

Solar Powered Airship for Cargo Transportation

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INTRODUCTION

Cargo transportation is known as one of the main sources of CO₂ pollution on earth. A green solution to this problem is to use a solar powered airship to transport goods from one point to another. Besides its green operation, the airship will be especially beneficial when transporting goods to and from deserted and hard-to-reach areas.

ABSTRACT

The demand for cargo transportation is rising as the international markets are opening, and more and more goods are shipped across borders all over the world. One of the critical CO₂ pollution sources comes from cargo transportation, whether it is by truck, ship, airplane or train. As the logistic networks are expanded they are also made more efficient. However, making the cargo transportation more efficient will never change the fact that cargo transportation today mostly is driven by fossil fuels, which is a limited resource on earth. A green solution to this problem is to use a solar powered airship. The airship is only driven by solar cells attached on the outside of the airship body, and it is equipped with a battery that makes it possible also to operate at night time. The propulsion and handling comes from high efficient DC motors that are controlled by a central computer. The airship is designed to operate at a height where it does not disturb the air traffic nor is visible from ground. The airship is traceable at all times, which makes it easy to monitor. In the project a small airship is considered but the design is easily scalable. This would be a step towards moving modern cargo transportation in a sustainable direction.