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

Torresol Energy
reinventing 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**

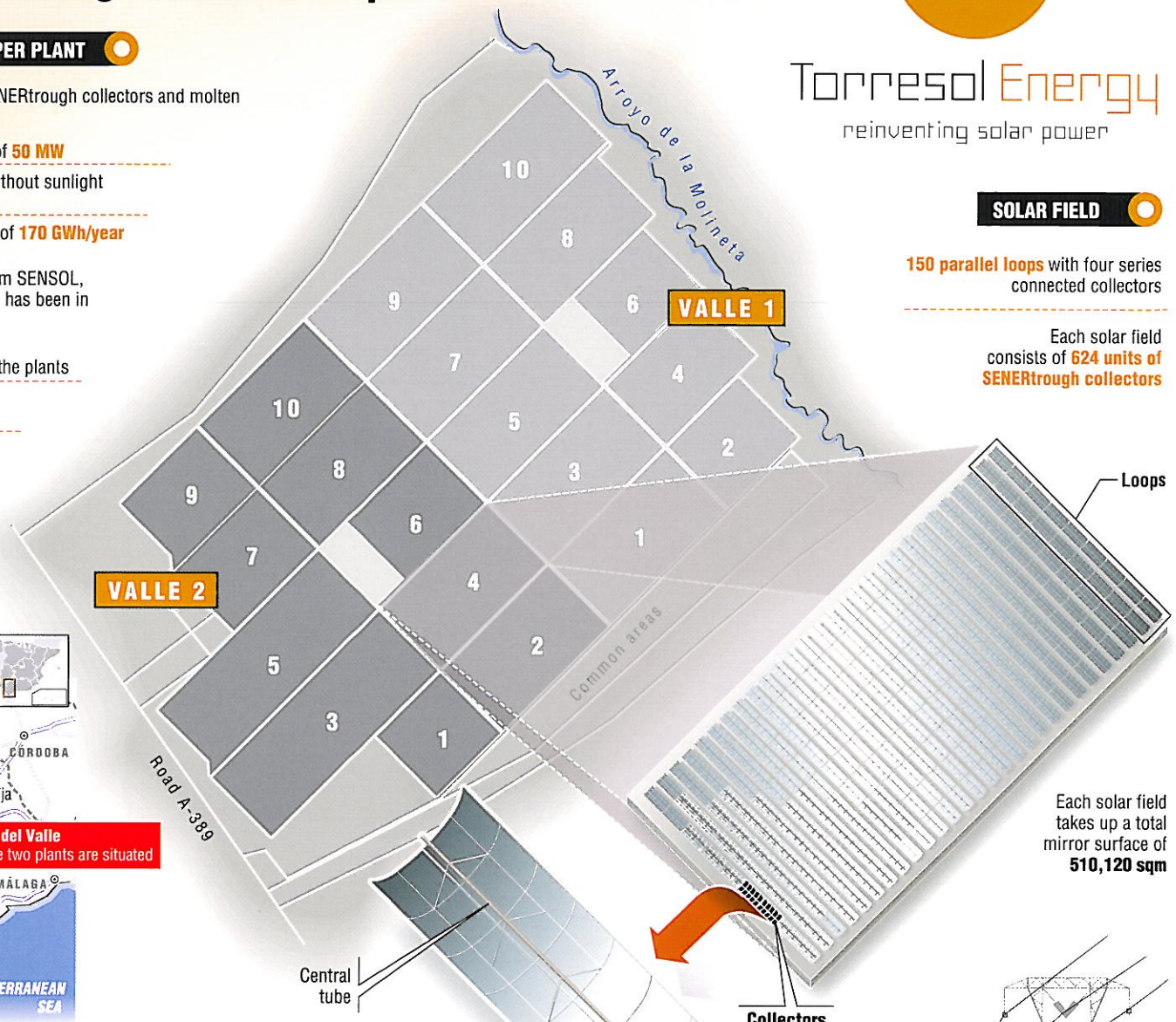
The computer program SENSOL, developed by SENER, has been in use to simulate:

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

SOLAR FIELD

150 parallel loops with four series connected collectors

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



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

LOCATION

SENERtrough collectors

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

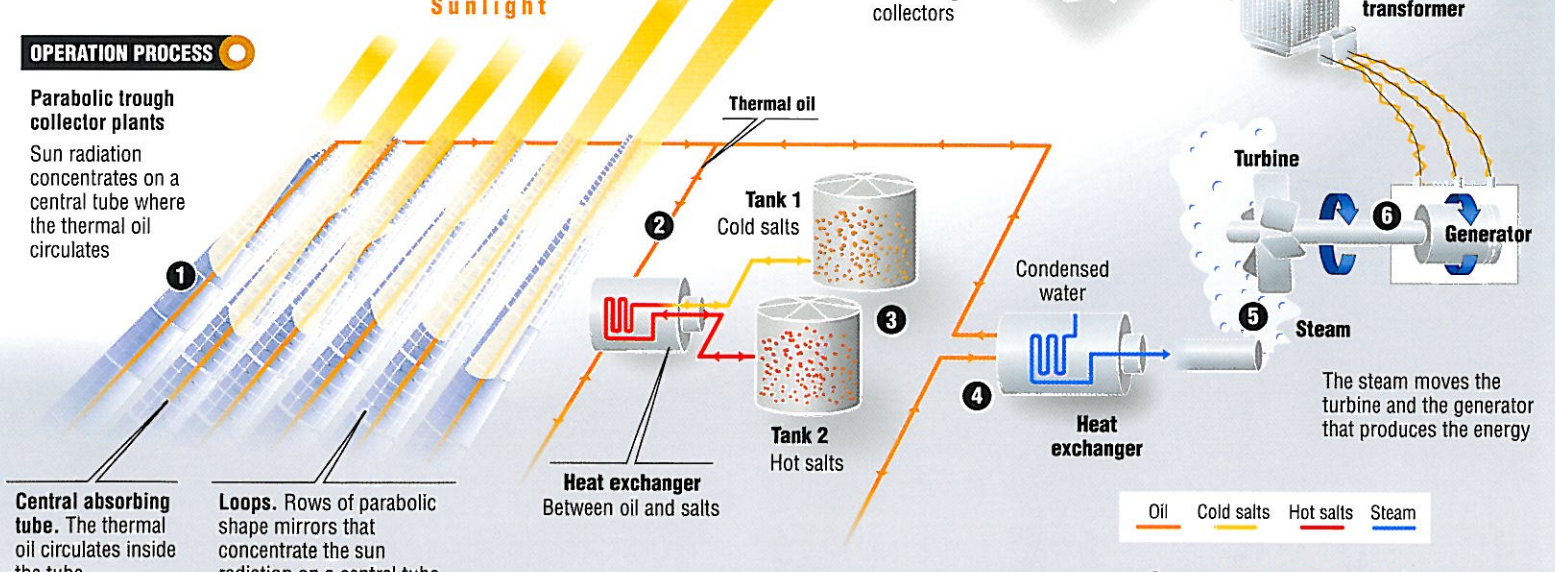
BENEFITS PER PLANT

- 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 CO_2 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

The steam moves the turbine and the generator that produces the energy

Source: www.torresolenergy.com / Infography: **GRAFÍA**