

Solar-powered wind-resistant containers for oil platforms





Overview

Can wind-solar energy be used on offshore oil and gas platforms?

This research assesses the environmental feasibility of using wind-solar energy for offshore oil and gas platforms in the Caspian Sea. The amount of this renewable energy available in three basins of the Caspian Sea has been estimated.

Why are oil and gas companies adopting offshore solar and hybrid power systems?

Oil and gas companies are adopting offshore solar and hybrid power systems, overcoming challenges with new technological advancements. As the global push for renewable energy intensifies, oil and gas companies are increasingly exploring solutions to transition from fossil fuels to more sustainable energy sources for supporting their operations.

Can solar and wind energy improve sustainability in offshore operations?

This research developed a concept design to enhance sustainability in offshore operations by integrating local solar and wind energy sources. The proposed hybrid system combines solar energy systems and wind turbines with traditional Thermoelectric Generators (TEGs), which have traditionally relied on natural gas.

How much power does an offshore oil & gas platform use?

The power consumption of offshore platforms ranges from 6–50 MW. To supply electricity from renewable energy sources, the first step is to evaluate the energy of natural resources like wind and solar around these fields.



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