

# Parabolic Trough Technology

Contributed by Wikipedia

A parabolic trough is a type of solar thermal collector. It is constructed as a long parabolic mirror (usually coated silver or polished aluminum) with a Dewar tube running its length at the focal point. Sunlight is reflected by the mirror and concentrated on the Dewar tube. The trough is usually aligned on a north-south axis, and rotated to track the sun. Heat transfer fluid (usually oil) runs through the tube to absorb heat from the concentrated sunlight. The heat transfer fluid is then used to heat steam in a standard turbine generator. The process is economical and, for heating the pipe, thermal efficiency ranges from 60-80%.

Because current commercial plants utilizing parabolic troughs are hybrids (fossil fuels are used during night hours) and include cooling stations, condensers, accumulators and other things besides the actual solar collectors, the kWh per square meter of space ranges enormously.

The largest operational solar power system at present is of this type. Named SEGS, it is located at Kramer Junction in California, USA.

Source:

[http://en.wikipedia.org/wiki/Parabolic\\_trough](http://en.wikipedia.org/wiki/Parabolic_trough)