

## Trough Concentrated Solar Power Generation Cost

Is 50 MW a good size for a parabolic trough power plant?

However, in terms of economies of scale, 50 MW is not the optimal plant size. The specific costs of a parabolic trough power plant with 7.5 h of storage can be cut by 12.1% if the plant size is increased from 50 MW to 100 MW and by 20.3% if it is increased from 50 MW to 200 MW (Figure 5.1).

Could LCOE reductions be achieved in parabolic trough solar fields?

could yield LCOE reductions, but designs are currently based on conventional boilers and need to be adapted to CSP plants. The overall cost reductions for parabolic trough solar fields, taking into account efforts in all areas, could be in the range 16% to 34% by 2020 (Kutscher, et. al., 2010).

Can concentrating solar power be integrated with thermal energy storage?

Concentrating solar power (CSP), when integrated with thermal energy storage (TES), can address both intermittency and storage needs by providing dispatchable renewable electricity.

OverviewCurrent technologyComparison between CSP and other electricity sourcesHistoryCSP with thermal energy storageDeployment around the worldCostEfficiencyCSP is used to produce electricity (sometimes called solar thermoelectricity, usually generated through steam). Concentrated solar technology systems use mirrors or lenses with tracking systems to focus a large area of sunlight onto a small area. The concentrated light is then used as heat or as a heat source for a conventional power plant (solar thermoelectricity). The solar concentrators use...

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