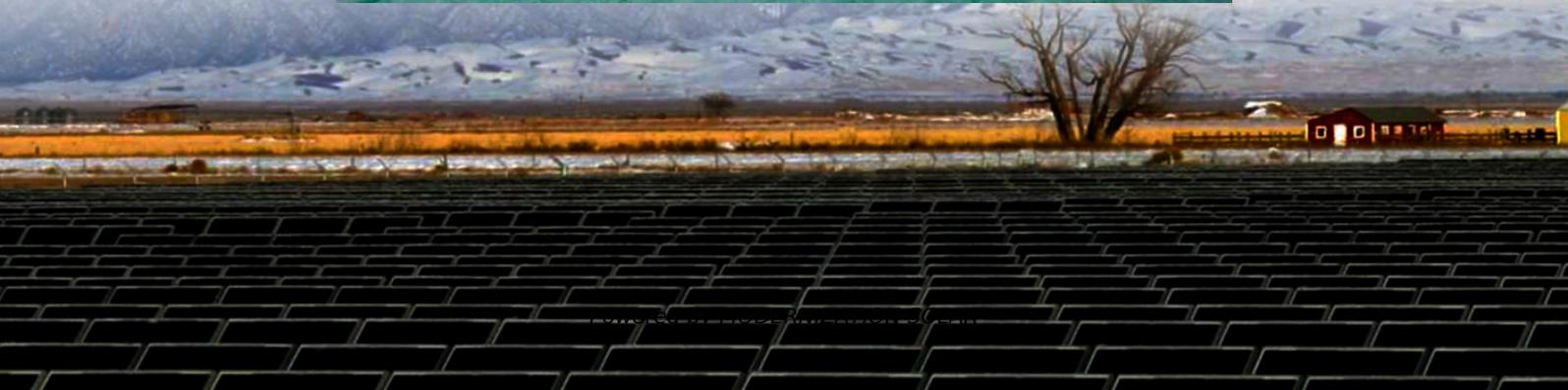


Comparison of photovoltaic containerized hybrid power generation and diesel power generation





Overview

What is a hybrid PV and diesel generator (D-HS) system?

Table 2 presents the technical specifications of a hybrid PV and diesel generator (D-HS) system, which integrates PV arrays, a diesel generator, and an inverter to generate and manage energy. The PV array has a nominal maximum power of 300 W, with a maximum power voltage of 37.02 V and a maximum power current of 8.11 A.

Are hybrid energy systems a viable alternative to power generation?

In this way, hybrid energy systems (HESs) count as an attractive alternative for power generation, especially in remote areas. Therefore, this article analyzes a case study of a hybrid photovoltaic-diesel system installed in the Tapajós-Arapiuns Extractive Reserve in the Brazilian Amazon region.

Can a diesel generator be converted into a solar/diesel hybrid system?

For this reason, there is a clear financial justification for converting almost every diesel-powered system into a solar/diesel hybrid system. Every unused diesel kWh saves money. The combination of diesel generators with PV systems quickly pays for itself through the large savings in fuel costs.

Why should you choose a diesel generator based on a photovoltaic system?

Intelligent technology ensures optimum interaction between the photovoltaic system and the diesel generator. This guarantees that as much solar energy as possible is used and that the diesel generator operates at various degrees of utilisation at the most advantageous operating points.



Comparison of photovoltaic containerized hybrid power generation

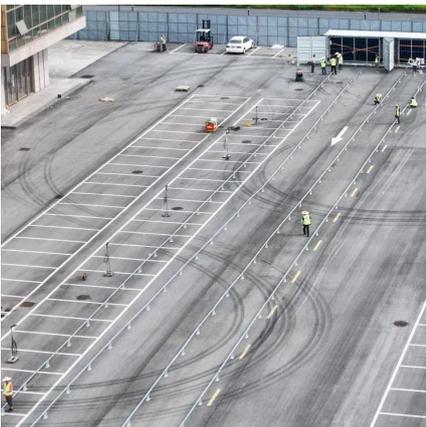


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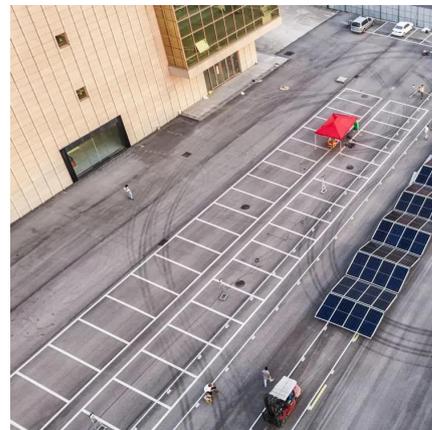
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