Aircraft Microgrid Research

This article investigates the current research status of energy management system architecture for airport microgrids charging electric aircraft domestically and internationally.

Overall, these contributions facilitate the development of robust, fault-tolerant, and efficient DC microgrids for electric aircraft, reducing development risks and accelerating certification ...

This paper concerns modeling, simulations and control design of turbo-electric distributed propulsion (TeDP) systems needed to power future hybrid aircraft systems.

Abstract--This paper presents an overview of technology related to on-board microgrids for the More Electric Aircraft. All aircraft use an isolated system, where security of supply and power density ...

We propose an integrated electricity-thermal-hydrogen microgrid that incorporates photovoltaics, hydrogen fuel cells, and multiple energy storage systems to reduce reliance on the ...

The concept of microgrids (MGs) as compact power systems, incorporating distributed energy resources, generating units, storage systems, and loads, is widely acknowledged in the ...

Dive into the research topics of "Optimal Load and Energy Management of Aircraft Microgrids Using Multi-Objective Model Predictive Control". Together they form a unique fingerprint.

This paper presents the development of an airport bipolar DC microgrid and its interconnected operations with the utility grid, electric vehicle (EV), and more electric aircraft (MEA).

It seems that the trend for future MEAs is to use this architecture. Several research groups such as MOET EU, CleanSky project and Airbus HVDC project are studying this distribution topology.

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