WALMER ENERGY

Home Dish Solar Power Generation System

Overview

What is a dish/engine system?

The dish/engine system is a concentrating solar power (CSP) technology that produces smaller amounts of electricity than other CSP technologies—typically in the range of 3 to 25 kilowatts—but is beneficial for modular use. The two major parts of the system are the solar concentrator and the power conversion unit.

Can a solar dish stirling engine provide energy at lower costs?

Solar thermal technologies, especially concentrated solar power systems (CSP) could be harnessed to provide energy at lower costs. This study presents a novel comparative techno-economic assessment of a newly developed solar dish Stirling engine (SDSE) system and a conventional photovoltaic (PV) system for residential electricity generation.

What is solar dish stirling engine (SDSE)?

New residential energy applications using Solar dish Stirling engine (SDSE). Comparing SDSE with PV systems using technical and economic metrics. SDSE achieves a lower LCOE ($0.104/kWh) than PV ($0.396/kWh). SDSE has higher efficiency (27.03 %) and greater energy output (14.6 MWh/year). SDSE requires less space and fewer modules than PV system.

How does a solar dish work?

The resulting beam of concentrated sunlight is reflected onto a thermal receiver that collects the solar heat. The dish is mounted on a structure that tracks the sun continuously throughout the day to reflect the highest percentage of sunlight possible onto the thermal receiver.

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