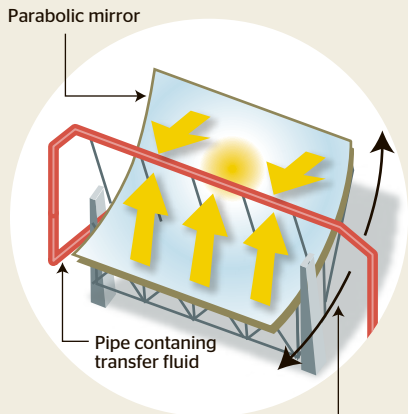


Living with the Sun

The parabolic trough solar furnace

1 At sunrise, mirrors of furnace's solar field start to follow the sun, concentrating heat on pipes containing transfer fluid



Computer-controlled mirror adjusts automatically to follow the sun through the day

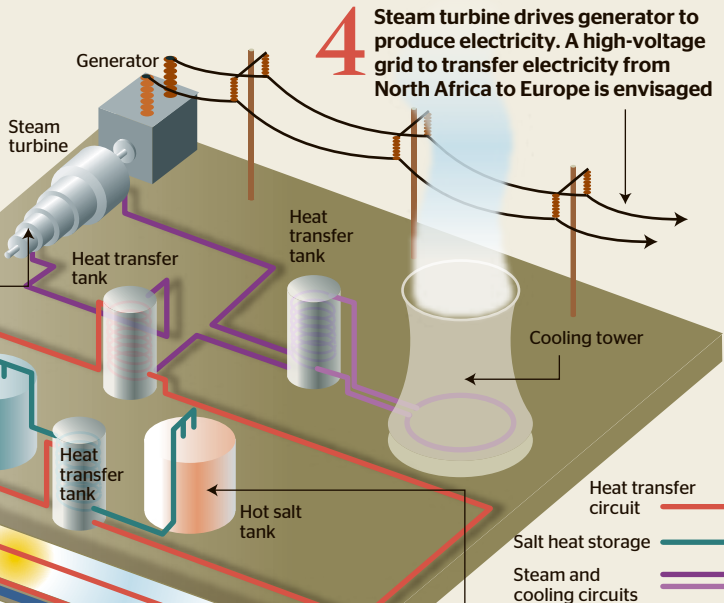


Solar furnace at Sanlucar La Mayor, near Seville, uses an alternative technique with mirrors angled to heat a chamber on top of a tower

2 Heated fluid is used to generate steam to drive generator turbine

Heat transfer circuit containing heat-resistant synthetic oil

Solar field



4 Steam turbine drives generator to produce electricity. A high-voltage grid to transfer electricity from North Africa to Europe is envisaged

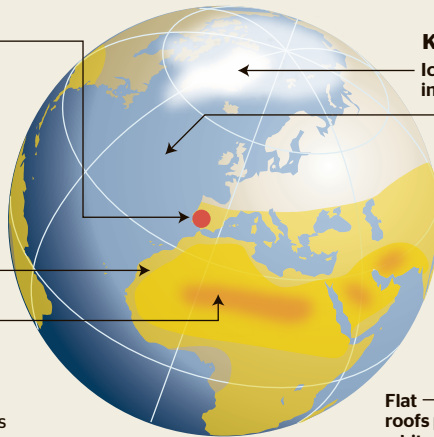
3 Fluid is also used to heat molten salt, storing heat for night operation or cloudy days

Siting the solar farms

Andasol, in Andalusia, Europe's first commercial parabolic trough solar power plant

Large areas of the world around the Equator are suitable for solar thermal power collection

A network of solar energy farms in the Sahara could supply nearly 80% of Europe's energy



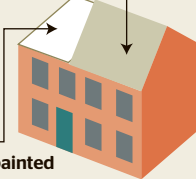
Keeping cool

Ice reflects 80% of infra-red rays

Sea reflects only 20% of infra-red rays

Pitched roofs painted with "cool" paint that reflects 85% of heat but only 25% of light

Flat roofs painted white



Painting houses white keeps them cooler in summer, reducing the need for air conditioning, as well as reflecting the sun's heat and light