

Press release

THEnergy-IPS report: Solar, Energy Storage and Intelligent Energy Conversion Units Make Safari Lodges in Africa Green

Solar energy cuts the electricity bill of game lodges and reduces emissions.

Sofia/Munich, October 2017 - Safari lodges are normally located in pristine nature, far away from civilization. They are often not connected to the national grid and generate power on-site using diesel generators. Diesel power is flexible, but also has various disadvantages such as has high costs, partly due to transport, and a significant ecological impact, mainly CO₂-emissions, local hazardous exhaust gases, and noise. In solar-diesel hybrid applications, solar is combined with diesel generators for reducing diesel consumption. The new THEnergy-IPS report entitled “Hybrid Solar Mini-grids for Remote Safari Lodges in Africa” shows that as a result, costs are reduced, and both noise and emission levels are improved.

Air conditioning, fans, fridges, freezers, dish washers, washing machines, pumps, lighting, television, radio, phone and camera charging, and heating are among the main sources of energy consumption at safari lodges. Power is needed around the clock, with a peak during the middle of the day and in the early evening. Typical safari guests are rather demanding regarding stable electricity supply. Although green efforts by safari lodges are supported, normally guests are not willing to accept restrictions. A reliable and robust power supply is a basic requirement for safari lodges. Studies show that it contributes to high customer satisfaction. Hybrid controllers or energy conversion units are the key components for efficiently synchronizing the load with various power sources and energy storage, and will ensure a reliable power supply. In addition, solar power is often 50% (or more) cheaper than diesel power at remote safari locations.

“Our EXERON solution has been successfully used for military and telecom applications, two sectors with extremely high requirements regarding reliability”, explains Alexander Rangelov, CEO at IPS. “In addition, our customers honor our hot-swappable, plug & play approach, which saves significant costs during installations and for maintenance – particularly in remote locations.”

The power demand of game reserves might change over time, e.g. through lodge extensions or when their vehicle fleet is electrified. Modular approaches allow for adding additional solar and storage capacity at a later stage. The share of renewable energy can be increased for fully powering lodges with solar or wind energy plus storage 24/7.

“We see an excellent fit between safari lodges on the one hand, and solar and energy storage applications on the other. The first safari lodge operators like Wilderness Safaris, & beyond, Singita, and Kambaku have turned to powering their lodges with solar and storage. The biggest off-grid installation can reach a size of more than 400 kWp solar and 3.2MWh battery storage,” says Dr. Thomas Hillig, Managing Director of THEnergy. “Safari lodges are a very attractive target segment for solar and energy storage companies.”

The full report can be downloaded at: <https://www.th-energy.net/english/platform-renewable-energy-on-islands/reports-and-white-papers/>

About IPS

IPS is a company with 28 years of experience in developing and manufacturing power electronics and energy conversion technologies. Its award-winning technology – EXERON (www.exeron.com) is a fully

integrated modular system applicable in multiple sectors some of which are mini-grids, telecom, residential, military, oil and gas and industrial. The technology can combine power from different energy sources like solar panels, wind turbines, diesel gensets and the grid, store unused energy in a battery and offer a consistent power supply and energy independence for areas with limited or no grid.

All the system's modules are plug & play, hot swap and built to work as integral parts of a whole. This allows for higher overall efficiency and more intelligent management of the system. Initially designed as an off-grid power solution for the defense sector, EXERON has unrivalled reliability and quality. EXERON is without an analogue as a technology on the market, military approved (AQAP 2110 certified) and patent pending in the USA. IPS's products are operated currently in 56 countries worldwide.

About Dr. Thomas Hillig Energy Consulting ("THEnergy")

THEnergy assists companies in dealing with energy-related challenges. Renewable energy companies are offered strategy, marketing and sales consulting services. For industrial companies, THEnergy develops energy concepts and shows how they can become more sustainable – combining experience from conventional and renewable energy with industry knowledge in consulting. In addition to business consulting, THEnergy advises investors regarding renewable energy investments in changing markets. www.th-energy.net

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