



**RESERVE POWER SYSTEMS**

## **Store solar electricity with HOPPECKE**

Reduce electricity costs – stay independent



 **HOPPECKE**  
POWER FROM INNOVATION

## HOW DOES SOLAR ELECTRICITY WORK?

Basically, it is very simple: Solar cells convert sunlight via photovoltaic effect into electricity. A direct current is created which is, by means of an inverter, converted into the household electricity used by all of us. In order to generate as much electricity as possible, solar cells are combined to solar modules, and the solar modules to solar installations, which are installed e.g. on roofs

### Feeding into the grid

Those who generate solar electricity in Germany are allowed to feed it into the public grid (according to the German Renewable Energies Act - EEG) and receive for every fed kWh a fixed compensation for electricity fed into the grid. A second meter in the house measures how much electricity is fed into.

### Feeding in, consuming...

Instead of feeding electricity into the grid, you can of course use it for yourself as well. If the sun rises in the morning, you have the possibility to make coffee, dry your hair, listen to the radio, vacuum the house, cook lunch, etc. in the course of the day - by using your own solar electricity.

### ... or storing

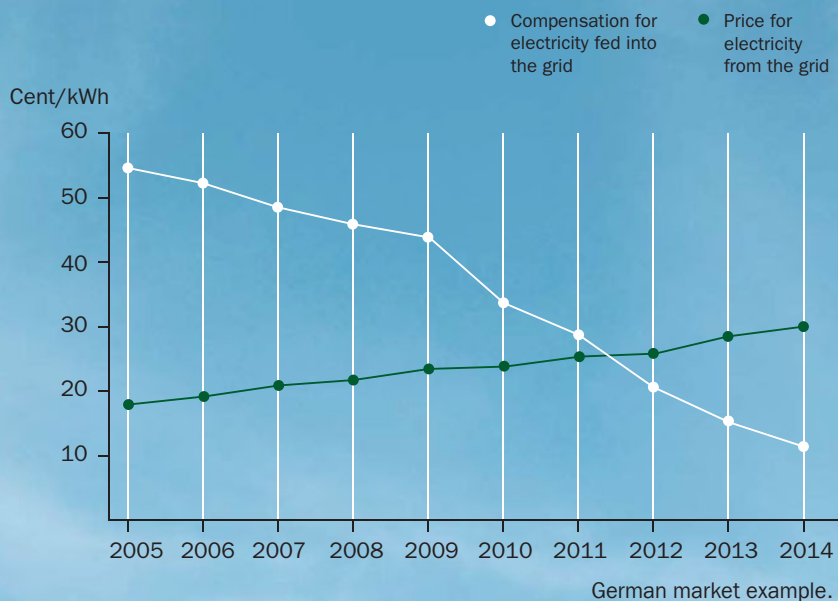
With the special HOPPECKE solar batteries, you can store your solar electricity temporarily. Using the stored electricity, you can operate your electrical devices such as dishwasher or washing machine or washing machine, TV set or refrigerator in the evening or at night. If the battery is discharged, it obtains automatically electricity from the public grid again.





# BECOME INDEPENDENT!

While the compensation for solar electricity fed into the grid by law is constantly decreasing, the energy providers increase the supply price for electric power annually. In the middle of the year 2011, the electricity price exceeded the compensation for electricity fed into the grid for the first time. This development will continue in the future: The gap between energy costs and compensation for electricity fed into the grid will be widening.



Electricity from the grid

Store solar electricity temporarily



## Private consumption is profitable

Those homeowners who operate a solar system save approximately 30% of the electricity costs in their own house - due to the consumption of the solar electricity generated. If you store the electricity in an own solar battery, the savings can even be increased up to 70%.

## Be on the safe side!

Those who store their solar electricity can make use of it with an appropriate inverter, e.g. in the event of a power failure. This creates independence!

## Your contribution to the energy turnaround

Moreover, storing solar electricity relieves the load on the public grids, enhances the availability of solar electricity and thus directly contributes to the success of the energy turnaround.

# Storing solar electricity in a safe way

Storing solar electricity saves money on electricity, makes you more independent and relieves the load on the public grids. In order to make the best use of these advantages, HOPPECKE has developed special systems for owner-occupied homes and private users. They are characterized by highest quality and safety, long service life as well as easiest handling in daily use. You can choose between the storage systems **sun.power** pack, **sun.power** pack LiOn and **sun.systemizer** home.



