PRESS RELEASE

A new test stand from PSE AG enables stress-testing of PV modules under real-world conditions

CFV Solar puts new mechanical load test stand into operation

Albuquerque/Freiburg, May 31, 2012. The CFV Solar Test Laboratory in Albuquerque, NM, USA, has begun using a mechanical load test stand supplied by the Freiburg company PSE AG. With this new test stand the capacity of PV modules to resist mechanical stresses can be accurately simulated and measured. The test stand enables the testing of loads not only at room-temperatures but also at temperatures from -40℃ to +80℃. This means that engineers can evaluate the performance, reliability and durability of PV modules for use in different climatic regions.

Martin Plass, General Manager of the CFV Solar Testing Laboratory in Albuquerque, NM, is very happy with the new equipment: “This new load-test stand enables us to determine whether modules can actually provide what they promise at both low and high temperatures. This is particularly vital in order to test new materials used in PV-modules.”

A special feature of the test-stand is the adjustment mechanisms of the cylinders and the 96 vacuum suction cups. The PSE arrangement allows rapid set-up of the machine for different size modules with equal distances between suction cups for a uniform load distribution. The high upper load limit of 10,000 Pa makes it possible to perform tests well in excess of normal demands and evaluate the modules safety margins. Another advantage is the ability to dynamically load-test modules with rapid switching-cycles of up to 4Hz, which can simulate stresses from wind-gusts or transportation and handling operations.

Frank Luginsland, head of the PSE AG Technology Department is also happy: “With our new test stand the mechanical reliability of PV modules can be evaluated under very realistic conditions. We are also

pleased with the short set-up times and the high ease of use we were able to achieve with this new design, both of which help reduce testing costs and times."

The mechanical load test stand applies both pull-and-push stresses to PV modules at different angles, thereby simulating the effect of wind and snow loads on the module in real-world mounting conditions. Present standards only require the stress tests to be carried out at room temperature, whereas in reality much higher and lower temperatures are encountered that significantly change the capability of modules to accept these stresses. With the new PSE test stand it is possible for the test engineers at CFV to develop new test programs for the industry that might also be integrated into future certification standards.

About PSE AG

PSE AG provides solar testing systems and solar consulting expertise to customers around the world. PSE Solar Test Stands are used by test labs and manufacturers for performance and durability measurements and certification to international standards. PSE Solar Consulting conducts rural electrification consulting and manages international research projects and PSE Conference Management organises major scientific solar conferences.

PSE AG was established in 1999 as a spin-off company of the Fraunhofer Institute for Solar Energy Systems ISE and currently has a staff of 65.

About CFV Solar

CFV Solar Test Laboratory, is a new state-of-the-art photovoltaic testing laboratory, jointly-owned by the CSA Group, the VDE-Institute, the Fraunhofer Institute for Solar Energy Systems ISE and the Fraunhofer USA Center for Sustainable Energy Systems (CSE).

The CFV laboratory carries out both certification and non-certification tests for all PV technologies. Examples include the testing of flat plate modules, thin-film modules and concentrating photo-voltaic systems. The test center supports suppliers of PV modules seeking to commercialize their products faster and at lower cost thanks to its ability to certify solar modules simultaneously for more than one country.

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