

Make a New Energy Paradigm

Human

Smart Grid

Energy Storage





Vision

happiness

Growth

Make a New Energy Paradigm

With differentiated technologies and competitive edge, Eugene Enerfarm aims to take the lead in the energy technology industry.

Eugene Enerfarm has been focusing on the renewable energy, smart grid and energy solutions businesses based on expertise in the energy storage system (ESS) using secondary batteries.



Company Profile

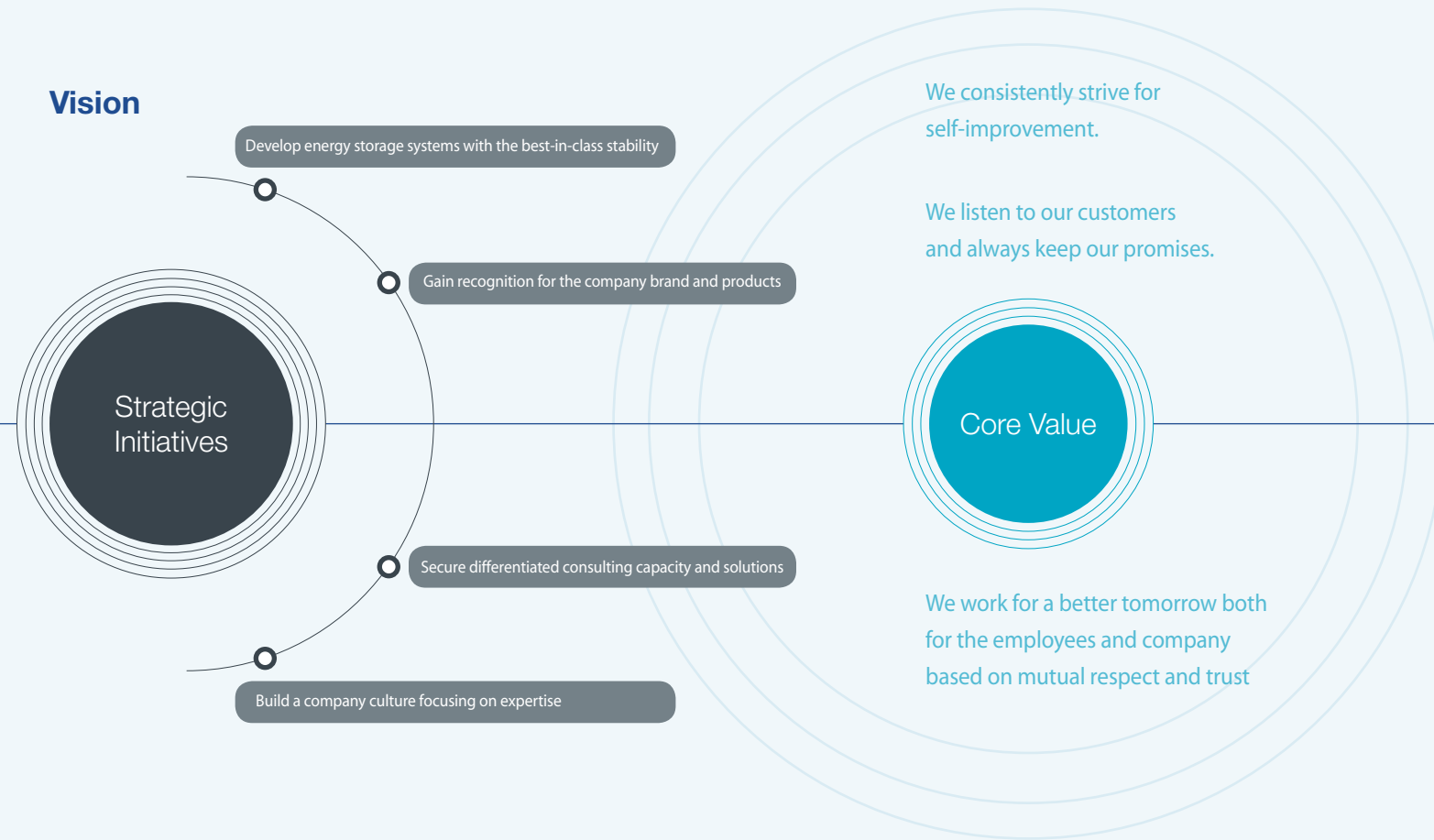
Introduction

Since the establishment in 2013, Eugene Enerfarm has emerged as a leading company in the ESS industry specializing in development, production and sales of the ESS. With our highly experienced workforce, strategic vision for the industry, and solid partnership with global ESS leaders, we work to develop high-quality energy solutions that satisfy a variety of customer needs.

