

Can solar energy replace fossil fuels on Pitcairn Island?

Pitcairn's authorities have launched a renewable energy project designed to replace fossil fuels with solar energy. The goal is to replace 95% of the current diesel consumption on Pitcairn Island (75,000 liters per year) with a combination of energy saving and solar electricity through the installation of a hybrid photovoltaic solar energy system.

Are the Pitcairn Islands Green?

Pitcairn Islands, a group of five islands with a total area of 47 km² and which constitute one of the most remote archipelagos in the world, turn to safer, greener energies that best meet the needs of the population. Pitcairn's authorities have launched a renewable energy project designed to replace fossil fuels with solar energy.

What is a hybrid power plant?

Hybrid power plants combine at least two different energy types. Rather common is the combination of diesel-gensets and renewable energy systems with or without storage. The actual configuration is very site and company specific.

What are hybrid power plants with storage?

Hybrid power plants with storage contain an additional component in comparison to the plant-type described above. A battery storage is dimensioned in such a way that it can store energy until the diesel gensets start-up, if for example a cloud deteriorates the solar output. The costs of the additional battery components are quite substantial.

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In order to reduce the energy dependence of fossil fuel, the architecture and control strategies of PV/diesel/battery hybrid system applied to the remote island are proposed to ensure the power ...

This paper presents an innovative hybrid system being implemented in three remote islands in the Republic of Maldives. It is expected that the newly developed and installed system will provide ...

It is not cost effective or feasible to extend a centralized power grid to islands and other isolated communities. Decentralized renewable energy sources are alternatives. Among ...

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