

# Press Release



*For your technology editors*

## Thermal Solar Plant automated by ABB Spain

### *Generating power from the sun even at night*

Madrid, June 26, 2007: ABB Spain was recently awarded with the contract for the ANDASOL units 1 and 2 Solar Power Station plant distributed control system. The Andasol solar power stations will be Europe's first parabolic trough power plants. They are located in Andalucia, in the province of Granada, one of the sunniest regions in Spain.

This solar thermal power plant uses solar energy to generate heat that is then converted into electricity. Parabolic trough power plants consist of a huge field (called solar field) of trough-shaped parabolic mirrors that concentrate sunlight onto specially coated absorber tubes (receivers) located along the focal line. Concentrated solar radiation is converted into heat inside the specially coated receivers. Then, a special heat transfer fluid flows through the receivers, is then pumped to the main power plant generator. The steam generated is then used to operate a turbine which generates electricity in the same way as in conventional power plants. One of the most surprising technological features is that it is possible to make electricity from the sun even by night. For this purpose, it is used liquid salt tanks for thermal storage.

The Joint Venture SENER-ACS/Cobra group is responsible for constructing the power plants. Both units are currently under construction.

The DCS solution is based on ABB Industrial IT, one of the most reliable families of controllers, communication interfaces and I/O modules that match these challenging requirements in solar power generation. ABB controllers provide a full range of controls, scalability, and fault tolerant redundancy options. The more of 4.000 I/O signals are interfaced on ABB based S800 units via Profibus™ communications. This provides remote and local installations in a small footprint, provided by standard cabinets with rail mounting, covering the fully broad range of I/O types.

The Man-Machine Interface is based on ABB Power Generation Portal™, that represents the most advanced full-featured information platform for plant management and control. Power Generation Portal embraces the use of context sensitive aspect menus to provide integrated information sharing, intuitive navigation, and efficient engineering.

ABB Spain, is part of the ABB Group, ([www.abb.com](http://www.abb.com)), a global leader in power and automation that enable utility and industry customers to improve performance while lowering environmental impact. The ABB Group of companies employs 152,000 and operates in more than 100 countries worldwide.

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