Replace. Clean and Reliable.

Hybrid Systems Solution for Islands

Renewable energy supply with next generation technology

Vision Energy Independent Islands

We are passionate about the sustainable supply of energy using renewable energy systems. Renewable energies are now presenting a much more cost-effective solution in islands, regardless of their size. Experience shows that energy storage has been one of the weak links in these systems. By offering next generation energy storage technology solutions, we want to contribute to help renewable energies take hold in islands and also make them self-sufficient.

Application Small to Large Remote Islands

Energy supply on islands generally depends on Diesel Generators (DG). These solutions are by far too expensive, unreliable and damaging to the environment. The cost of diesel and it's transport also present a substantial future risk of supply. The need for O&M, especially for island systems, can be significant. Rather than being the norm, the efficient operation of DG is therefore an exception.

Although the installation of solar photovoltaic plants is a step in the right direction, owing to permanent fluctuations, it's contribution is limited to a mere 30% of the total generation. The transition to a solar PV dominated 24/7 energy generation system is therefore incomplete without storage technologies. As experience indicates, a given combination of batteries, control software and management system does not guarantee a reliable system solution as the requirements are too complex.

As a specialist in Energy Storage Systems (ESS) and complex engineering, Autarsys has developed a scalable system solution that reliably covers all the possible risks that arise from island systems and is at the same time cost-effective to produce.

The Autarsys ESS is a robust and reliable system which consists of Li-ion batteries in tandem with hybrid bi-directional inverters. Precise engineering of all system components in a containerized solution ensure that the power electronics operate under "laboratory conditions", thereby firmly securing the long lifetimes and guarantees of individual components.

Product Autarsys Mini Energy Storage System (ESS)

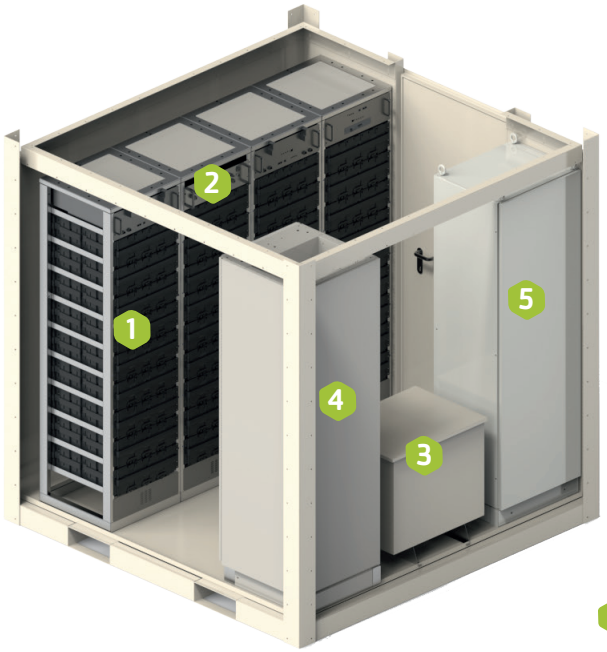
Typically suited for applications on islands, the Autarsys Mini ESS comes as a sealed "Plug & Play" system which is easy to install. It is a specialized solution for harsh weather conditions and is designed to operate at stable conditions that prolong lifetime in spite of high ambient temperature, dust 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×b×h)	2.44 × 2.20 × 2.26 m³
Guarantee*	10 years
Lifetime*	20 years

ESS Features and Capabilities
Off-Grid, On-Grid, Black start capability,
Islanding, Fuel save, Energy Management,
Renewable Control Mode, Arbitrage / Load shifting
Frequency regulation P(f)
Voltage stabilization Q(U)
Harmonic compensation up to 51st
Reactive power compensation
UPS-functionality
SWER-net integration

