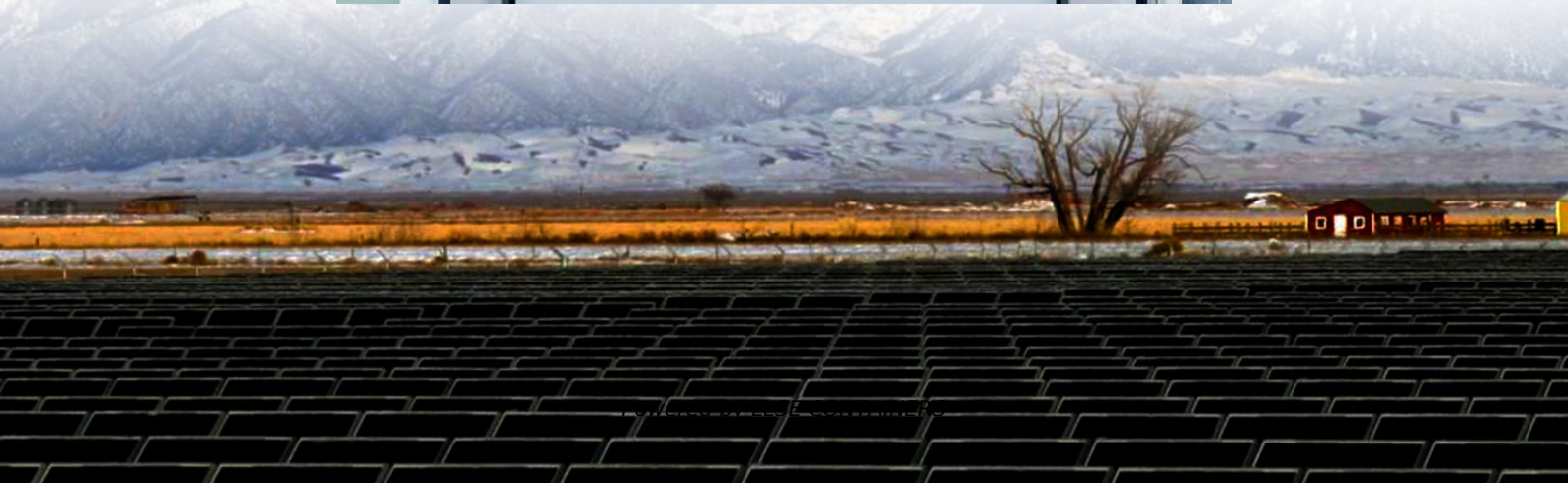


# **High-efficiency off-grid solar-powered containerized oil refinery**





## Overview

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Why should oil refinery plants use hybrid energy systems?

This significantly enhances the economic viability and environmental sustainability of the oil refinery plant, contributing valuable insights into the optimal configuration of hybrid energy systems for large-scale industrial applications and addressing the challenges of energy security, cost-effectiveness, and environmental impact. 1. Introduction.

What is a feasibility study of energy integration in grid-connected oil and gas industries?

Feasibility study of energy integration in grid-connected oil and gas industries. Considering a hybrid model of renewable energies including solar, wind, and biomass alongside a combined cycle gas power plant and grid. Examining the impact of reduced grid capacity to purchase energy from grid. Analyzing sensitivity to economic instabilities.

How does a refinery deal with energy shortages?

Additionally, given the refinery's connection to the grid, any energy shortages are supplemented by grid resources. The uncertainty surrounding wind and solar power production is addressed through a combination of each other, the dedicated gas power plant, grid resources, and biomass units.

How does Isfahan refinery get its energy?

A fraction of the refinery's energy demand is fed from the grid, with the connection point being supplied by three 230/63 kV transmission substations under the jurisdiction of the Isfahan Regional Electricity Company.



## High-efficiency off-grid solar-powered containerized oil refinery

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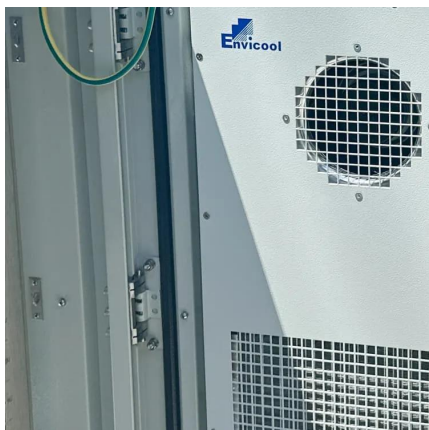
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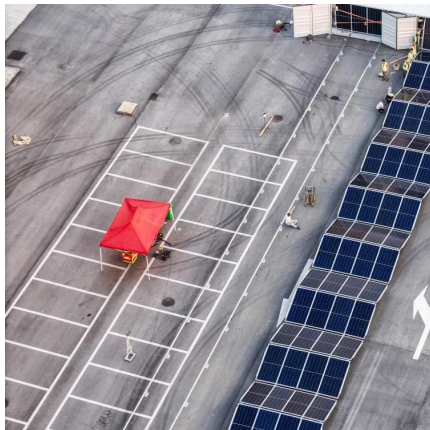
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