

## **SOLAR THERMOELECTRIC**

### **Definition**

Solar thermoelectric (concentrated) power systems use a large array of mirrors and/or lenses to concentrate the sun's energy onto a focal point. In this way they transform the direct components of solar radiation into heat energy at high temperature. This heat energy is then converted into electricity for immediate use, and in some cases into energy that can be stored in the form of heat or in chemical form. There are currently four types of thermosolar technology of particular note because of their high degree of technological development: parabolic troughs, solar power towers, linear Fresnel concentrators and Stirling parabolic dishes. Each of these technologies has certain specific characteristics that help create different kinds of thermoelectric solar landscapes, although all these landscapes have a set of common features.

### **Related terms**

Solar thermal, Photovoltaic

### **Keywords:**

Sun energy, Lenses, Heat energy, Concentrated solar power (CSP), Concentrated solar thermal power, Industrial landscape, Agroindustrial landscapes



*Figure 27* Solucar PS10 is the first solar thermal power plant in the world that generates electricity with this technique in a commercial way. (Photo: Naja Marot 2017)

### **Source**

de Andrés-Ruiz C., Iranzo-García E., Espejo-Marín C. 2015: Solar thermoelectric power landscapes in Spain: A new kind of renewable energy landscape? In: Frolova M., Prados M.-J., Nadaï A. (eds.) *Renewable Energies and European Landscapes: Lessons from Southern European cases*. Springer, New York, London: pp. 237–254.

## Translations

Bosnia and Herzegovina Termoelektrični solarni sistemi

Bulgarian Соларна термоелектрическа централа

Croatian Solarna termoelektrična energija

Czech Sluneční termoelektrická energie

Danish Termoelektrisk sol

Dutch Thermo-elektrische zonne-energie

Esperanto Suna varmelektrounuo

Estonian Päikeseküte

Finish Aurinkokeräin

French Thermoélectrique solaire

German Solare Thermoelektrik

Greek Ηλιακά θερμιονικά συστήματα

Hebrew סולאר-תרמו חשמל

Hungarian Termoelektromos napelem

Italian Solare termoelettrico

Islandic /not used

Latvian Saules termoelektrība

Lithuanian Saulės termoelektrinės

Montenegrin Solarna termoelektrana

Polish Ogniwo termoelektryczne

Portuguese Termoeléctrica solar, Energia solar termoeléctrica

Romanian Termoelectricitate solară

Russian Концентрированная солнечная энергия

Slovenian Sončna termoelektrika

Serbian Термоелектрични соларни системи

Spanish Energía solar termoeléctrica

Swedish Solar termoelektrisk