High-efficiency pv distributions used in oil refineries

The Pine Bend PV system is considered the largest such installation for a single user in the U.S. Along with providing power for the refinery"s ...

In this study, renewable energy is integrated optimally into a refinery considering costs and CO2 emissions. Using Aspen HYSYS, a refinery in the Middle East was simulated to estimate the energy ...

In this case, the high PV capacity factor in California and high cost of electricity are driving results, with PV being largely oversized despite not receiving net metering compensation at this high capacity.

The CHP and solar power systems have helped Pine Bend improve its energy efficiency by 10% over the past five years, putting it into the top ...

Results indicate that the associated costs of emissions reductions via several distributed clean energy technologies are competitive with other emissions reduction strategies such as energy ...

The integration of renewable sources into existing industrial frameworks is becoming essential, especially for high electricity-consuming industries with continuous production, such as ...

The digitalization of oil fields, powered by solar energy, enables real-time monitoring and optimization of operations, leading to improved efficiency ...

The 45-megawatt solar installation will include at least 100,000 panels and connect directly to the refinery operations. When complete, it is expected to help lower energy costs, improve ...

This paper proposes a solar-assisted method for a petrochemical refinery, considering hydrogen production deployed in Yanbu, Saudi Arabia, as a case study to greenize oil refineries.

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For the process that can directly transform CO2/H2O to fuels, improvements in conversion rates and product selectivity are key requirements for achieving energy efficiency in the solar refinery.

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