



Valle 1 and 2, Parabolic Trough Technology, Spain

Valle 1&2 are adjacent solar plants located in Cadiz, Spain that feature parabolic trough solar technology combined with molten salt storage facilities.

The construction of the plants started in late 2009 and was completed in 2011. The plants have a combined power capacity of 100MW and are now fully operational. The footprint of the solar field covers 510,000 square metres and the molten salt storage system allows for seven to eight hours of power generation without sunlight.

Valle 1&2 are the two first thermo-solar plants in the province of Cadiz, representing a total capital investment of 700 million euros, the largest private outlay made to date in the province. The plants will be able to produce approximately 300GWh/year, which is equivalent to the average consumption of 45,000 households a year, or the entire city of Cadiz. Moreover, the plants displace more than 96,000 tons of CO₂ a year.

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Both plants utilise the latest parabolic trough technology developed by Torresol Energy JV partner Sener. This technology has unique mechanical characteristics – an appreciably lower steel weight and fewer assembly hours compared to similar collectors. These advantages are significant given the fact that conventional 50MW solar plant includes 90km of parabolic trough mirrors requiring about 15,000 tons of steel.

Torresol is a Joint Venture between Spanish engineering firm Sener (60%) and Masdar (40%).