

Empower. Economic and Safe.

Electrification for Remote Communities and Villages



Renewable energy supply with next generation technology

Vision Electricity for Everyone

We are passionate about the sustainable supply of energy using renewable energy (RE) systems. Presenting a much more cost-effective solution in off-grid regions, experience shows that energy storage has been one of the weak links in these systems. By offering high quality AC grid power to the entire community as an alternative to widely used small DC solar home systems for a few people, we want to contribute to make RE pre-dominant and for everyone.

Application Micro, Mini and Off-Grid

Globally over a billion people still lack access to electricity. Over 80% of these people live in rural areas. Extending the grid to such areas is economically impractical owing to the huge transmission and distribution costs, not only because of their geographical isolation but also their sparse population. It has been shown that mini grids and off-grid renewable energy systems with battery energy storage present a sustainable, efficient and cost effective solution to this problem.

Pico systems at first sight seem to be inexpensive, but the specific cost of electricity is high. Mini grids traditionally rely on polluting diesel generators (DG) for peak production, which are expensive, inefficient and damaging to the environment. As a specialist, Autarsys offers a robust and precisely engineered Energy Storage System (ESS) which houses an intelligent energy management system. Unlike a DG, these systems are highly flexible and efficient during all modes of operation and ensure that electricity is also fed at low loads when supply is insufficient, especially at night times.

The Autarsys ESS offers the added advantage of being modular, such that the energy capacity can be easily scaled to not only supply to anchor load applications such as water pumps, remote telecommunication towers, street lighting etc. but also incentivize residents to use appliances with higher wattages. The ESS is also designed to readily integrate with the grid, as and when it arrives.



Product Autarsys Mini Energy Storage System (ESS)

Typically suited for electrification needs in villages, the Autarsys Mini ESS comes as a sealed "Plug & Play" system which is easy to install. It is a specialized solution for harsh weather conditions and is designed to operate at stable conditions that prolong lifetime in spite of high ambient temperature, dust and humidity, thereby requiring negligible maintenance.

| | |
|-------------------------------|-----------------------------------|
| Nominal AC Power | 30 - 90 kVA |
| Energy Capacity | 33 - 274 kWh |
| Output Voltage | 3 Ø 230/400 V |
| Output Current | 43,5- 130,5 A |
| Frequency | 50/60 Hz |
| System Efficiency | > 85% |
| Ambient Temperature | -10 to 50 °C |
| Dimensions (l x b x h) | 2.44 x 2.20 x 2.26 m ³ |
| Guarantee* | 10 years |
| Lifetime* | 20 years |

ESS Features and Capabilities

On-Grid & Off-Grid Ready, Online UPS, SWERnet Integration, Fuel Save, Diesel Generator Control, Energy Management, Dynamic Grid Support, Reactive Power Compensation, Blackstart

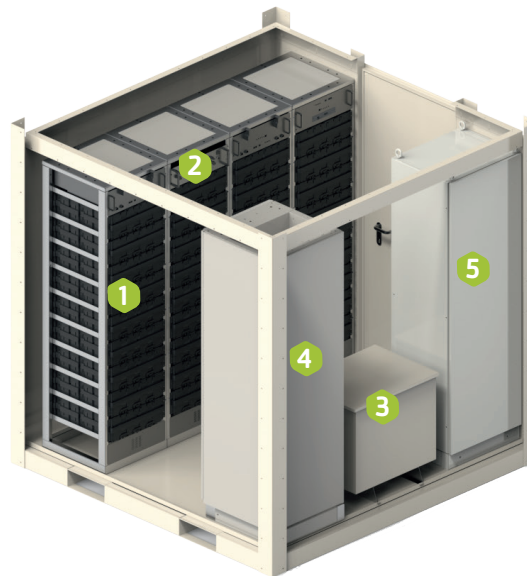
ESS Communication Interface

Touchscreen Display
Data Monitoring (SCADA)
Ethernet Support
Modbus
GPRS/Satellite Communication

