

# Kiribati gemasolar thermosolar plant





## Overview

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The plant is of the type and uses concepts pioneered in the and demonstration projects, using as its heat transfer fluid and energy storage medium. Originally called Solar Tres, it was renamed Gemasolar. The project, which has received a subsidy of five million euros from the and a loan of 80 million euros from the , makes use of the Solar Two tech.

Gemasolar is the first commercial solar plant with central tower receiver and molten salt heat storage technology.



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### **(PDF) Gemasolar, the First Tower Thermosolar Commercial Plant ...**

GEMASOLAR is the first commercial plant to apply this type of technology in the world and is therefore of considerable importance in the field of renewable energies as it opens the path to a new thermosolar power generation technology which could be the best alternative to the parabolic trough commercial thermosolar power plants currently being

### **Gemasolar solar thermal power plant**

Gemasolar is a 19.9 MWe thermosolar power plant with 120 MWt molten salt central receiver. Solar field of 310,000 m<sup>2</sup> mirror surface. Solar thermal energy collected and stored in molten salts for 15 hours of production, and steam turbine with 3 pressure levels.



### **(PDF) Gemasolar, the first tower thermosolar commercial plant ...**

GEMASOLAR is the first commercial - scale plant featuring a central tower molten salt receiver with thermal storage capabilities supplying electricity to the grid from May 2011.

### **Gemasolar Thermosolar Plant / Solar TRES CSP Project**

This page provides information on Gemasolar



Thermosolar Plant / Solar TRES CSP project, a concentrating solar power (CSP) project, with data organized by background, participants, and power plant configuration.



### GEMASOLAR, THE FIRST TOWER THERMOSOLAR COMMERCIAL PLANT

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GEMASOLAR is Torresol Energy first project to use central tower technology and molten salt system. The plant incorporates significant technological innovation, including the 120 MW th

### Gemasolar Thermosolar Plant

Gemasolar is the first commercial solar plant with central tower receiver and molten salt heat storage technology. It consists of a 30.5-hectare (75-acre) solar heliostat aperture area with a power island and 2,650 heliostats, each with a 120-square-metre (1,300 sq ft) aperture area and distributed in concentric rings around the 140-metre-high



### Gemasolar Thermosolar Plant

OverviewDesign and specificationsPerformanceSee alsoExternal links

The plant is of the solar power tower type CSP and uses concepts pioneered in the Solar One and Solar Two demonstration projects, using molten salt as its heat transfer fluid and energy storage medium. Originally called Solar Tres, it was renamed Gemasolar. The project, which has



received a subsidy of five million euros from the European Commission and a loan of 80 million euros from the European Investment Bank, makes use of the Solar Two tech...

### The Gemasolar Thermosolar Plant: One Step Closer to Energy

The Gemasolar Thermosolar Plant: One Step Closer to Energy Storage of the Future Eduard Cristian Vasile March 2015 Energy has always fueled progress. Electricity has become as essential as sunshine, air or water. There have been endlessly innovative ways to generate it, but when it comes to storing the energy, innovation seems to have stalled.



### System Advisor Model (SAM) Case Study: Gemasolar

Utilizing SAM's capabilities, we modeled Gemasolar, the first commercial-scale plant in the world to apply central tower receiver and molten salt heat storage technology. We were able to model the plant with minimal changes to the default values, using the limited information that has been made publicly available. Even with

### Gemasolar, Central Tower Technology

Gemasolar is the world's first utility-scale solar power plant to combine a central tower receiver system and molten salt storage technology enabling electricity supply 24 hours a day. The plant was built by Torresol Energy, a strategic alliance between Masdar (40%) and Spanish engineering group Sener (60%).



## CASE STUDY ON THERMAL ENERGY



## **STORAGE: GEMASOLAR**



The 19.9-MW (gross) Gemasolar project employs silvered glass heliostats and features a large molten-salt storage system that provides up to 15 hours of capacity, enabling expected net capacity factors near 75%, or approximately 110 GWh/year of generation. Gemasolar is the largest molten-salt central receiver project ever

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