



Press Release 1/2015

First Full Test Center for Solar Collectors in Central America

PSE AG Delivers Testing Facility to Costa Rica

Freiburg, May 5, 2015 – PSE AG announced today that it has delivered a turnkey test center for thermal collectors and factory made systems to the state owned power company Grupo ICE in Costa Rica. The test center consists of several testing facilities to measure the performance and reliability of solar thermal collectors and systems. The main components of the test center are PSE's new SORAS-ST6 steady-state solar simulator, a mechanical load tester, as well as a rain and thermal shock tester. The entire test center is designed to test collectors and systems indoors and outdoors according to all relevant international standards like ISO 9806 and ISO 9459-5.

"This test center is unique in Central America. Grupo ICE will take advantage of getting all the equipment from one source. The high degree of automation will guarantee repeatable results on an international level" explains Jan Steinmetz, project leader at PSE AG in Freiburg, Germany. Virgilio Jiménez Valverde, General Coordinator of the Laboratory for Energy Efficiency at Grupo ICE also welcomes the start-up of the test center: "We see a big potential for thermal solar systems in Costa Rica and all of Central America. The market is just developing and it is important to have quality products in the market. We are very proud that we can test and approve the quality of products for our customers."

The heart of the test center is the new steady state solar simulator SORAS-ST6 to test solar thermal collectors independently of weather and season. Fully automated, it determines the power and efficiency curve of

solar thermal collectors. To simulate solar irradiation six metal halide lamps are in operation. Together with the artificial sky the simulator generates outdoor like irradiation.

Another important component of the test center is the mechanical load tester MLT12 of PSE AG, which simulates static and dynamic loads on thermal collectors. Twelve pneumatic cylinders with vacuum suction cups exert both compressive and tensile loads on test samples.

The rain and thermal shock tester RAST is a three-in-one test stand, covering internal and external shock tests as well as rain penetration tests.

The equipment supplied by PSE AG is part of a comprehensive project that also includes the analysis of the energy efficiency of washing machines, water heaters, household and commercial refrigerators, household electrical stoves, electrical motors up to 50HP, and all kinds of light sources. Capris Engineering acted as the general contractor and developer of the complete project.

The accreditation of the test center in accordance with ISO 17025 is currently underway. Comparative measurements with the Fraunhofer Institute for Solar Energy ISE in Freiburg, Germany have already confirmed that the test center delivers nationally and internationally comparable results.

About PSE AG

PSE AG offers test systems for PV modules and solar collectors, as well as consulting services for 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.

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PSEs steady state solar simulator SORAS-ST6 and mechanical load tester MLT12 are part of the test center of Grupo ICE in Costa Rica. © PSE AG