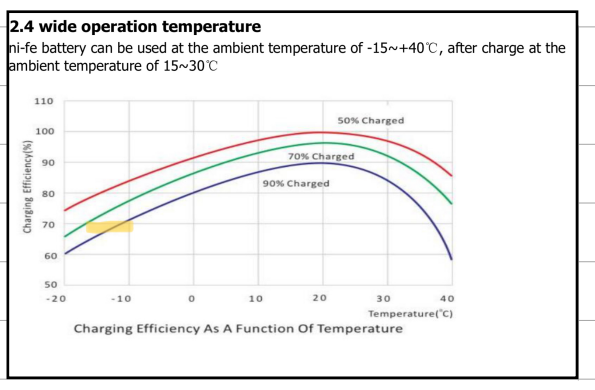
Comparison of Lithium battery vs Edison's battery

	Powerwall 2	NiFe 150	NiFe 200	NiFe 250	NiFe 400	NiFe 500	NiFe 1,200
Volts per battery	?	1.2	1.2	1.2	1.2	1.2	1.2
Number of batteries	1	40	40	40	40	40	40
Voltage of bank	?	48	48	48	48	48	48
Ah of battery	?	150	200	250	400	500	1,200
Watts of battery bank	14,000	7,200	9,600	12,000	19,200	24,000	57,600
Watts available	13,500	7,200	9,600	12,000	19,200	24,000	57,600
Required capacity in watts	7,000	7,000	7,000	7,000	7,000	7,000	7,000
Depth of discharge	52%	97%	73%	58%	36%	29%	12%
Bank sizing based on depth of discharge	13,500	7,200	9,600	12,000	19,200	24,000	57,600
Unused capacity in watts	6,500	200	2,600	5,000	12,200	17,000	50,600
Efficiency in storing energy	95%	85%	85%	85%	80%	80%	70%
Additional energy required due to poor efficiency in watts	675	1,080	1,440	1,800	3,840	4,800	17,280
Repeat purchases	2	0	0	0	0	0	0
Total number of purchase cycles	3	1	1	1	1	1	1
Cost per battery	$8,510	$120	$110	$113	$160	$200	$400
Initial cost	$8,510	$4,800	$4,400	$4,520	$6,400	$8,000	$16,000
Expected cycles per purchase	3,200	1,095	1,278	2,555	5,475	6,023	9,855
Expected cycles for all purchases	9,600	1,095	1,278	2,555	5,475	6,023	9,855
Cost per kWh of solar energy	$0.03	$0.03	$0.03	$0.03	$0.03	$0.03	$0.03
Assumes 4.5-peak sun hours, 25-years of operation, 10-kW size, 25% losses, total cost $1 / watt							
Unused capacity per cycle kWh	6.5	0.2	2.6	5	12.2	17	50.6
Expected cycles for all purchases	9,600	1,095	1,277.5	2,555	5,475	6,022.5	9,855
Cost per kWh of solar energy	$0.03	$0.03	$0.03	$0.03	$0.03	$0.03	$0.03
Cost of unused energy for all cycles	$2,026	$7	$108	$415	$2,169	$3,324	$16,192
Assumes batteries are topped to 100% using only solar energy							
Additional energy required due to battery inefficiencies per cycle kWh	0.675	1.08	1.44	1.8	3.84	4.8	17.28
Expected cycles for all purchases	9,600	1,095	1,277.5	2,555	5,475	6,022.5	9,855
Cost per kWh of solar energy	$0.03	$0.03	$0.03	$0.03	$0.03	$0.03	$0.03
Cost of additional energy due to battery inefficiencies for all cycles	$210	$38	$60	$149	$683	$939	$5,530
Assumes batteries are topped to 100% using only solar energy							
kWh purchased with battery bank	14	7.2	9.6	12	19.2	24	57.6
Cost of unused energy for all cycles	$2,026	$7	$108	$415	$2,169	$3,324	$16,192
Cost of additional energy due to battery inefficiencies for all cycles	$210	$38	$60	$149	$683	$939	$5,530
Cost due to unused energy and inefficiencies per kWh purchased	$160	$6	$17	$47	$149	$178	$377
kWh purchased	14	7.2	9.6	12	19.2	24	57.6
Cost of all purchases	$25,530	$4,800	$4,400	$4,520	$6,400	$8,000	$16,000
Cost per kWh purchased	$1,824	$667	$458	$377	$333	$333	$278
kWh purchased	14	7.2	9.6	12	19.2	24	57.6
Cost of all purchases + unused energy + inefficiencies	$27,767	$4,846	$4,568	$5,084	$9,252	$12,263	$37,722
Cost per kWh purchased including unused energy & inefficiencies	$1,983	$673	$476	$424	$482	$511	$655
Cost of all purchases + unused energy + inefficiencies	$27,767	$4,846	$4,568	$5,084	$9,252	$12,263	$37,722
Expected cycles for all purchases	9,600	1,095	1,277.5	2,555	5,475	6,022.5	9,855
Cost per cycle including purchase, unused energy, & inefficiencies	$2.89	$4.43	$3.58	$1.99	$1.69	$2.04	$3.83
Cost of all purchases + unused energy + inefficiencies	$27,767	$4,846	$4,568	$5,084	$9,252	$12,263	$37,722
Available kWh for storage	13.5	7.2	9.6	12	19.2	24	57.6
Expected cycles for all purchases	9,600	1,095	1,277.5	2,555	5,475	6,022.5	9,855
Cost per kWh stored including unused energy & inefficiencies	$0.214	$0.615	$0.372	$0.166	$0.088	$0.085	$0.066





Prices for NiFe battery cells were obtained here:

hengmingbattery.en.made-in-china.com

Please notice that some prices make no sense per NiFe battery; however, I do not doubt that some of them are approximately correct.

Furthermore, these prices are still missing shipping costs, shipping insurance costs, import taxes, sales taxes, and installation costs.

Battery with retail shops that will import NiFe batteries will be higher.

I have tried to adjust the table based on the NiFe charts for cycles and efficiency.

Tesla Powerwall 2 prices were obtained from Tesla's US website. This includes a Federal tax credit of almost $3,000, and it includes installation expenses of the Powerwall 2 and a Gateway. Without the tax credit the total cost would be $11,500. In reality, I doubt a buyer of the Powerwall would buy it without a Gateway or the installation for both devices.