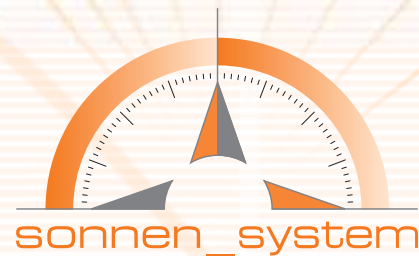


Independent Power Supply within Megawatt range

Customary Photovoltaic constructions are designed to deliver the converted energy directly, without intermediate storage in the energy supply network.

This application permits merely the operation in parallel with a network which cannot guarantee the permanent and exclusive energy supply by Photovoltaics.

Hence **island systems** in the Photovoltaics utilize the converted energy to be stored in accumulators which can be accessed in the evening, at night or early in the morning.



Solar park "Barrax" in Spain (1,5 Megawatt) · Start up in 2008 by sonnen_systeme Projektgesellschaft mbH



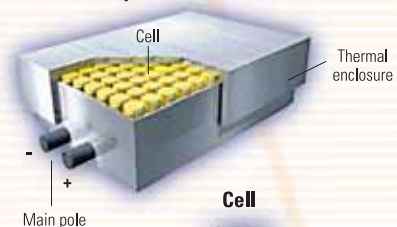
Moreover, the use of **NAS-battery systems** permits the **independent** energy supply also in the **megawatt area**.

The sodium sulphur battery system distinguishes itself by his high energy density, the easy and quick installation, the high life span and its system-stability.

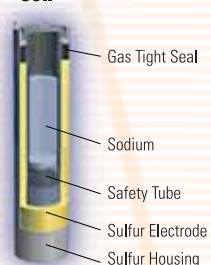
Due to the applied **block construction** of the single cells, the units can be planned and extended optionally large and as a result can also be fed by entire solar plants in the megawatt range.

This system allows the **independent energy supply** of entire companies, hotels, towns and regions and can be used wherever a connection to the energy supply network does not exist, or the installation is too complex.

Sodium sulphur (NAS) battery



Cell



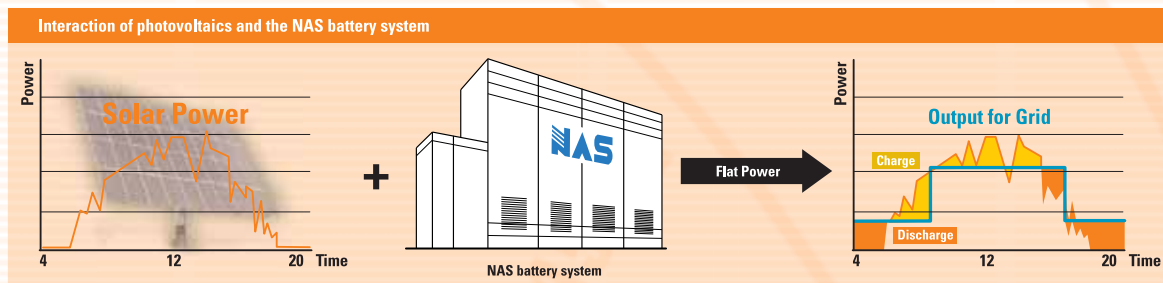
Principle of the independent energy supply

Thereby the generator to the energy conversion is preferentially realized by photovoltaic systems, because this technology is reliable, clean, fast adaptable and uncomplicated.

The PV-construction is designed in such a way, that **parallel to the supply** of the consumer a surplus is being generated, which feeds and charges the battery system.

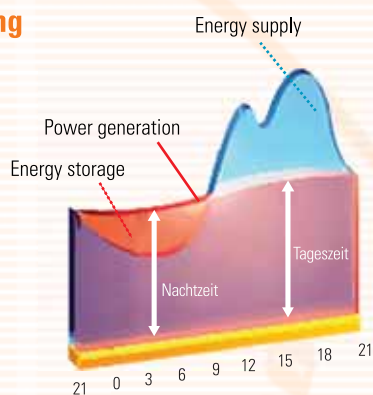


Thus, a power supply has been realized, which is supplied by the PV unit during the day and, due to the stored energy in the accumulators, is maintained at night.

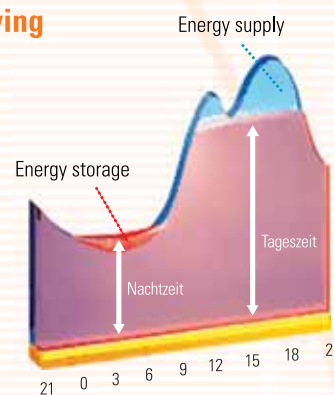


These electric circuits can be characterized by their **simple and fast controllability** and as a result can be completely adapted to the individual requirements and needs of the consumers.

Load leveling



Peak saving



The **combination** of **PV-constructions** and **NAS-battery systems** permits the uncomplicated development of new territories, which can be mainly applied wherever industry, tourism and the military look for a reliable, individual and absolutely **independent energy supply**.