

Press Release

## The KACO new energy Ultraverter concept wins Germany's most prestigious photovoltaics award.

**Bad Staffelstein / Neckarsulm, 06. March 2015 – With Ultraverter, the Neckarsulm-based solar PV inverter manufacturer has combined the advantages of module- and string inverters in a completely new “AC serial switching” system architecture. The concept was awarded an Innovation Prize at the “30th Photovoltaics Solar Energy Symposium” in Bad Staffelstein, Germany, for being one of the rare key innovations in the branch.**

The OTTI innovation prize jury chose to award KACO new energy GmbH for a new generation of solar PV inverters, the Ultraverter blueplanet flex and blueplanet flexgate. The technological concept of the Ultraverter can basically be classified as MLPE (Module Level Power Electronics). It differs from conventional approaches by means of lower voltage DC-AC conversion at module level, with the resulting advantages of lower switching losses and lower material stress on the components.

The Ultraverter consist of two components, the blueplanet flex inverter and the blueplanet flexgate grid connection box. The **blueplanet flex** are low voltage inverters, which turn almost any commercially-available PV module into a pure AC source. They can be mounted onto existing module racks or can be pre-installed as a fixed module component. The brainpower is to be found in the **blueplanet flexgate** grid connection box. The blueplanet flexgate is responsible for controlling the strings, the connection to the public grid and the communication with the operator. The connection output of each blueplanet flexgate is modularly scalable: single-phase it ranges from 1 to 11 kilowatts, and three-phase from 3 to 20 kilowatts.

The chief attraction of the concept: thanks to their patented switching concept, the blueplanet flex are **compatible with all grid voltages and grid frequencies world-wide**. The number of modules per string is therefore simply selected in accordance with the grid voltage. A universal inverter for all networks also means: system design, warehousing and logistics become easier than ever with the Ultraverter.

They also fulfil all current demands when it comes to reliability and operational safety. Should a module indicate an error, automatic bridging occurs, voltage losses are compensated for, and the impact of the defect is reduced to a minimum. Every blueplanet flex optimises the performance of its “own” module, so that losses caused by shading or soiling become less relevant. Highest safety is assured thanks to the ability to disconnect strings right down to module level, for example, during maintenance or in the event of fire.

Ultraverter find their optimum areas of application in PV systems ranging from small private arrays up to medium-sized, commercial solar power plants.

KACO new energy is confident that thanks to the Ultraverter concept, the technical and normative hurdles which nowadays still complicate market access in many places and make photovoltaic unnecessarily expensive, will be overcome. In that sense, they not

only mark technological innovation, but could also be an important, reasonably-priced building block in the global energy turnaround.

The award-winning highlights of the KACO new energy Ultraverter concept at a glance:

- \_Compatible with all grid voltages, world-wide
- \_Operates at low voltage levels
- \_Easy system layout and mounting
- \_Intelligent power adjustment
- \_Automatic bridging in the event of an error
- \_String disconnection at module level

### **About the Photovoltaics Solar Energy Symposium**

The “Symposium Photovoltaische Solarenergie” (Photovoltaics Solar Energy Symposium) is the most important meeting point of the PV branch in Germany. This is also reflected by the fact that the Symposium celebrated its 30th anniversary in 2015. The event was held at the Banz Monastery in Bad Staffelstein and was organised by the *Ostbayerisches Technologie-Transfer-Institut e.V.*, OTTI (East Bavarian Technology Transfer Institute). OTTI is a non-profit organisation founded in 1977. Headquartered in Regensburg, it is one of the leading organisers of practice-oriented conferences in the field of Renewable Energies in Europe.

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### **About KACO new energy**

KACO new energy is amongst the world's largest manufacturers of solar inverters. With 850 employees and offices in 16 countries, the company offers inverters for every array size from the smallest homes to the largest solar farms of hundreds of Megawatts. KACO new energy is based in Neckarsulm, near Stuttgart, Germany and the production facilities there, in the Americas and Asia have supplied approx. 7 Gigawatts of inverters since 1999. The Company was the first inverter manufacturer to achieve fully carbon-neutral production and is rapidly heading towards power self-sufficiency. KACO new energy also supplies energy storage systems and battery inverters, as well as inverters for combined heat and power plants and CPV systems. In 2014, KACO new energy celebrated the Centenary of the original company which was one of the first suppliers of inverters in the late 1930s.