

End User: Savings and Cogen Analysis for Salgenx Salt Water Battery

18,000 kW (18 MW) Battery System - Salgenx Salt Battery Technology

12/31/2022



S18MW: This system uses multiple tanks for electrolytes. Two dry containers for electrodes, command, and control.

Battery Efficiency	.91					
Energy Efficiency	10	mA/cm2	100	A/m2	9.29	A/ft2



Power Density (Wh/L)	125.7	x	150000	=	18,855	kW
kW loss per round trip	.91	x	18,855	=	1,697	kW

End User Grid Utility Power Mining and Savings: System Sale Price \$2,250,000 \$119/kW

Kilowatt Price Difference \$(kW)	Revenue or Savings				Payback (year)	Cogen Battery Thermal Savings (year)	Payback (year)
	Cycle	Day	Month	Year			
\$0.01	1	\$172	\$5,147	\$62,627	35.93	\$125,254	17.96
\$0.02	1	\$343	\$10,295	\$125,254	17.96	\$250,508	8.98
\$0.03	1	\$515	\$15,442	\$187,881	11.98	\$375,761	5.99
\$0.04	1	\$686	\$20,590	\$250,508	8.98	\$501,015	4.49
\$0.05	1	\$858	\$25,737	\$313,134	7.19	\$626,269	3.59
\$0.06	1	\$1,029	\$30,884	\$375,761	5.99	\$751,523	2.99
\$0.07	1	\$1,201	\$36,032	\$438,388	5.13	\$876,776	2.57
\$0.08	1	\$1,373	\$41,179	\$501,015	4.49	\$1,002,030	2.25
\$0.09	1	\$1,544	\$46,327	\$563,642	3.99	\$1,127,284	2.00
\$0.10	1	\$1,716	\$51,474	\$626,269	3.59	\$1,252,538	1.80
\$0.15	1	\$2,574	\$77,211	\$939,403	2.40	\$1,878,806	1.20
\$0.20	1	\$3,432	\$102,948	\$1,252,538	1.80	\$2,505,075	0.90
\$0.30	1	\$5,147	\$154,422	\$1,878,806	1.20	\$3,757,613	0.60
\$0.40	1	\$6,863	\$205,897	\$2,505,075	0.90	\$5,010,151	0.45
\$0.50	1	\$8,579	\$257,371	\$3,131,344	0.72	\$6,262,688	0.36

Thermal Savings: If a optional heat pump input with a COP 3 is used during the evening, the heated water (salt water) can be used during the day, without effecting charge. This can result in large savings since a heat pump can produce significant savings while used off-peak, and storing heated liquid for later use.

For illustration purposes only. Your tax situation or project costs may vary.