February 24, 2015

ELIIY Power Develops the POWER iE6 HYBRID Solar Power Generation / Electricity Storage Hybrid System

Integrating power conditioners for solar cell and lithium-ion batteries

ELIIY Power Co., Ltd. (Head Office: Shinagawa-ku, Tokyo, Japan; President: Hiroichi Yoshida) today announced that it has developed the POWER iE6 HYBRID solar power generation / electricity storage hybrid system that integrates power conditioners for solar cell and storage batteries and that it will be released in April 2015.

Product Name	POWER iE6 HYBRID	
Model	EPS-20H-100	EPS-20H-200
Output Type	100 V output in power outage	100 V / 200 V output in power outage (production on order)
Suggested Retail Price	To be set at retailers' discretion	

[Hybrid Power Conditioner]

[Lithium-Ion Storage Battery Unit]

1. Power conditioners for solar cell and storage batteries have been integrated to supply stable electric power both in normal times and in the event of a power outage. If there is a power outage, it automatically switches into independent operation.

2. It provides three operation modes to choose from according to the home user's needs to ensure efficiency in the consumption of electric power.

3. It incorporates a large-sized lithium-ion battery cell with the world's top-class safety features and is free of smoke or ignition when nailed and has superior low temperature characteristics ensuring operation under a temperature of -20 degrees Celsius.

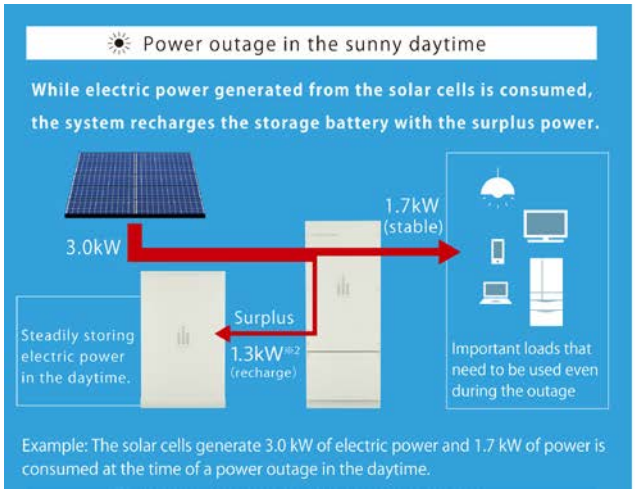
This system will be on display for reference at the 6th International Rechargeable Battery Expo BATTERY JAPAN, which is scheduled to take place at Tokyo Big Sight from Wednesday to Friday, February 25-27.

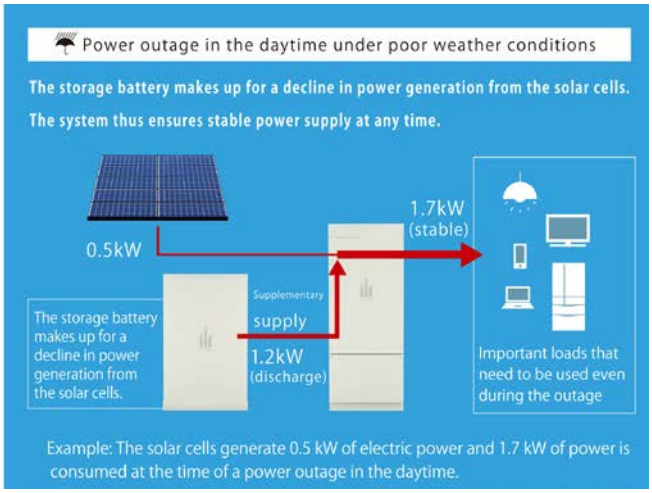
◆ Main Features

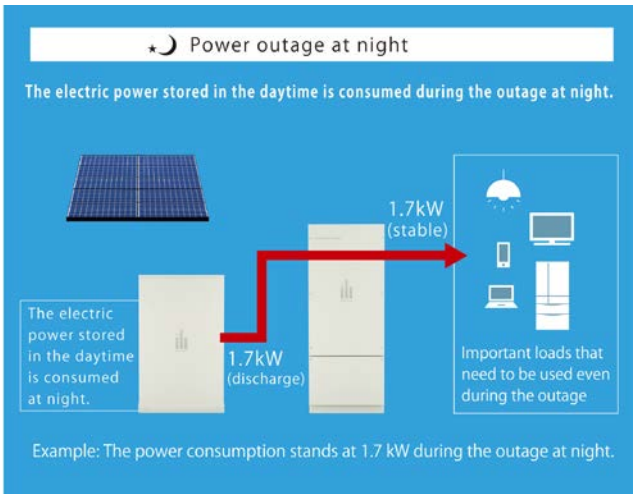
1. Power conditioners for solar cell and storage batteries have been integrated to supply stable electric power both in normal times and in the event of a power outage. If there is a power outage, it automatically switches into independent operation.

In the daytime, while electric power generated from the solar cells is consumed, the system recharges the storage battery with the surplus power. In the event of a power outage, it automatically switches into independent operation in about five seconds. Appliances that need to be used during the outage, such as communication equipment, a lighting fixture or a refrigerator, will be serviceable as soon as the system shifts to independent operation after connection is made to them in advance.

