

TrueCapture

Unlock your potential

TrueCapture™ is an intelligent, self-adjusting tracker control system that increases typical PV power plant energy by up to **6%**. TrueCapture boosts solar power plant production by continuously optimizing the tracking algorithm of each individual row in response to site features and changing weather conditions.

Get the most out of your system

Now operating on 1,000s of megawatts worldwide, TrueCapture combines advanced sensor, weather forecasting and machine-learning technologies to maximize energy yield. With its smart data capture and model-based predictive control software, TrueCapture helps customers maximize the benefits of their Nextracker systems, generating more revenue with higher energy yield, better availability, and lower operating costs.

How Does TrueCapture Work?

Standard systems track all rows identically regardless of terrain undulation and construction variance, and do not capture as much light as they could. Backtracking can reduce shading in the first hours after sunrise and final hours before sunset at a cost to performance, because height differences between individual rows are not considered.

As the day progresses, trackers follow the sun as closely as possible using standard tracking algorithms. If the weather changes and becomes cloudier or hazier, energy generation dips again. Why? Tracking angles that were “correct” in the previous direct sunlight conditions don’t harvest as much energy when light is scattered.

TrueCapture production estimates are currently offered by the following independent engineers:



Independent engineers are now able to say, ‘your production is x percent higher if you apply the TrueCapture technology.’ Now, we can take our 30 or 35 years of cash flow, bring that extra spread forward and actually create current net present value. For an owner like us, that is super valuable.

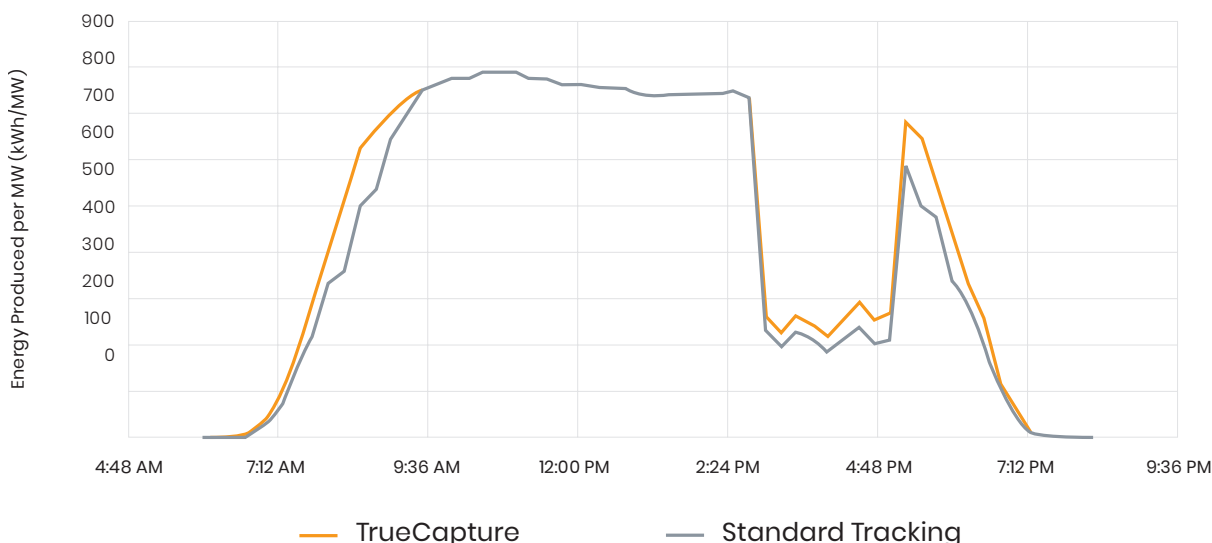
– **Bryan Martin**,
CEO, DEShaw & Co



Optimize with Smart Control

TrueCapture solves both challenges with a unique, integrated approach. Over the course of the day, TrueCapture continuously dispatches optimal tracking algorithms to each tracker row, correcting for shading anomalies caused by uneven ground and changing weather conditions. As shown in the accompanying chart, the increase in power production widens the “shoulders” of the power production curve for any given day, resulting in better performance and lower LCOE.

1 MW Energy Production Standard Tracking vs TrueCapture



Innovation at Work

Proprietary smart panel sensors provide real-time shading information on each tracker row. The data is then processed by machine-learning software to build a virtual 3D model of the solar project. From dawn to dusk, TrueCapture’s intelligent control engine integrates the virtual model with measured irradiance data collected from on-site weather stations and predictive analytics data to calculate and send updated and optimized tracking commands to every independent row. As a result, energy production gets a boost.

Customer Requirements

Available for both NX Gemini 2-in-portrait tracker and NX Horizon, TrueCapture is compatible with most project sites — contact your NX sales representative to learn more about how to take your performance to the next level.



Standard Tracking



With TrueCapture



TrueCapture in diffuse light conditions