Nextracker and Biosar Power Up Brazil's Largest Solar Project

Project Overview

The Pirapora solar project consists of three phases, totaling almost 400 MW of photovoltaic (PV) generating capacity built on 800 hectares of land north of Belo Horizonte, capital of the Brazilian state of Minas Gerais. Nextracker supplied thousands of its locally manufactured NX Horizon™ single-axis tracking systems to the project and sent its onsite installation and commissioning team to support the effort. Pirapora represents a milestone in the growth of Brazilian renewables, as it is the first solar power plant to benefit from the Brazilian Development Bank (BNDES) financing program established in 2014 to boost adoption of utility-scale solar in the country. On completion of the final phase of the project and interconnection in early 2018, Pirapora will be the largest solar power plant in Brazil.

Name of Project	Pirapora I, II and III
Location	Minas Gerais, Brazil
EPC	Biosar
NX Horizon Tracker Rows:	13,798
Modules	1,235,094
Developer	EDF Energies Nouvelles (80%) Canadian Solar (20%)
Financing	Solar power purchasing agreement (PPA), with project financing loan from the Brazilian Development Bank

NX Horizon is not only FINAME-compliant, which is essential for Brazil solar market readiness, but its advanced product features, quality and reliability maximize energy yield and reduce both installation and operating costs for our customers' projects. Nextracker is the perfect partner, thanks to its local Brazil presence and the strong financial backing of its corporate parent, Flex.

– Aris Polychronopoulos, General Manager, Biosar

The Challenge

Challenges facing the Pirapora project were twofold: the remote location of the construction sites and the relatively nascent state of the Brazilian solar tracker supply chain. In order to reach the restricted sites, new roads were built to prepare for the onslaught of new traffic to the project. Delivery timetables had to be strictly adhered to as production schedules were paramount to the client. The difficult terrain required specially equipped trucks to transport the components and other materials to mitigate damage en route to the site.

Emerging solar markets like Brazil new to constructing large utility-scale solar farms often face challenges with establishing supply chain and sourcing operations. To meet the construction deadlines as well as the local FINAME content requirements, the NX team — with help from their colleagues at parent company Flex — had to quickly ramp up a robust local supply chain to ensure production and delivery of tracker components on a timely basis. Nextracker forged long-term partnerships with qualified suppliers to ensure local production of customized tubes, piers and controllers that exceeded international standards for specification, material and finishing as well as Nextracker's stringent lifetime reliability requirements.

Nextracker Solution: NX Horizon Single-Axis Tracker

The rapid constructability, enhanced energy yield, and minimal O&M costs of the smart NX Horizon single-axis tracking system made it the lowest LCOE solution for the Pirapora solar project. Manufactured to exacting industry-leading quality and reliability standards, the trackers' drive and electrical components are fully sealed against the red dust found in the area, and also offer full protection against torrential rain during the winter months. Nextracker's global services team has been involved since the beginning of the project. They will continue to provide operational support for the lifetime of the power plants via their advanced Digital O&MTM monitoring and control capabilities as well as on-site visits.

Benefits

The Pirapora solar project makes a substantial contribution to satisfying the growing energy appetite of Minas Gerais. The PV power plants will supply hundreds of gigawatt-hours of reliable solar electricity annually and contribute to Brazil's goal of deploying 7 GW of solar by 2025 and obtaining 23% of its energy from non-hydroelectric renewable sources by 2030. The locally produced tracker and other system components used in the project created hundreds of jobs and a boost to the economy of São Paulo where Flex's factories are located, as well as helping to develop a strong Brazilian solar manufacturing supply chain.

Features & Benefits

511,927 tons

of CO_2 emissions avoided per year