

## Press release 2/2013

### **PSE AG introduces a new kind of sun position sensor**

#### **Heliosensor is a finalist for the Intersolar Awards 2013**

*Freiburg, June 10th, 2013 –*

PSE AG, along with development partner Black Photon Instruments GmbH, will be presenting its new sun position sensor, the Heliosensor, for the first time at Intersolar Europe 2013. The Heliosensor determines the incidence angle of solar radiation with high precision, and so tests the precision of uniaxial and biaxial solar tracking systems, such as heliostats and CPV trackers. The Heliosensor can also be used as a position sensor for high-precision tracking systems. The wide acceptance angle (for monitoring angle-dependent output measurements) is especially interesting for research institutions.

The sensor measures the incidence angle of direct sunlight within an acceptance angle of  $\pm 60^\circ$ . The resolution for the entire range is better than  $0.02^\circ$ . PSE has patented its method of attaining a combination of such a wide incidence angle and such high resolution. Within the sensor, a transparent pattern is positioned in front of a CCD chip. Depending on the sun's angle in relation to the sensor, a different part of the pattern is projected onto the chip. Software developed by PSE then determines the incidence angle of the sun in relation to the sensor.

The concept, the degree of innovation and the broad range of applications have convinced the Intersolar Awards committee: Out of numerous candidates, PSE AG was nominated a finalist in the solar thermal category. A presentation of the sensor's concept and its advantages will introduce the Heliosensor at the Intersolar Europe Innovation Exchange on Wednesday, July 16<sup>th</sup>, Hall B2, booth B2.430. In addition, PSE AG will be exhibiting the new sensor at the PSE booth, A2.434.

Andreas Häberle, CEO of PSE AG, reports that the idea for the Heliosensor “was born of the challenge to document the precision of our trackers for testing institutions. No sufficiently precise machine was available on the market, so we had to develop one ourselves. We are very excited to present our Heliosensor at the Intersolar in Munich.”

More and more concentrating solar technologies with tracking systems have been installed and operated successfully in recent years. With the Heliosensor, researchers and product developers have a reliable tool for developing tracking systems and for measuring the performance of solar modules and collectors.

### **About PSE AG**

PSE AG offers test systems for PV modules and solar collectors, as well as services on the international level relating to the use and development of solar energy systems. PSE test stands are used by institutes and product developers for performance and quality testing, as well as certification testing for international standards. PSE offers consulting services in the area of rural electrification and in the coordination of international research projects. PSE conference management organizes international scientific solar conferences.

The company was founded in Freiburg in 1999 as a spin-off of the Fraunhofer Institute for Solar Energy Systems, and currently employs 65.

### **About Black Photon Instruments GmbH**

Black Photon Instruments GmbH is an internationally recognized manufacturer specialized in high accuracy measurement systems for photovoltaic and meteorological applications. Its product portfolio includes sensors for measuring CPV tracking accuracy, spectral distribution of sunlight for multi-junction\* solar cells and circumsolar radiation.

Black Photon Instruments was founded as a spin-off of Fraunhofer Institute for Solar Energy Systems (ISE) in July, 2010, and is located in Freiburg im Breisgau, Germany.

Press information and photos are available for download on the News page of the PSE website: <http://www.pse.de>.

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*Heliosensor to measure the incidence angle of direct sunlight ©PSE AG*