

# First Solar modules produce more energy than silicon PV panels

First Solar's advanced modules can offer over 4% more energy than conventional silicon PV panels.



This is according to research into the performance of four solar photovoltaic (PV) module technologies in South Africa.

The study was conducted by Arup, an independent engineering consultancy, and was commissioned by First Solar. It examined the performance of First Solar's thin film modules and panels from top tier poly- and mono-crystalline silicon PV module manufacturers, in a utility-scale setting at three sites in South Africa.

## Projected energy yield

The consulting firm used sophisticated modelling techniques to examine the projected energy yield of the four module types in three hypothetical solar PV plants, with a capacity of about 84 megawatts DC each in Bloemfontein, Upington and Vryburg.

Engineers from Arup conducted 24 energy yield simulations, using plant design parameters that were kept constant across all technologies, and examined the energy yield probability for the first year of production, for each module type.

The analysis factored in site-specific meteorological data, which included temperature, irradiance and other weather data. This industry-standard approach ensured that the hypothetical plants closely represented actual onsite conditions based on a typical meteorological year.

View the [Module Performance Comparison for Four Solar PV Module Technologies](#) conducted by Arup.

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