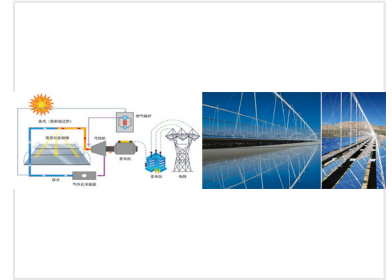


# Fresnel Concentrating Solar Power System

This system uses Fresnel reflectors to focus sunlight onto a receiver, heating a working fluid to produce steam. The high-pressure steam then drives a turbine connected to a generator, creating electricity.



## System Overview

### Fresnel Concentrating Solar Power System

This Fresnel concentrating solar power (CSP) system utilizes an advanced array of Fresnel reflectors to efficiently focus sunlight onto a central receiver. By heating a working fluid to generate high-pressure steam, the system drives a turbine and generator set for reliable electricity production. Designed as a closed-loop cycle, it includes integrated cooling systems to condense steam back into water, ensuring operational efficiency and sustainability.

#### Technology Type

Fresnel Concentrating Solar Power (CSP)

## Technical Components

### Core System Components

- Fresnel Reflectors (Mirrors)
- Central Receiver
- Steam Turbine
- Generator
- Air-Cooled Condenser
- Substation Interface

### Operational Process

Stage	Description
Concentration	Fresnel reflectors focus sunlight onto the receiver
Thermal Conversion	Working fluid is heated to produce saturated or superheated steam
Power Generation	High-pressure steam drives the turbine and generator
Cycle Management	Steam is condensed via air-cooling for reuse in a closed loop