PATTERN SOLAR

Solar Energy Storage System Packages

Residential Solar Solutions | 3kW – 11kW

Guangdong Pattern New Energy Co., Ltd.

> PATTERN offers a range of solar energy storage packages for different household sizes, electricity consumption levels, and backup power needs. Each package combines a hybrid solar inverter, LiFePO4 battery storage, and solar panels.

1 Recommended Solar System Packages

Solar Package	Hybrid Inverter	LiFePO4 Battery Storage	600W Solar Panels	Total PV Capacity
3kW Basic Kit	3.2kW / 24V	2.56kWh × 2 (5.12kWh)	4 panels	2.4kWp
3kW Standard Kit	3.2kW / 24V	5.12kWh × 2 (10.24kWh)	5 panels	3.0kWp
6kW Basic Kit	6.2kW / 48V	10.24kWh × 1	8 panels	4.8kWp
6kW Standard Kit	6.2kW / 48V	10.24kWh × 2 (20.48kWh)	10 panels	6.0kWp
8kW Basic Kit	8.6kW / 48V	15.36kWh × 1	12 panels	7.2kWp
8kW Standard Kit	8.6kW / 48V	10.24kWh × 2 (20.48kWh)	16 panels	9.6kWp
11kW Basic Kit	11kW / 48V	17.92kWh × 1	16 panels	9.6kWp
11kW Standard Kit	11kW / 48V	15.36kWh × 2 (30.72kWh)	18 panels	10.8kWp

2 Recommended Home Applications



3kW Solar Kit — Small Homes & Essential Backup

Suitable for small houses, apartments, and households with basic electricity needs.

Typical appliances: LED lighting, fans, television, Wi-Fi router, phone charging, and an energy-efficient refrigerator.

Basic: For essential backup and lower daily consumption.

Standard: For households needing longer backup time, with the same inverter output capacity.



6kW Solar Kit — Everyday Family Homes

Suitable for medium-sized family homes with several appliances and regular daily electricity use.

Typical appliances: Lighting, fans, refrigerator, television, washing machine, and a small air conditioner, subject to simultaneous load limits.

Basic: For homes with moderate consumption and shorter backup requirements.

Standard: For families seeking additional battery storage for evening and overnight use.



8kW Solar Kit — Large Homes & Higher Energy Demand

Suitable for larger houses, villas, and households using multiple electrical appliances.

Typical appliances: Multiple refrigerators, washing machine, water pump, air conditioning, lighting, and entertainment equipment, depending on actual load.

Basic: For larger homes with grid support or managed backup loads.

Standard: For increased storage capacity and greater flexibility during power outages.



11kW Solar Kit — Premium Homes & Small Businesses

Suitable for large villas, multi-room residences, home offices, and selected small commercial applications.

Typical appliances: Multiple air conditioners, refrigerators, water pumps, office equipment, lighting, and other household loads, subject to system design.

Basic: For high-demand properties with controlled battery-powered loads.

Standard: For customers requiring larger energy reserves and longer backup duration.

3 What Is Included in a PATTERN Solar Kit?

Main Components	Description
Hybrid Solar Inverter	PATTERN 3.2kW, 6.2kW, 8.6kW or 11kW inverter
LiFePO4 Battery	Battery capacity according to the selected package
Solar Panels	600W solar modules, quantity as listed
Solar Mounting Accessories	Mounting rails, brackets, clamps and fasteners
PV Cables & Connectors	Solar cables and compatible connectors
Electrical Protection	Appropriately rated DC/AC protection equipment
Battery Connection Accessories	Battery cables, terminals and required protection
Monitoring Accessories	Optional Wi-Fi monitoring, depending on inverter configuration

4 Important Notes for Customers

- **System sizing:** The most suitable package depends on daily electricity consumption, peak appliance load, backup duration, and local solar conditions.
- **Battery backup:** A larger battery provides more stored energy, but does not increase the inverter's rated output power.
- **Solar production:** Actual electricity generation depends on location, weather, panel orientation, shading, and system losses.
- **Installation:** Final solar panel string design, electrical protection, and battery configuration must be verified before installation.
- **Battery output limitations:** Some Basic packages cannot support the inverter's full rated output continuously when operating on battery power alone.

> **Technical note:** The 3kW packages use 25.6V batteries, while the 6kW–11kW packages use 51.2V batteries. Parallel battery configurations require compatibility verification. The 600W panel configurations are preliminary because the exact panel electrical specifications have not yet been confirmed.

PATTERN — Reliable Solar Energy Solutions for Every Home

From essential household backup to high-capacity residential energy storage, PATTERN provides flexible solar solutions for distributors, installers, and project partners.

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Website: www.patternbattery.com
Email: info@patternbattery.com