

About Us

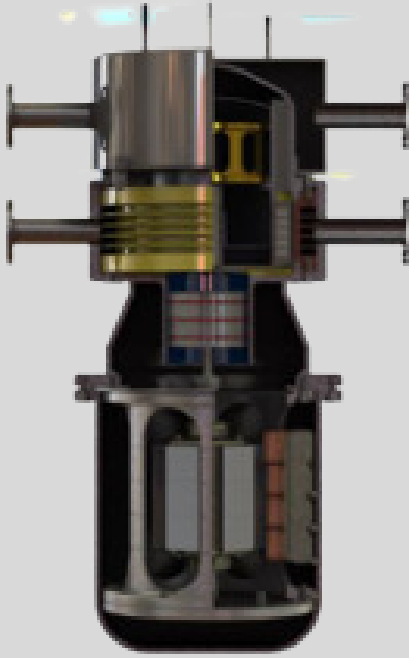
Mint Energy develops energy generation and energy storage solutions to meet the ever-changing needs of modern-day consumers and businesses. Mint Energy strives to provide safe, environmentally-friendly, cost-effective, and reliable solutions.



Stirling Generator

Current PV solutions are limited to capturing only the visible spectrum of light, neglecting the valuable UV and infrared spectra. The Stirling Generator goes beyond these constraints. The solar collectors excel by capturing an impressive 92% of the sun's energy as it reaches the Earth's surface. In comparison, Concentrated Solar Power (CSP) systems capture up to 60%, while traditional PV Solar farms lag behind, capturing only 16-22% of this abundant energy resource.

The Stirling Generator converts a wide range of heat sources including solar, biomass, or waste heat. This versatility makes it suitable for both distributed and centralized energy systems of various scales and applications. The Stirling Generator operates silently, emits low levels of pollution, and requires minimal maintenance, making it an environmentally friendly and cost-effective choice. The Stirling Generator's unique ability to provide constant power output, even with fluctuating heat inputs, enhances grid stability and reliability.



- **High efficiency**
- **Produces 4.5 MWh per day in 1/3 of the space required by solar**
- **Low environmental impact**
- **Constant power output - Produces 24/7/365**
- **Long operational lifespan**
- **Low maintenance requirements**
- **Can be used off-grid**
- **Costs approximately \$450,000 USD per MWh**
- **Low entry cost and low operational cost**

Description	Mint Stirling Generator (This Solution)	Solar PV	Diesel or HFO Generator Set
Cap Ex Cost Per MW	\$450,000 MWh	\$800,000 MWp	\$1,000,000 MWh
Sample Project Size - MW Per Day	50 MWh	50 MWh	50 MWh
Hours of Generation Per Day	24 Hours Per Day	6 Hours Per Day	24 Hours Per Day
Cap Ex Cost One Time	Low	Highest	High
Op Ex Cost Per Year	2% of the Value	20% of the Value	80% Fuel and Maintenance
Life Span in Years	50 years	25 Years	10 years
Space Requirements	1/3 of Solar	High	Low
Power Plant Type	Base Load 24 hr / 365 Days a year is Standard	Base Load 6 hr / 365 Days a year is a high value	Up to Base Load 24 hr / 365 Days a year
Estimated Cap Ex One Time	\$22,500,000	\$40,000,000	\$50,000,000
Estimated Op Ex Per Year	\$450,000	\$8,000,000	\$40,000,000
Cap Ex Price with Graphene Battery Backup (50MWh)	\$900,000 MWh **	\$1,600,000 MWh	\$1,450,000 MWh
EMISSIONS	Net Zero	Net Zero	Tons
Recycle at End of Life	100% - Easy	15% - Hard to Do	65% - Medium
Minimum Project Size	Single Engine is 4.5MWh Per Day	450 Wh	100 KVA
Energy Efficiency	92% Solar to Heat 38% Engine to Electricity	23% Solar PV to Electricity	25% Engine to Electricity
Additional Benefits	Excess heat used to make steam or warm homes. Runs 48 hours 100% off-line with Graphene backup.	N/A	N/A

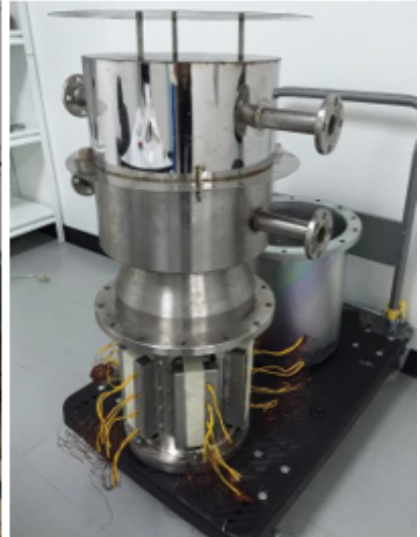
**** Less than a Diesel Generator with backup with less cost per MWh per day**

Contact us

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Stirling Generator System

How it works



Thermal energy is harnessed and focused onto the circulating tube containing the heat transfer fluid.



The superheated liquid is then directed to the storage tanks.



This heated liquid is channeled through the Stirling Generator, generating electricity and producing a cooler "waste liquid" in the process.



The residual waste liquid, still at temperatures in the hundreds of degrees Celsius, subsequently passes through a heat transfer unit, releasing hot water or steam at the specified temperature before circulating the now further cooled liquid back into the heating system.

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