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

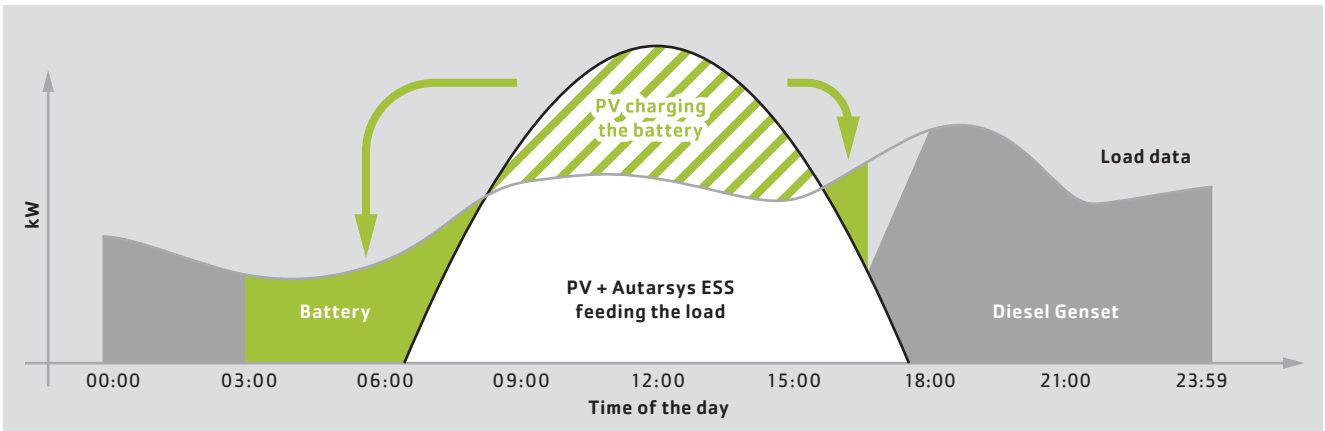


1. Battery racks
2. Precharge
3. Transformer
4. Battery Inverter
5. Control cabinet

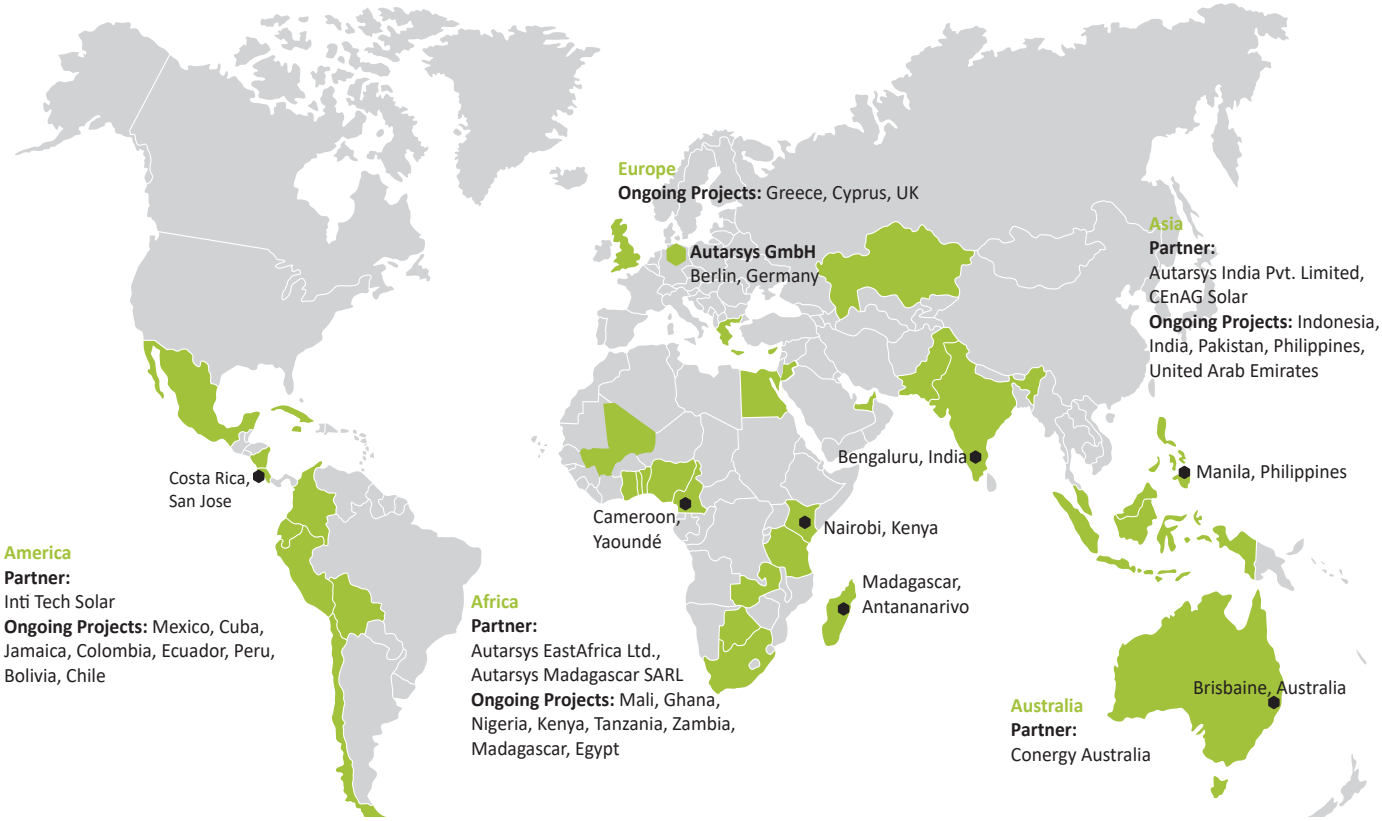
*The guarantee and lifetimes mentioned are under specific standard conditions of operation of the ESS.
Actual product specifications and layout may vary depending upon the application.
For further details, please contact your support team at Autarsys.

Intelligent Energy Management Maximize solar minimize diesel

Diesel generators at low loads are inefficient and expensive to operate. Moreover, excess solar power is curtailed during the day time owing to low demand. The Autarsys ESS functions as a voltage source inverter allowing the DG to be shut down. It's onboard energy management redistributes the excess solar energy stored in it's batteries to match the load at off-peak times. It increases the share of renewable generation, manages fluctuations and results in huge savings by greatly reducing use of the DG.



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.

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