# THE HOPPECKE SOLAR BATTERIES

## sun.power pack

Energy storage solution for optimizing the photovoltaic direct consumption

### Advantages of the HOPPECKE sun.power pack:

- Easy handling thanks to plug & play – you will receive a completely pre-assembled system
- Stores from 4.9 up to 14.8 kWh
- Higher storage capacity due to combining individual storage modules
- Outstanding quality (maintenance-free lead-gel batteries made in Germany)
- Approximately 2,500 recharging cycles (@ 50% DoD) – very long design life (approx. 10 years)
- High safety standards – thanks to protection against contact and the use of fully insulated connectors

## sun.power pack LiOn

Energy storage solution based on lithium-ion for optimizing the photovoltaic direct consumption

### Advantages of the HOPPECKE sun.power pack LiOn:

- Fast-charging possibility
- Stores up to 5 kWh, expandable to any size
- Higher storage capacity due to combining individual storage modules
- Outstanding quality (lithium-ion systems made in Germany)
- High charging efficiency and very low self-discharge
- Maximum level of safety due to integrated battery management system
- Intrinsically safe operation of any lithium-ion module
- Communication with inverter system in order to transmit the battery status data
- Approx. 7,500 recharging cycles (@ 80% DoD) – very long design life (approx. 20 years)

## sun.systemizer home

Intelligent battery storage system with integrated battery management based on **sun.power** pack

### Advantages of the HOPPECKE sun.systemizer home:

- Robust and modular frame system consisting of five basic units
- High efficiency due to high battery voltage
- Outstanding quality (maintenance-free lead-gel batteries made in Germany)
- Approx. 2,500 recharging cycles (@ 50% DoD) – very long design life (approx. 10 years)
- High safety standards – thanks to a multi-level safety concept
- With integrated battery management system made by HOPPECKE:
  - Measurement of battery current, battery voltage and temperature
  - Calculation of the battery conditions (charging and aging condition)
  - Definition of the maximum charging/discharging current
- System compatibility via CAN-Open-Standard
- Intelligent link between the battery system and the inverter
- Upgrading to new HOPPECKE battery technologies is possible
- Stores up to 11 kWh



Already more than 3,500  
**sun.power** pack are in use.



Available in 2015,  
can be ordered in 2014.



Already more than 500  
systems are in use.



**NOW IT IS THE TIME TO INVEST IN THE FUTURE!**





## A STRONG BRAND

### HOPPECKE – Trust in battery experience since 1927

Our company is the largest manufacturer of industrial batteries in Europe. Having been concerned with the issue of energy storage since 1927, we have extensive know-how and valuable development experience. For this reason, our energy storage systems are preferably used where safety and reliability are required: In hospitals, power plants, data processing centres or even at airports. As a tradition-conscious and quality-oriented family company, we are continuously focusing on a production with the quality label “Made in Germany”.

- Independent family company since 1927
- European market and technology leader in the field of industrial batteries
- Provider of innovative storage technologies based on extensive research and development activities
- Consistent production made in Germany
- Consistently directed towards environmental protection and sustainability
- Own battery return and recycling system thanks to own smelter (certified disposal company)
- Closed material cycle due to recycling of lead, plastic and acid

### HOPPECKE solar batteries are funded with up to 30%

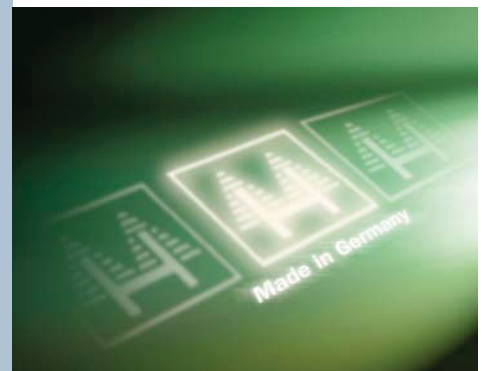
Since our storage systems meet the highest requirements in terms of quality and safety, they fulfill the eligibility requirements for battery storage systems of the Federal Government. Retrospectively from 1st January 2013, you receive up to 30% of the purchase price as government funding for purchasing a HOPPECKE solar battery.

Our systems **sun.power** pack, **sun.power** pack LiOn and **sun.systemizer** home meet all eligibility requirements:

- 7 years current value compensation guarantee
- Compatibility with the inverters of renowned manufacturers
- Compliance with the standards
- Manufacturer's Declaration and further information at [www.hoppecke.com](http://www.hoppecke.com)



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You can purchase the HOPPECKE storage systems at selected retail stores.  
Current sales information can be found at [www.hoppecke.com](http://www.hoppecke.com)