The energy solutions we provide are being adopted in all areas of the power industry such as power plants, transmission sites and substations, as well as the end users.

Company Profile

Vision

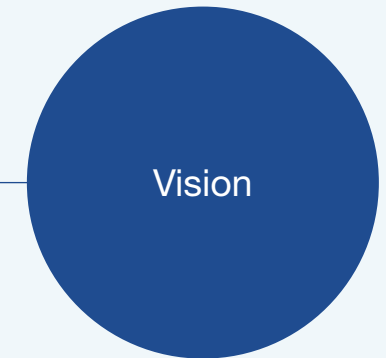


Mission

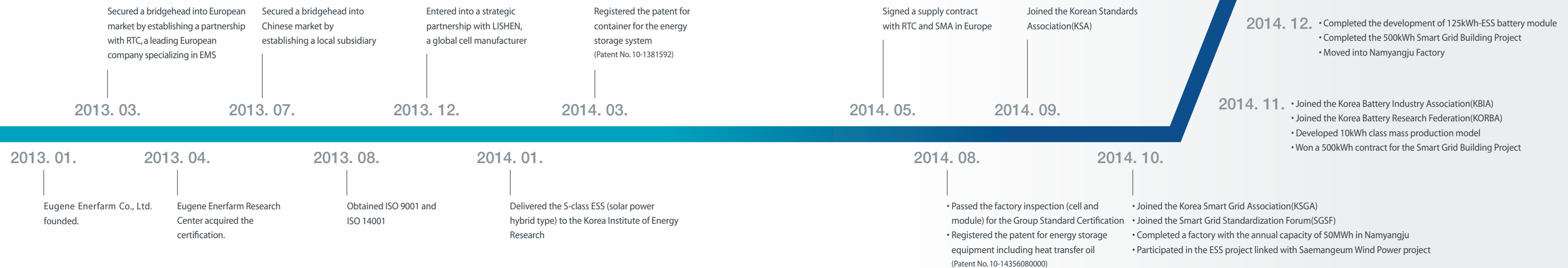


Eugene Enerfarm strives to be recognized as the most reliable and competent partner that provides the best products for safeguarding our customers' power infrastructures by adhering to the "Customer First" philosophy. We remain committed to growing as a world-class smart grid company with an aim of becoming a total energy solution provider.

