

VALLE 1 & VALLE 2, among the first plants of 50 MW with thermal molten salts storage system and SENERtrough collector loops



Torresol Energy
re inventing solar power

MAIN FEATURES PER PLANT

Key technologies: SENERtrough collectors and molten salts storage system

- Nameplate power of **50 MW**
- Thermal storage without sunlight up to **7.5 hours**
- Energy production of **170 GWh/year**

The computer program SENSOL, developed by SENER, has been in use to simulate:

- The functioning of the plants
- The obtaining electric power
- The optimization of its design

LOCATION



VALLE 2

VALLE 1

SOLAR FIELD

156 parallel loops with four series connected collectors

Each solar field consists of **624 units of SENERtrough collectors**

Each solar fields takes up a total mirror surface of **510,120 sqm**

SENERtrough collectors

Higher reliability, optical performance and a state of the art design that reduces the production and assembly costs

BENEFITS PER PLANT

- Clean and safe **energy supply to 40,000 households**
- Energy efficiency, since each plant guaranties electrical production for **3,600 hours per year**
- **45,000 CO₂ emissions tons** saved every year

OPERATION PROCESS

Parabolic trough collector plants

Sun radiation concentrates on a central tube where the thermal oil circulates

Central absorbing tube. The thermal oil circulates inside the tube

Loops. Rows of parabolic shape mirrors that concentrate the sun radiation on a central tube

Sunlight

