

# Malindi Solar Power Plant, Kenya

The Malindi Solar utility-scale PV project in Kenya provides another example of Nextracker's project management and product technology excellence in challenging emerging markets.

## Project Overview

Located on the coast of Kenya, the 52 MWp Malindi Solar plant is one of the largest utility solar farms in East Africa. The project was developed by Malindi Solar Group Ltd (MSG), which is owned by Globeleq (90%), an African independent power producer (IPP), and its partner AEDC (10%). Project financing was provided by BII (formerly CDC Group) and DEG, the development finance institutions of the UK and Germany, respectively. Sterling and Wilson was contracted by MSG to perform the engineering, procurement and construction work for the project. Construction on the project began in 2019 and was completed in 2021. The plant has been generating clean electricity since mid-December 2021 and selling it to national utility Kenya Power and Lighting Company (KPLC) under the terms of a long-term power purchase agreement. The project also included the construction of the new 220 kV Weru substation, which is now part of KPLC's national grid infrastructure.

Nextracker was chosen for the Malindi Solar project because of its world-leading solar tracker technology and proven track record of ontime delivery, engineering and project management expertise, and comprehensive global services organization.

## The Challenge: Limited Local Solar Expertise and Tooling, Compliance, High Winds

As the first major solar project of its kind in the Kenyan coastal area, Malindi faced a number of challenges. These included a long project development cycle, limited solar expertise in the area, lack of availability of tools and materials in the local market, additional compliance requirements for importing materials, and delays in grid availability and interconnection. In addition, the site experiences high wind speeds (up to 200 kph [125 mph], per ACSE/SEI 7-10) and difficult rocky soil conditions.

Name of Project	Malindi Solar
Developer / Owner	Globeleq, Africa Energy Development Corp. (AEDC)
EPC	Sterling and Wilson
Offtaker / PPA	Kenya Power and Lighting Co. (KPLC), 20-year PPA
Capacity	52 MW-DC/40 MW-AC
Carbon offset	44,500 tons of CO2 annually
Trackers	NX Horizon
Modules	157,000
Job creation	250 (direct); 5,600 (secondary area impact)

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Nextracker was selected for the project because of the company's track record for delivering high-quality solar tracker systems and their deep bench of expertise in dealing with extreme weather and difficult soil conditions. We look forward to our continued partnership in helping the Kenya realize its clean energy vision for 2030 and beyond.

– **Brian Baturevich**, Managing Director, Engineering, Globeleq

## Meeting the Challenge: Meticulous Planning, Installer Training, Remote Management

Nextracker successfully managed the project, with limited infrastructure and an underdeveloped workforce. In addition to training local installers, meticulous planning helped alleviate the low availability of tooling in the area. Timely deliveries were achieved despite the difficulties of doing business in the midst of a pandemic and global supply chain disruption. Significant portions of the construction and commissioning activities were successfully managed remotely as well.

One particular construction challenge occurred during the foundation and pile driving portion of tracker installation. The initial pile plan needed to be updated during construction to meet ground conditions. Based on the results of pull-out tests, the decision was made to employ concrete-encased foundations throughout the project site to accommodate the rocky soil. Despite this midstream change, Nextracker's rapid solution to the problem kept the project on track, with no impact on the commissioning date.

### Features & Benefits

**Hundreds**

of jobs created

**44,500 tons**

of CO<sub>2</sub> emissions avoided per year



## Benefits: Clean Energy, Job Creation, A New Market

The Malindi Solar project has helped build the foundation for utility solar businesses in Kenya. Hundreds of jobs have been created, backed by local training and workforce development, with thousands more jobs likely to result from more stable electricity supply in the region. This is one of the first large-scale solar farms in Kenya and the only one in the coastal region, so future projects will also benefit from the supply chain channel efforts created during the development and construction of the project. Malindi Solar is located in a region that faces grid stability issues and power demand is increasing, so most of the generation will be consumed locally by some 250,000 residential and business customers. The plant will offset 44,500 tons of carbon emissions annually.