

Plenary Talk

PV XIII Thu 9:00 Audimax 2

Status and Perspectives of Concentrating Solar Power Technologies — ●ROBERT PITZ-PAAL — DLR, Institut für Solarforschung, Cologne, Germany

In CSP technology concentrating collectors are used to generate high temperature heat that drives a conventional power cycle. As heat can be stored simpler and cheaper than electricity the concept is very suitable to provide electricity according to the demand in particular covering the load peak after sunset typical in many Sunbelt countries. CSP electricity costs have dropped approx. by half since the beginning of the commercial implementation phase in 2007 along with the

implementation of 6,2 GW of CSP plants worldwide. They range today from 12 €cents/kWh down to 6 €cents/kwh depending on size of the power plant, solar resource and financing conditions. Further cost reduction is driven by mass production effects but also through technical innovations that lead to higher system efficiencies, resulting in more electricity output per sqm of concentrator surface. The talk will provide background information on the current market and cost situation. It will highlight new technology concepts and report on the progress of research projects that target to increase system efficiency through higher operation temperature in the heat transfer fluid of the system.