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### Paper Information

#### A review of the vortex engine

**Author(s):** A. T. Mustafa, H. H. Al-Kayiem & S. I. U. Gilani

**Abstract:**

Convective vortices are common features of atmosphere that absorb lower entropy- energy at higher temperatures than they reject higher-entropy-energy to space.

Via the thermodynamic efficiency, it has been predicted that the intensity of convective vortices depends on the depth of the convective layer.

The atmospheric vortex engine is proposed as a device for producing mechanical energy by means of artificially generated vortex.

The operation of the engine is based on the facts that the atmosphere is heated from the bottom and cooled from the top.

By generation of the artificial vortex, it is aimed to eliminate the physical solar updraft tower and reduce the capital of the solar chimney power plants.

The paper presents the fundamentals of the atmospheric vortex engine, and reviews the state of the art in topic.

Furthermore, the paper discusses an idea on utilizing the solar energy as heat source to operate the system.

In conclusion, the system is feasible and promising for electrical power generation.

**Keywords:**

convection vortex, tornado, atmosphere, vortex engine, power generation, global warming, solar energy, solar collector....

**Pages:** 10

**Size:** 508 kb

**Paper DOI:** 10.2495/SC130772

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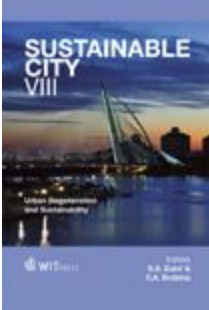
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