

Nextracker and CleanMax Solar Push Plant Performance Forward

Project Overview

Situated in the dry and sunny region of Tamil Nadu, India, the grid-connected 30 MW Eluvanampatti solar farm is providing clean, inexpensive electricity to a major IT company as part of a long-term power purchase agreement (PPA). CleanMax Solar, one of India's leading developers, selected Nextracker for the advanced technology, performance and reliability of its single-axis tracker system as well as Nextracker's responsive local support team. Proven, reliable, and in full commercial operation, the Nextracker system is currently generating 15% more energy over the standard fixed-tilt systems deployed in Tamil Nadu — 3% higher than predicted by 3rd party simulation.

Name of Project	Eluvanampatti Solar Farm
MW	30
Location	Tamil Nadu, India
Developer / Owner	CleanMax Solar
EPC	PES Engineering
Number of NX Horizon rows	1,115
Modules	89,200
Financing	Solar power purchase agreement



Achieving a 15 percent energy gain at our Tamil Nadu site was beyond our expectations. Nextracker's technologies combined with our portfolio of global industrial corporations provide clean energy solutions to India and push the industry forward with innovative ways to improve power plant performance.

— Kuldeep Jain, Managing Director, CleanMax Solar

The Challenge

In the case of the Eluvanampatti solar farm, there were conditions not uncommon on sites developed for utility-scale solar systems in India: high levels of airborne dust, irregularly shaped land parcels and sloped terrain. Our installation and commissioning teams worked through these environmental and geotechnical challenges, borrowing lessons learned from other regions where Nextracker has been installed, such as the Chilean desert and the dusty outback of Australia.

Nextracker Solution: NX Horizon

The Nextracker NX Horizon™ single-axis tracker features a proven high-quality design and enhanced energy harvest as well as lower O&M costs and better LCOE than other tracker and fixed-tilt systems. Combined with the company's local deployment, installation and global services support, NX Horizon solar tracker is ideal for large-scale Indian solar projects like the Eluvanampatti PV power plant. NX Horizon's drive and electrical components are fully sealed against sand and dust ingress — a critical reliability factor in Tamil Nadu's sometimes-harsh climate.

The independent unlinked-row architecture of the Nextracker systems gave CleanMax and its EPC partners the flexibility they needed to design and construct the power plant under challenging site conditions. Since the company's trackers feature fewer foundations and assembly points, geotechnical risks were mitigated and project construction schedules were accelerated.

Benefits

The Eluvanampatti solar farm provides thousands of megawatt-hours of electricity annually to a large Indian IT firm's data center, offsetting much of the facility's power requirements and reducing its dependence on fossil-fuel-based utility power. The financing of the project was made possible in part by one of the largest private sector solar PPAs in Asia to date — a growing trend in the region and the world.

Features & Benefits

15%

more energy generated than a fixed-tilt system

38,500 tons

of CO₂ emissions avoided per year