Vision



History

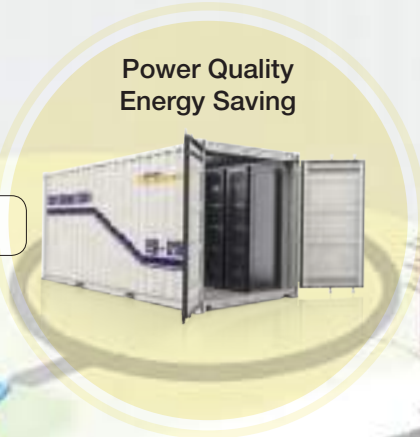


ESS Business



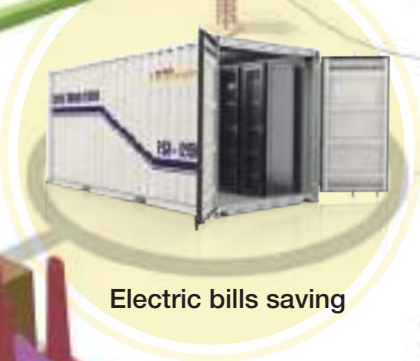
Smart Grid

Renewable Energy



Substation

Factory



Building

DR Trading



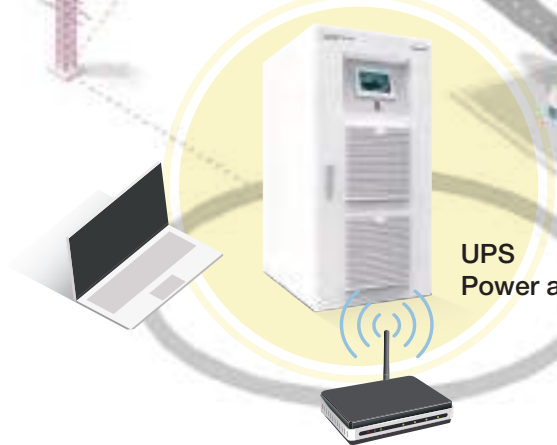
House

Intelligent Consumer

Power Plant



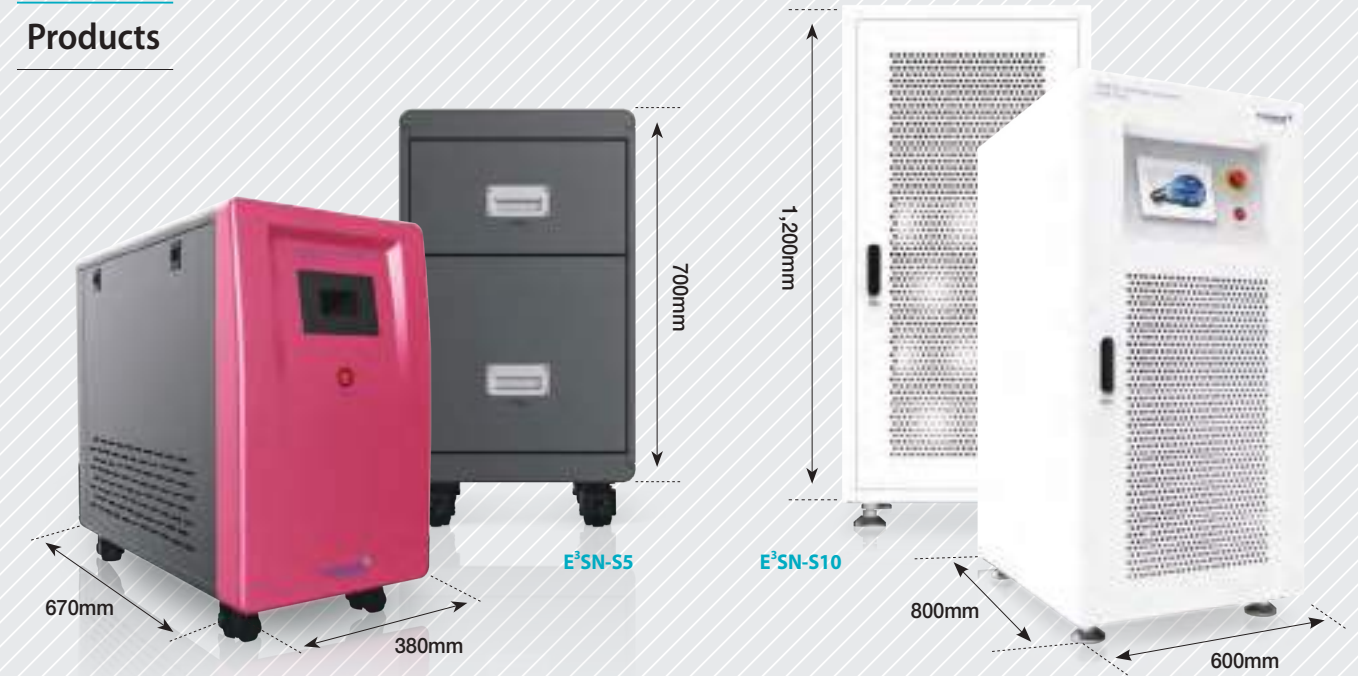
UPS Power applications



E³SN-S class



Products



E³SN-S class: Emergency power supply for homes to save electricity costs

The E³SN-S class system sends the power generated by solar cells to the power system and load, or charges it to the battery and allows the power consumed by the load to be released through solar cells or batteries during power outage. In particular, by operating in the Schedule Mode which is run when the E³SN-S class is connected to the power system, the batteries can be charged during midnight hours at lower prices. If a peak load occurs when the generated solar energy is insufficient, the E³SN-S class can make up for the power consumed by the load. In addition, the Auto Mode is also available, which determines the power flow depending on the excess or deficiency of power instead of time settings.

Benefit

1. High quality power with constant voltage and constant frequency
2. Enhancement of power efficiency
3. Prevention of electricity related accidents (response to power outage)
4. Participation in DR trade

Application

Homes with PV panels, small commercial buildings, isolated houses, islands, streetlights, lighthouses and more

Advantage

- Easy installation and operation
- High energy density
- Excellent stability
- High efficiency

E³SN-S5

Specification

Category	Data	Unit
Power	2.5	kW
Capacity	5	kWh
PV Input	Max Input	4 kW
	Voltage Range	250-450 V
	Max MPPT Efficiency	99 %
Grid Input	Rated Voltage	110/220 VAC
Battery	Operation Range	230-310 VDC
	Battery Type	Lithium ion
Energy @2h rate Discharge	5	kWh
Operation Temperature	Optimum	25 °C
PMS	Data Interface	RS-232C
	Display	4inch LCD
Weight	85	kg

