

Off-grid Experts Workshop: exchange on autonomous systems

Off-grid electricity supplies are not an important subject in Europe – so think many due to the market aimed at on-grid PV. But they are very wrong; many experts and companies are also thinking about off-grid solutions in Europe. An opportunity to get together was provided by the Off-grid Experts Workshop in Memmingen, in southern Germany, which took place for the fourth time this year. 450 international guests followed the invitation of the systems integrator Phaesun and the co-organiser Steca Elektronik GmbH.

The event combined a presentation programme of interactive sessions with an exhibition and near-practice elements such as a hands-on workshop, in which participants were able to install off-grid systems on their own. The main focus went from rural electrification to solar water supplies and applications in both the industrial and leisure fields. New this year was the “Speaker’s Corner” as a platform for subjects considered to be exotic and outside the off-grid forum. The Managing Director of Phaesun GmbH, Tobias Zwirner, believes the event is moving in the right direction, with increasing visitor interest being shown: “The off-grid niche market is not being given enough attention by large sector events. With the Off-grid Experts Workshop we have created a platform on which manufacturers, users and other experts can exchange views on the many-faceted field of autonomous energy supplies at a high level.”

And yet it is especially successful events which change and develop further. The exhibitors and visitors this time took a closer look at wind and hydro power in addition to PV. Zwirner thinks this is also logical from an application viewpoint: “Autonomous

solar technology has more points of contact with off-grid wind or hydropower than it does with on-grid solar technology.”

Trends in off-grid solar power use

LED lights and PV modules as a power source have meanwhile become a lot cheaper. Sales of complete kits for autonomous electricity supplies are thus rising with this trend and strengthening it. They are used not only in households in structurally poor regions of Africa, Latin America and Asia, but also in Europe; campervans are often “on the road” and thus off-grid. But it can also be seen that there is a growing demand for complete systems in larger power applications. Martin Hauck from Smart Energy-systems reports: “We have moved over to installing the electronics suitable for the requested system directly in junction boxes and selling Plug’n’Play complete solutions. This avoids problems with the choice of the right components and installation on site.” The company builds in electronics from Studer Innotec from Switzerland, an event partner of the

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workshop. Eric Werfeli, Sales Engineer at Studer, reports an increasing demand for monitoring off-grid systems: “More and more often hybrid systems with more than one energy source are being installed, which supply important electrical systems such as telecommunications stations.”

Awards presented for the 2nd time

Exceptional achievements were celebrated with the Off-Grid Experts Awards 2015 at the end of the event. Especially good examples on the subject of “energy independence” were highlighted in the four categories of product, project, photo and film. The winning

product was an electronic controller, the “Universal Electricity Dispenser” by the Spanish company Trama Tecno Ambiental. In the project category the judges praised the Foundation for Rural Electricity Services (FRES) team from the Netherlands for a comprehensive solar electricity supply project in Mali. Gilda Monjane’s photo “Solar power solution for learners” from Mozambique won the prize in the photography category. And finally, the Bavarian start-up company LuvSide won the short-film competition with their piece “The Dream of Autonomous Energy Supplies”, in which a vertical axis wind generator played a major role.

Ralf Ossenbrink

Visitors to the Off-grid Experts Workshop came from all around the world to Memmingen in southern Germany.

Photo: Phaesun

the USA and presented, among others, its optimised AGM (Absorbed Glass Mat) deep cycling battery with 6 to 12 V in Anaheim.

REC presented a 20 kW version of its Solar Box, a hybrid solar plus storage plus diesel generating microgrid system. It is integrated in a storage container that can be shipped and also doubles as an office. So far systems with around 100 kW have been sold, says George McClellan, Technical Sales

Manager at REC. He sees the main future sales markets to be especially construction projects in remote areas, where a quickly implementable supply of electricity is in demand.

The PowerCube from **Power Oasis**, a U.S. partner company of Panasonic, is designed to supply electricity to critical communications networks with site loads from 700 W to 1.5 kW. This off-grid market may not be so big in terms of volumes, but it is strategically



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