



WALMER ENERGY

Bifacial Solar PV 30 MW





Overview

What is bifacial photovoltaic?

1. Introduction Unlike traditional Monofacial Photovoltaic (mPV) modules, Bifacial Photovoltaic (bPV) technology generates electricity on both sides of their solar cells, capturing direct and reflected sunlight from the surrounding environment, particularly in areas with high ground reflectivity [1, 2].

What are bifacial and monofacial solar cells?

Front and rear view of monofacial and bifacial photovoltaic (PV) modules . Bifacial solar cells encased in a glass/backsheet structure provide more power under standard test conditions (STC) than glass/glass PV bifacial modules.

Does bifacial PV outperform monofacial solar?

The analysis encompasses both systems' initial costs, energy output, and payback periods. The findings reveal that the bifacial PV system outperforms the monofacial system in electricity generation and offers a shorter payback period.

Why are bifacial photovoltaic cells becoming more popular?

Bifacial photovoltaic cells, modules, and systems are rapidly overtaking the market share of monofacial PV technologies. This is happening due to new cell designs that have replaced opaque, monolithic back surface foil contacts with isolated contacts, which allow light to reach the cell from the rear side.



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