[Schematic of Operation in the Event of a Power Outage]





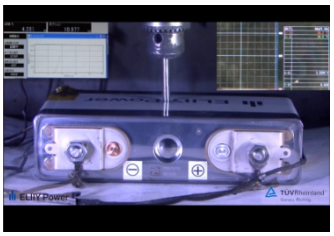


2. It provides three operation modes to choose from according to the home user's needs to ensure efficiency in the consumption of electric power.

The system provides three different modes. In the OSAIFU (economy) mode, cheaper nighttime power is stored in the storage battery and consumed in the daytime and in the evening when a

large amount of electric power is consumed to lower the electricity bill. In the ECO (green) mode, the electric power generated from the solar cells is stored in the storage battery and consumed at night to help achieve self-sufficiency of electric power. And in the BACKUP mode, the storage battery is recharged when its remaining power level is low and it is kept at full charge in preparation for emergency. Home users can choose the mode from the three mentioned above according to their needs.

3. It incorporates a large-sized lithium-ion battery cell with the world's top-class safety features that is free of smoke or ignition when nailed and has superior low temperature characteristics ensuring operation under a temperature of -20 degrees Celsius.



Incorporated in this system, the large-sized lithium-ion battery cell has passed 11 safety certification tests including penetration, drop, submersion and forced internal short circuit tests conducted by TÜV Rheinland, a global third-party testing and certifying body, to become the world's first battery cell of its kind to obtain the TÜV-S mark*1. As the cell holds a battery capacity retention rate of 80.1% or more*2 after 12,000 cycles of recharge and discharge processes during 10 years of use, the system may be used for a long time with peace of mind. In addition, the low temperature characteristics have been improved from those of the conventional cell to open the way for operation under conditions of -20 degrees Celsius. It may thus be installed in cold regions.

*1 The mark serves as a certification with the safety standards issued by TÜV Rheinland Japan Ltd. (*Manual for Testing Lithium-Ion Cells under Severe Conditions* v. 2:2011).
*2 Value estimated from the data obtained from the acceleration test conducted by ELIIY Power at a room temperature of 23 deg. C and approximately three cycles of full recharge and discharge per day at the depth of discharge (DOD) of 100%

4. Other Features

■ **With a storage capacity of 6.2 kWh, the system works for nearly 24 hours* in the event of an unexpected outage.**
* On the assumption of using lighting (60 W), a television set (115 W) and a refrigerator (25 W) in spring or fall
* The duration of serviceability varies depending on the equipment connected, on the season and on other conditions.

■ **A remote control with a color LCD screen that helps users grasp the power recharge/supply status and the remaining power level at a glance**

■ **Support for start-up of the Enefarm cogeneration system in the event of power outage (available only with the model for 100 V / 200 V output in a power outage)***
* An automatic start-up of independent operation separately requires an automatic switch unit.
* The Enefarm will not come into operation when the gas or water supply is suspended.

■ **24/7 support provided in the GOANSHIN (reassurance) service**

◆ Major Specifications

[The POWER iE6 HYBRID]

Model	EPS-20H-100	EPS-20H-200 (production on order)
Output Type	100 V output in power outage	100 V / 200 V output in power outage (An automatic switchover to output from the storage battery in response to power

			outage separately requires an automatic switch unit.)
Operating Conditions * Except for the remote control	Ambient Temperature	- 20 deg. C to +40 deg. C	
	Humidity	5% to 95% RH (no freeze or condensation)	
	Location of Use	Outdoors (snow cover of less than 100 cm / a specially designed model required for regions prone to serious salt damage)	
Standard Certification	Electricity Storage System	S-JET and JET for grid interconnection	

[HYBRID POWER CONDITIONER]

Model			EPS-20P-100	EPS-20P-200
Output Type			100 V output in a power outage	100 V / 200 V output in a power outage
Dimensions			580 mm (W) x 250 mm (D) x 1,450mm (H)	580 mm (W) x 250 mm (D) x 1,600 mm (H)
Weight			82 kg	122.5 kg
Output	Output Voltage	Normal	202 V, single-phase, two-wire	
		Outage	101 V ± 5 V, single-phase, two-wire	202 V ± 5 V, single-phase, two-wire
	Rated Output	Normal	5.5 kVA (5.5 kW)	
		Outage	2.0 kVA (2.0 kW)	
	Frequency		50 / 60 Hz	
	Load Power Factor (in outage)		1.0	
	Rated Output Duration	Outage	150 minutes	
Input (grid)	Commercial Input		100 / 200 V, 5.5 kW, single-phase, two-wire system (connected to a single-phase, three-wire system)	
	Commercial Frequency		50 / 60 Hz	
Input (PV)	Maximum Input Wattage		6,450 W	
	Maximum Number of Strings		3	

[Lithium-Ion Storage Battery Unit]

Model		EPS-20B
Storage Battery	Storage Capacity	6,208 Wh
	Type	Lithium iron phosphate
Product	Dimensions	655 mm (W) x 300 mm (D) x 1,060 mm (H)
	Weight	130 kg
Output	Storage Battery Output	2.0 kW
Input	Storage Battery Input	1.5 kW
	Recharge Time	4 to 5 hours

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