

GEMASOLAR, the world's first solar thermal plant consisting of central tower technology and salts receiver



Torresol Energy
reinventing solar power

GEMASOLAR, with a nameplate power of 19.9 MW, will be the first commercial plant in the world with heliostats, central tower and molten salts receiver technology

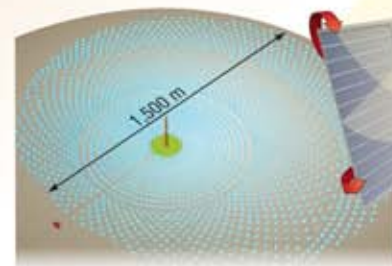
Key technological solutions have been developed

- Bigger and more numerous heliostats
- Receiver thermal power increased by three
- Molten salts storage thermal system with up to 15 hours capacity under low sun radiation conditions

SOLAR FIELD

2,650 heliostats

The heliostats location has been established by the SENSOL software, so as to reach the optimum plant dimensions

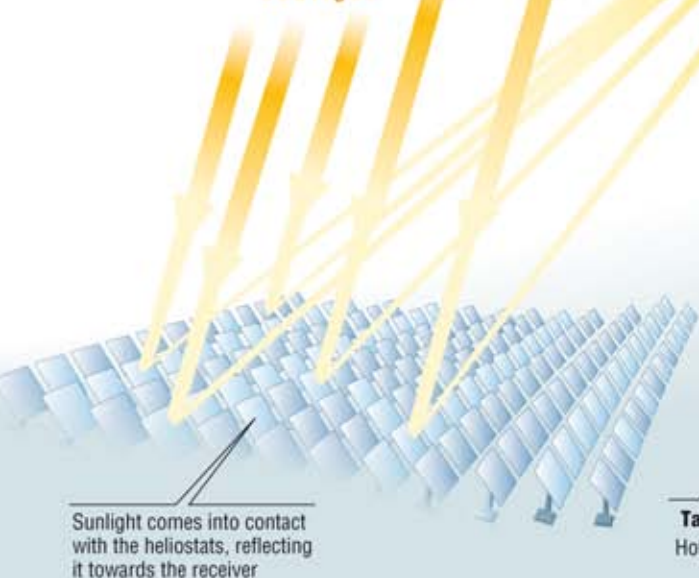


BENEFITS

- **Safe and clean energy** that preserves the environment thinking of future generations
- **25,000 households energy** supply capacity
- **Energy efficiency** that guaranties electrical production for around 6,600 hours per year
- More than **30,000 CO₂ emissions tons** saved every year

OPERATION PROCESS

Sunlight



Sunlight

Reflected light

The heliostats have a mechanism that positions accurately the surface of the mirrors

Sun receiver made up of panels placed at the top of the tower

Tower

Tank 1

Tank 2

Heliostats

LOCATION

At GEMASOLAR location, high direct sun radiation annual values have been registered, besides gathering excellent weather conditions for the plant operation



Electrical network

Electrical transformer

In the sunlight receiver, the salts heat up and descend to tank number 2 where they are stored at more than 500° C

The steam moves the turbine and the generator produces the energy

Turbine

Generator

Steam

When the salts lose their heat, they release the steam

Tank 1 Cold salts

Tank 2 Hot salts

Salts are pumped to the top of the tower

From tank number 2, salts are transferred to heat exchangers through pipes

Heat exchangers