

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

3,000 kW (3 MW) Battery System - Salgenx Salt Battery Technology

11/6/2023



S3000: This system uses multiple tanks for electrolytes. One dry container 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 24000

=

3,017

kW

kW loss per round trip

.91

x 3,017

=

272

kW

Electrolyzer Stack Capacity

600 kW



End User Grid Utility Power Mining and Savings: System Sale Price \$1,000,000 \$331/kW

Kilowatt Price Difference \$(kW)	Revenue or Savings				Payback (year)	Cogen Battery Thermal Savings (year)	Payback (year)
	Cycle	Day	Month	Year			
\$0.01	1	\$27	\$824	\$10,020	99.80	\$20,041	49.90
\$0.02	1	\$55	\$1,647	\$20,041	49.90	\$40,081	24.95
\$0.03	1	\$82	\$2,471	\$30,061	33.27	\$60,122	16.63
\$0.04	1	\$110	\$3,294	\$40,081	24.95	\$80,162	12.47
\$0.05	1	\$137	\$4,118	\$50,102	19.96	\$100,203	9.98
\$0.06	1	\$165	\$4,942	\$60,122	16.63	\$120,244	8.32
\$0.07	1	\$192	\$5,765	\$70,142	14.26	\$140,284	7.13
\$0.08	1	\$220	\$6,589	\$80,162	12.47	\$160,325	6.24
\$0.09	1	\$247	\$7,412	\$90,183	11.09	\$180,365	5.54
\$0.10	1	\$275	\$8,236	\$100,203	9.98	\$200,406	4.99
\$0.15	1	\$412	\$12,354	\$150,305	6.65	\$300,609	3.33
\$0.20	1	\$549	\$16,472	\$200,406	4.99	\$400,812	2.49
\$0.30	1	\$824	\$24,708	\$300,609	3.33	\$601,218	1.66
\$0.40	1	\$1,098	\$32,943	\$400,812	2.49	\$801,624	1.25
\$0.50	1	\$1,373	\$41,179	\$501,015	2.00	\$1,002,030	1.00

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.

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