



pacific
energy

AESU Series
Generator Hybridization Unit

◆ AESU Series

info@pacificenergyinc.com



- Dramatic Emission Reduction up to 61%
- Voltage stabilization to 3%
- 3Phase120/208 & 1 Phase 120/240
- Fuel Savings of >25%
- Easy to Use Interface
- Trailer Mounted from 30 to 150 kWh
- Skid Mounted from 30 to 150 kWh
- Designed to Industry Standards (UL, IEC, UN, ICBO)

*: dependent on user's load factor



Microgrid



Generators



Renewables



Hybrid

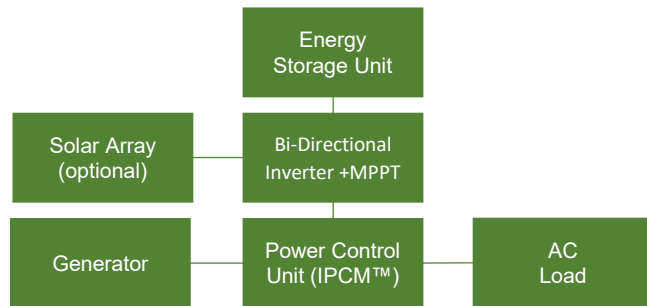
The Advanced Energy Storage Unit (AESU) combines any existing or new generator(s) with an onboard energy storage system and can be also fully integrated with renewable energy sources (optional) to save fuel while dramatically reducing emissions and numerous other issues associated with running generators at low efficiency such as wet stacking, engine noise and the odor/particulates associated with diesel exhaust. Pacific Energy's Intelligent Power Control Management Technology (IPCM™) enables the use of generators in series with the energy storage system for maximum power efficiency. The IPCM ensures generators operate at maximum efficiency by running at maximum output and storing excess energy. The power from the generator runs through the trailer and the IPCM keeps the generator operating at maximum efficiency, storing extra energy when the generator is producing more than the load and discharging power from the energy storage system when extra power is needed

- Microgrid/ Rural Electrification
- Shore Power
- Construction
- Oil Platform
- Uninterrupted Power (UPS, Commercial)
- Disaster Relief
- Movie Set
- Mini-Grid
- Demand Response/ Peak Shaving
- High Stressed Electrical Grid Relief

AESU System Block Diagram



AESU Series are designed to be positioned in between the generator and the load. The generator is always operated at its rated output to reduce noise and prevent staking and minimize toxic emissions. This operation mode saves diesel fuel, and significantly minimize maintenance cost and increase generator life while providing uninterrupted power. An optional 6 kW PV Solar array can directly connect to the unit for additional fuel savings. .



General Specifications

AESU Model	AESU30	AESU50	AESU100	AESU150	Units
Storage Capacity	30	50	100	150	kWh
Maximum Power Output*	60	100	100	100	kW
Weight	771	953	1769	2585	kg
	2700	3100	3900	5700	lbs.
Width x Length x Height	0.91x1.82x1.22	1.22 x 2.13 x 1.53	1.22 x 2.44x 1.52	1.22x2.44x1.52	m
	36 x 72 x 48	48x 84 x 60	48 x 96 x 60	48 x 96 x 60	in
AC Gen. Input Voltage	3 ☑ AC 120/208V and 1 ☑ AC 120/240V				
Monitors	Voltage •Currents •Frequency •State of Charge (SOC)				
Safety Features	DC Overvoltage • DC Undervoltage • DC Overcurrent• Generator Overvoltage• Generator Undervoltage •Overtemperature •Power Electronics• Fault BMS Fault				
Communication	CAN Bus. ModBus. WiFi Optional				
Chemistry	Lithium Titanate (LTO) or Lithium Iron Phosphate (LFP)				

AC Output Power Specifications	Min	Nom	Max	Units
Rated Output Voltage (3☑) [1 ☑ optional)	115.2/199.6	120/208 • 120/240	124.8/216.3	VAC
Rated Output Power		- 60	60	kW
Frequency	58.2	60	61.8	Hz

Environmental Specifications

Temperature (above 65°C with degradation)	-45	60	°C
Cooling	Liquid Cooled		
Rated Maximum Elevation	2,000/ 6,000		m/ ft.

Energy Storage Specifications

Charge Time (at 60 kW input)	30		Min.
Battery Capacity (per module)	5	33	kWh
Pack Voltage (per module)	270	414	486
Pack Current	-160	-80/80	160
Cycles (at 2C charge/discharge)	10,000	15,000	cycles
Depth of Discharge (DoD)	Up to 95%		

*: AESU units are fully customizable to meet energy storage and power requirements Specifications subject to change without notice. Contact Pacific Energy for updated information.

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info@pacificenergyinc.com

◆ AESU Series

Advanced Energy Storage Unit

- Recovers
- Stores
- Manages

Multiple Sources of Energy



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Sales: 3080 12th St.
Riverside, CA 92507

R&D: 6969 Jurupa Av
Riverside, CA 92504

(951) 588-1642