Capacity



2.5kW / 5kWh

Voltage



110/220VAC

E³SN-S10

Specification

Category	Data	Unit
Power	5	kW
Capacity	10	kWh
Grid Input	Rated Voltage	100/200-240 VAC
	Rated Frequency	50/60 Hz
Round trip Efficiency	>80	%
Noise Level	<45	dBA
Battery	Operation Range	270-340 VDC
	Battery Type	Lithium ion
Energy @2h rate Discharge	10	kWh
Operation Temperature	Optimum	25 °C
PMS	Data Interface	TCP/IP
	Scheduling Function	Yes
	Display	7 inch LCD
Weight	325	kg

Capacity



5kW / 10kWh

Voltage



100/200-240VAC

E³SN-M class



Product



E³SN-M class: Reduces electricity costs and controls power peak

The E³SN-M class system is a Eugene Enerfarm's standard product developed for storing energy in the power system. By connecting multiple E³SN-M125 products in parallel, the system can be expanded to MWh capacity. It can be installed at the transmission and distribution sites as well as in industrial facilities. The E³SN-M class lowers the peak power in the power system and allows for load shift, resulting in less occurrence of peak load by storing electricity when power demand is low and using it during times of higher demand.

Benefit

1. Reduce electricity costs
 - Save basic electricity costs by lowering peak power
 - Power can be stored during times of low demand at lower prices and used at peak times.
2. Prevent unplanned use of power in excess of contract volume
3. Prevent power outage

Application

Manufacturing plants, large-scale industrial complexes, and smart buildings

Advantage

- Easy installation and operation
- High output
- Excellent stability
- Sophisticated design

E³SN-M125

Specification

Category	Data	Unit
Operation Voltage	Min Voltage	556.8
	Normal Voltage	614.4
	Max Voltage	668.16
Charge Current	Continuous	120
	Peak Current	150
Discharge Current	Peak Current	150
Energy @2h rate Discharge		125
Operation Temperature	Optimum	25
Data Interface		RS-232C
Power	AC	Use inner batteries during power outage

Capacity Rating



240Ah

Energy Rating



125 kWh

Discharge Current (Continuous)



120A

Battery (type)



Lithium-ion

Battery (life)



Guarantee for 6 years

Operation Temperature



0°C~45°C

Power (AC)



100~240 VAC

Weight



2450 kg

E³SN-E class



Product



E³SN-E class: Improves power quality by linking renewable energy generation system

The E³SN-E class system is designed in a container-like structure that allows for installation of large-scale energy storage systems in outdoor areas. It has a structure of four E³SN-M125 products connected in parallel, as well as the MBMS, a parent application to control E³SN-M125 models. The MBMS delivers the data on the energy stored in the container to the EMS or PMS&PCS through the Modbus. Also, the system stores important internal data by building a database. The E³SN-E class system is acknowledged as an independent building and equipped with its own temperature and humidity controllers as well as a fire-fighting system.

Benefit

1. Replace reserves in power plants
2. Secure safety through frequency control, voltage stabilization and load-following
3. Reduce investment costs for transmission and distribution facilities
4. Improve transmission stability
5. Improve power quality
6. Enhance use efficiency of renewable energy power generation

Application

Traditional power plants (thermal, hydro, and nuclear plants)
 Renewable energy power plants (wind power and solar power plants)
 Power suppliers, substations, transmission and distribution, and more

Advantage

- Easy installation (outdoor and indoor)
- Convenient operation with specialized interface
- High output and high capacity
- Excellent stability
- High efficiency
- Long service life
- Equipped with Eco-friendly container

E³SN-E500

Specification

Category	Data	Unit
Operation Voltage	Min Voltage	556.8 V
	Normal Voltage	614.4 V
	Max Voltage	668.16 V
Charge Current	Continuous	480 A
	Peak Current	600 A
Discharge Current	Continuous	480 A
	Peak Current	600 A
Energy @2h rate Discharge	500	kWh
Operation Temperature	Optimum	25 °C
Data Interface	TCP/IP	
Power	DC	Use inner batteries and system UPS during power outage
Feature	• Built-in thermo-hygrostat system • Building internal database • Built-in fire protection system	

Capacity Rating

 **960 Ah**

Energy Rating

 **500 kWh**

Discharge Current (Continuous)

 **480 A**

Battery (type)

 **Lithium-ion**

Battery (life)

 **Guarantee for 6 years**

Operation Temperature

 **0°C ~ 45°C**

Power (AC)

 **100~240 VAC**

Weight

 **15,000 kg**



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