ESS Product Certifications

EN 61000-6-2, EN 61000-6-4,
IEC62040, CE Conformity

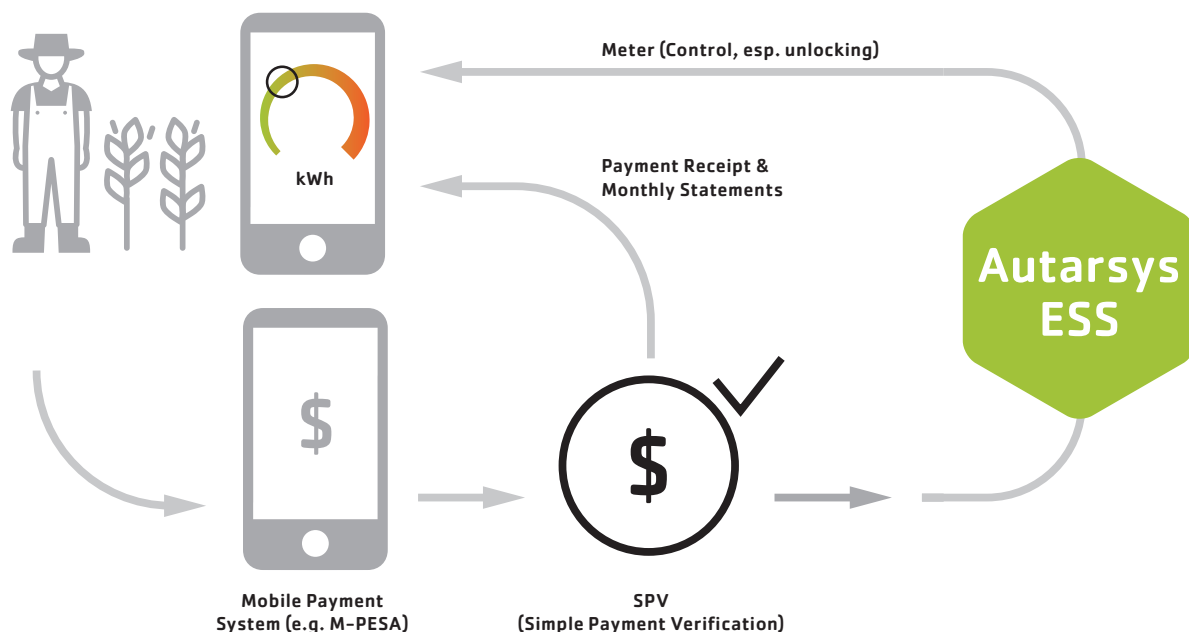
*The guarantee and lifetimes mentioned are under specific standard conditions of operation of the ESS. Actual product specifications and layout may vary depending upon the application. For further details, please contact your support team at Autarsys.



