

## TOP TEN

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# Energy Harvesting Solutions for Airport Infrastructures

Recent developments in energy harvesting systems has opened up the opportunity for their implementation in various transport infrastructures. Among the different existing transport infrastructures, this research focuses on airports used by several airlines and regulated by multiple aviation agencies. The aviation agencies enable the safe use of these infrastructures by aircraft and their occupants, people, and goods. The aviation service allows a fast connection between origin and destination, firming up regions development. Although an aircraft are a transport mode that operates mainly in the air, it starts and ends its connection on the ground. The airport infrastructure is composed of elements capable of supporting an aircrafts high load and speed in a short space, with only a few kilometres. Given the characteristics of the airside, access to it is reserved. The use of energy harvesting - ambient dependent products, the framework of energy harvesting - traffic dependent solutions in the FAR/CS/CCAR-25 regulations allow a mix of power generation to meet the current challenges. Because energy harvesting collects wasted energy, it is considered sustainable energy. Sustainable electric power generation will reduce non-renewable electric power generation and decrease CO2 emissions. The decrease of CO2 emissions is a challenge referred to all sectors, as stated by UN's SDGs and into the civil aviation sector to the ICAO's CORSIA program. Given the characteristics of the airport (size, reserved access, etc.), it can also provide a humanitarian response after extreme events, with the ability to continuously operate due to their supply of electric energy locally based.

