News Release

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Novatec Solar’s Fresnel collector generates superheated steam above 500°C

Karlsruhe, Germany – Novatec Solar’s Fresnel collector has successfully generated superheated steam at temperatures above 500°C at its 1.4 megawatt (MW) demonstration plant in Murcia, Spain, by implementing an innovative receiver design.

“With this technical achievement, Novatec Solar takes a leading position in the development of high temperature CSP technology”, says Martin Selig, Head of Market and Product Development. “It combines the low cost nature of our Fresnel technology with high cycle efficiency of superheated steam turbines, leading to significant reduction of electricity generation cost of concentrated solar power.”

The superheated steam technology uses vacuum absorber tubes being integrated in Novatec Solar´s market proven technology that is currently deployed in all commercial projects of Novatec Solar. “By using vacuum receivers, the heat losses can be reduced by 50 % compared to the Nova1 technology.” says Dr.-Ing. Max Mertins, Head of Research & Development.

The German Aerospace Center (DLR) has been engaged as an independent certifier to carry out performance tests on the superheated steam plant. DLR’s certification will provide a reliable basis for all future CSP projects that use superheated steam.

Novatec Solar is a leading provider of Linear Fresnel CSP technology, using flat mirrors to concentrate the sun’s energy onto a receiver to generate steam. The steam can be used to generate electricity, in new power stations or as a fuel saver in existing ones and also in other industrial applications requiring process heat including enhanced oil recovery and district cooling.

Novatec Solar’s 1.4MW_e demonstration plant in Murcia, has been connected to the Spanish national electricity grid since March 2009. The company began constructing the world's first commercial 30MW_e Linear Fresnel power plant in April 2010, also in Spain, and is building a solar field to reduce emissions at a coal-fired power plant at Liddell in Australia.

Novatec Solar has developed a highly automated manufacturing process and solar field cleaning system.

In March 2011, ABB, the leading power and automation technology group, acquired a 35 percent shareholding in Novatec Solar.

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About Novatec Solar

Novatec Solar (www.novatecsolar.com) was founded in 2006 by management shareholders Martin Selig, Dr. Max Mertins and Gerhard Hautmann. Novatec Solar is based in Karlsruhe, Germany. The Novatec management team is made up of experts from solar energy research and development, automotive mass production and power plant design. Novatec Solar's focus is the production, development, implementation and operation of solar boilers based on Fresnel collector technology.

About ABB

ABB (www.abb.com) is a leader in power and automation technologies that enable utility and industry customers to improve their performance while lowering environmental impact. The ABB Group of companies operates in around 100 countries and employs about 130,000 people.

About Transfield Holdings

Transfield Holdings (www.transfield.com.au) is a leading Australian development and investment company. Transfield has investments in Transfield Services Limited and Campus Living Villages, each of which have significant activities internationally. Transfield Holdings is the majority shareholder in Novatec Solar.

Media Contacts

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Figure 1 Supernova Collector, generating superheated steam achieving temperatures above 500°C