



PRESS RELEASE

Talesun develops new Module without Potential Induced Degradation Zero PID Module already in test production

Munich, 19th August 2014: Zhongli Talesun Solar, a leading international manufacturer of high quality solar modules and cells, has developed a new photovoltaic module that exhibits no Potential Induced Degradation. The test production of the Zero PID Module, which has been developed together with Dow Chemical, has already begun in Jiangsu. The series production will begin on certification of the new module type by Germany's TÜV-Süd testing centre.

Potential Induced Degradation (PID) is a complex phenomenon that arises for three reasons: Through the mobility of sodium ions under high voltage, through polarization of the surface arising from charge redistribution, and through integrated circuits related to an electro-chemical induced corrosion. Over the long-term, PID endangers the electricity production, causing losses in output of up to 70 percent. The Zero PID Module from Talesun uses a new material from Dow Chemical to encapsulate and thereby prevent the PID effect.

Tests confirm Zero-PID characteristics

The Photovoltaik-Institut Berlin (PI Berlin) has already tested several modules: The maximum voltage amounted to 1,000 volts. Humidity was measured at 85 percent and the temperature at 85 degrees celsius. The trial ran over 672 hours, which corresponds to a simulated period of 25 years under normal operating conditions. The tests have shown that the PID across all modules lay below one percent and was thereby clearly below industry standards; conventional modules were tested under identical levels of humidity and temperature for just 96 hours and generated PID levels of some five percent.



Furthermore, the tests showed that the photovoltaic module retained a high efficiency level over the long-term. Stability was clearly above that of conventional modules, allowing users to build on a long-term secured yield. The modules that were evaluated in Berlin originated from test production at the Talesun plant. Mass production will begin on certification of the Zero PID Module by Germany's TÜV-Süd test center.

“We are currently awaiting the certificate from TÜV Süd”, says Gregor Albrecht, Managing Director at Talesun Solar Germany GmbH in Munich. “We have innovatively adapted the Dow Chemical encapsulation material. Our R&D department has also revised the cell technology, so that the mobility of sodium ions is prevented. The result is our Zero PID Module, an innovation which ensures that we remain at the summit of technological advances in PV. This is further evidence of how innovation drives everything that we do at Talesun.”

“The high specific resistance of the encapsulation material and our level of expertise with polymers have made the development of the Zero PID Module possible,” says Sang-Ho Kang, Global Business Director at Dow Photovoltaic. “We are proud to be able to work together with such a highly innovative company as Zhongli Talesun Solar.”

**About Talesun**

Talesun is an internationally operating premium producer of solar modules and cells for the private and industrial sectors. The company's 210,000m², fully automated production plant in the Chinese province of Jiangsu reaches a production capacity of 2 GW. Talesun has subsidiaries in Hong Kong, Singapore, Munich and San Jose. More information under: www.talesun-eu.com and www.talesunenergy.com.

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