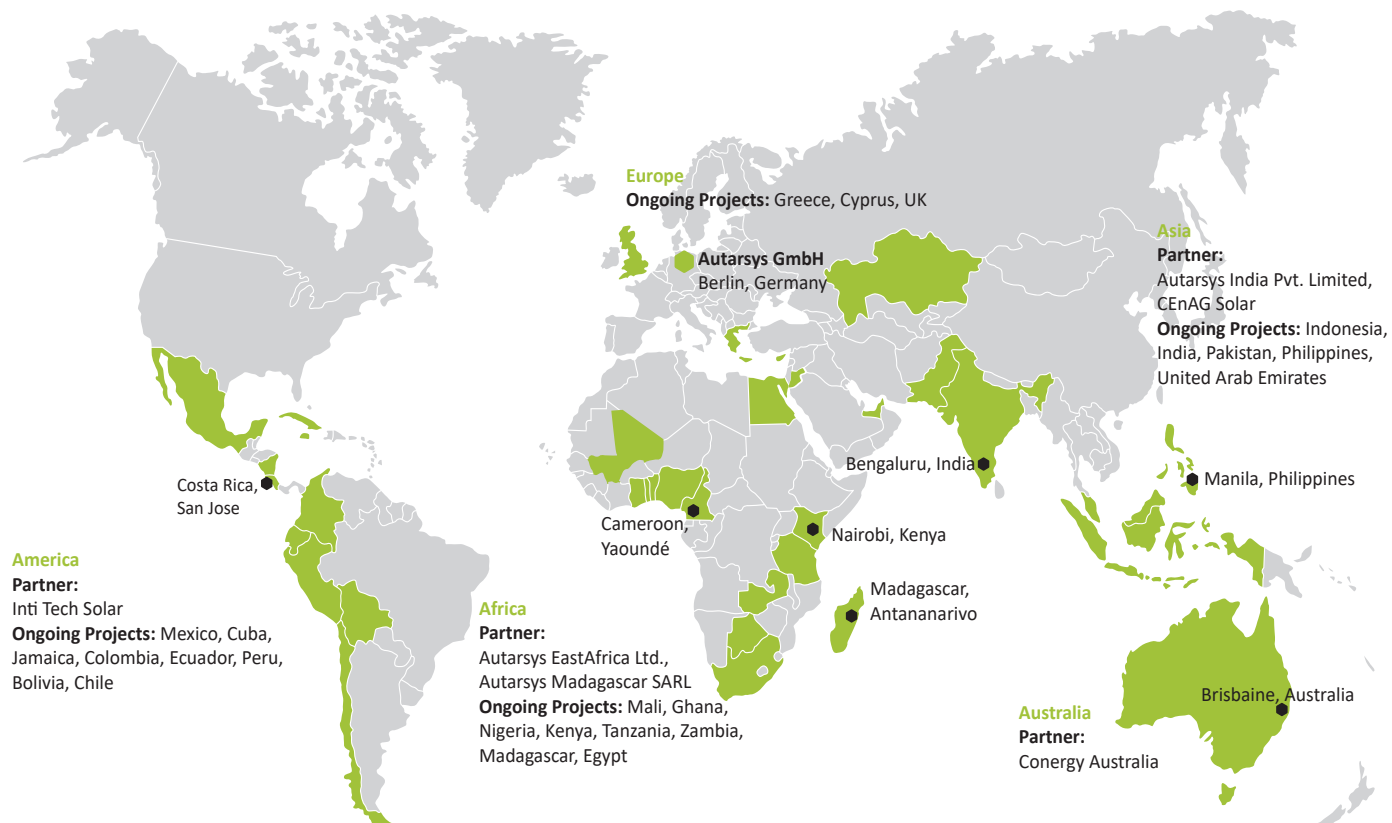
- 1 Battery racks
- 2 Precharge
- 3 Transformer
- 4 Battery Inverter
- 5 Control cabinet

Pay as you Go Energy when and where you want

Remote regions far away from the grid lack basic infrastructure. Mini and micro grid operators face difficulties in receiving payments for the energy delivered to consumers. The Autarsys ESS communication platform integrates smart meters with the Simple Payment Verification (SPV) system, enabling seamless energy delivery and a transparent payment method for its customers.



Global Presence **Where we are on duty**



Ancillary Tailored Service and Support **You can rely on us**

| Analysis & Engineering | Installation | Operation & Maintenance |
|---|--|---|
| Load profiling and forecasting energy demand | Adaptation of communication interface and system power | Remote monitoring of system performance |
| Evaluation of the grid and renewable energy sources | Commissioning | Provide online support for troubleshooting |
| Sizing the energy storage system | Onsite O&M training for technical personnel | Comprehensive hardware, software and spare part management through product lifetime |

autarsys

Make your own energy.

Contact

Headquarters
 Autarsys GmbH
 Johann-Hittorf-Str. 8
 12489 Berlin, Germany

mail@autarsys.com
 Phone +49(0)30.609849800
 www.autarsys.com

Autarsys Eastafrica Ltd.
 Nairobi, Kenya
 info-ea@autarsys.com

Autarsys India Pvt. Ltd.
 Bengaluru, India
 info-india@autarsys.com

Autarsys Westafrica SARL.
 Yaoundé, Cameroon
 info-wa@autarsys.com

Autarsys Madagascar SARL.
 Antananarivo, Madagascar
 info-madagascar@autarsys.com