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## Press Release

Concentrix Solar GmbH  
Bötzingen Str. 31  
79111 Freiburg  
Germany  
[www.concentrix-solar.de](http://www.concentrix-solar.de)

**Contact:**

Silke Hajunga  
Public Relations

Phone: +49-761-214108-24  
Fax: +49-761-214108-29  
[hajunga@concentrix-solar.de](mailto:hajunga@concentrix-solar.de)

### **Concentrator PV power plant feeds solar electricity into public grid with 23% AC efficiency**

Concentrix Solar confirms the record efficiency of its concentrator technology FLATCON<sup>®</sup> in commercial power plant

Concentrix Solar confirms the excellent efficiency of its demonstration systems at its commercial power plants in Spain. On clear days at the Casaquemada power plant, system efficiencies of 23 percent AC are consistently measured for the entire concentrator power plant under normal field operating conditions.

Such a high efficiency was measured a year earlier at a demonstration system with a power of 5.4 kW in Seville, Spain. "We are happy to be able to show that it is possible to reach these high efficiencies also in a larger installation and not only for a single test system", says CTO Dr. Andreas Gombert. "At an efficiency of 23 percent, our concentrator systems produce almost exactly double the electrical power yield of conventional PV power plants".



Figure 1: Casaquemada, the combination power plant of Concentrix Solar and Abengoa Solar in Spain.

Casaquemada is a 2 megawatt power plant located near Seville in Sanlúcar la Mayor, Spain, which Concentrix Solar operates together with its partner Abengoa Solar. In this power plant, tracking systems were installed with both silicon modules and concentrator photovoltaic systems, making it one of the first combination power plants of this kind. For this power plant, Concentrix Solar provided 100 kilowatts (kW) of installed power.

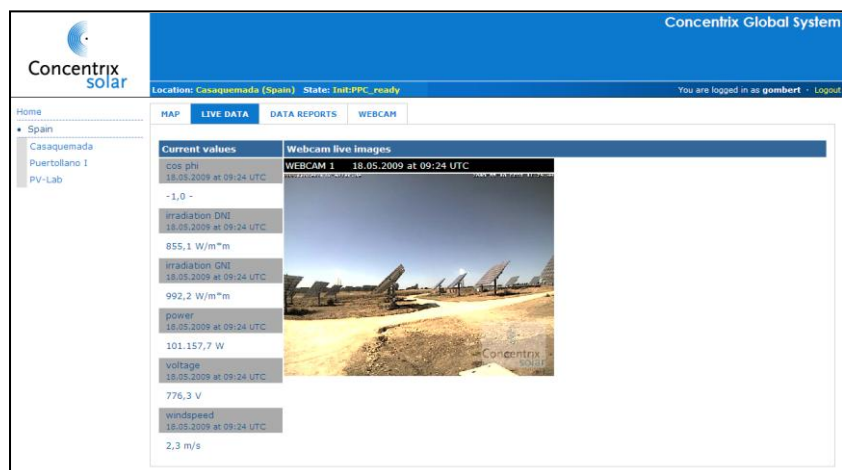


Figure 2: Photo of the Concentrix Solar monitoring system. At an irradiation of 855 W/m<sup>2</sup>, the power plant achieves a power of 101,158 watts.

In Casaquemada, first generation FLATCON modules with a power of 48 watts are still in use. In the meantime, Concentrix Solar produces a newer and more efficient module generation. The new modules CX-75 have a power of 75 W and achieve an average efficiency of 27.2 percent.

Since September 2008, Concentrix Solar's FLATCON modules are commercially available. Concentrix Solar produces its new concentrator modules using a fully automated industrial production line with an annual production capacity of 25 megawatts (MW) located in Freiburg, Germany. The building and infrastructure are designed in such a way that Concentrix Solar can quickly increase its production capacity to 100 MW. With this, Concentrix Solar takes a top position worldwide among the manufacturers of concentrator photovoltaic modules with respect to quality and capacity.



#### **About Concentrix Solar**

Concentrix Solar GmbH was founded in February 2005 as a spin-off company of the Fraunhofer Institute for Solar Energy Systems ISE. At present, about 60 people are employed at Concentrix Solar. Concentrix Solar manufactures concentrator power plants for sunny locations. By means of Fresnel lenses, sunlight is focused onto small highly-efficient solar cells. These solar cells convert the sunlight, concentrated 500 times, directly into electrical energy. With this technology, system efficiencies of 23 percent are possible, which are clearly above those achieved by conventional PV technologies. Typical silicon modules achieve about 13 to 14 percent, good thin film modules reach efficiencies between 7 and 10 percent.

Concentrix Solar operates a fully automated production line in Freiburg, Germany with an annual production capacity of 25 MW for manufacturing its concentrator modules.