Solar-inducing air flow power generation

The paper presents theory, practical experience, and economy of solar updraft towers: First a simplified theory of the solar tower is described. Then results from designing, building and ...

So, this research sought to propose and design a new solar vortex engine system and improve the system by conducting a set of calculations carried out by the ANSYS 2020 R2 simulation ...

The electric generating apparatus through driving air current by solar energy belongs to the technology of solar electric power generation and relates to the gaseous current electric...

It is a solar thermal power plant utilizing a combination of a solar air collector and a central updraft tube to generate a solar-induced convective flow, which drives pressure staged turbines to generate ...

Recently, a thermoelectric co-generation system has been developed where a temperature difference power generation module and a solar-driven evaporator are combined to output steam and ...

Impact Summary: If successful, Georgia Tech"s technology would reduce the cost of energy by 20% over wind power and 65% over solar photovoltaic energy.

Generating sustainable electricity from ambient humidity and natural evaporation has attracted tremendous interest recently as it requires no extra mechanical energy input and is ...

In this paper, a computational simulation was used in the ANSYS 2020 R1 program to simulate the influence of solar intensity on the vortex updraft velocity generated.

We designed a 3D structured evaporator and present a comprehensive analysis of the heat and mass transfer mechanisms. The evaporation enhancement is attributed to the restructured ...