



● INSTALLED AND COMMISSIONED IN THREE DAYS

PROJECT REPORT

Solar LED PAPI Replacement at a Mine Airstrip in West Africa

Synopsis

A mine site in West Africa relies on its private airstrip to move personnel and equipment on a tight, predictable schedule, making a working precision approach path indicator (PAPI) essential to safe daily operations.

When the site's existing PAPI was damaged by weather and environmental exposure, Aviation Renewables was brought in to replace it with a new 2-box Solar Series LED PAPI. By reusing the existing foundations and rewiring the system to suit the new units, the team completed installation and commissioning in three days, keeping disruption to the airstrip's approach guidance capability to a minimum.

LOCATION

Mine Site Airstrip, West Africa

DATE

2026

CLIENT

Private Mine Site
(Confidential)

EQUIPMENT

2-box Solar Series LED PAPI
with Solar Series Power System

APPLICATION

Solar LED PAPI Replacement for a Mine Airstrip

3 days

INSTALL AND
COMMISSIONING

2 box

SOLAR SERIES LED PAPI-
APAPI

100 %

FOUNDATIONS REUSED

100 % solar

OFF-GRID POWER SYSTEM

Challenge

A DAMAGED PAPI AT A REMOTE MINE AIRSTRIP

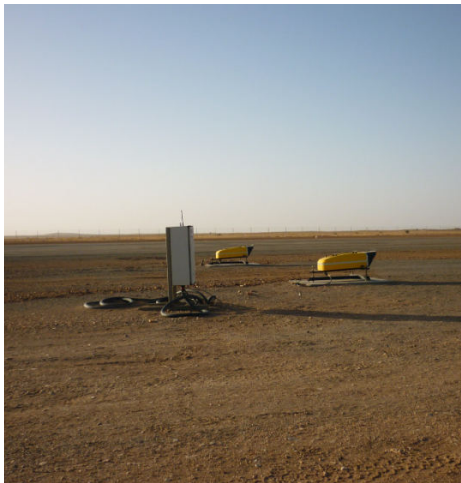
For a working mine site, any gap in approach guidance capability is a direct constraint on flight operations – and on the movement of personnel and supplies.

The airstrip had an existing PAPI supporting approach guidance for incoming flights, but weather and environmental exposure over time had damaged the units to the point where they could no longer be relied upon.

As with most mine airstrips, the location's remoteness meant any replacement had to be efficient to install and reliable in the field.

Ideally, it would also make use of the infrastructure already in the ground rather than requiring a full rebuild – every cubic metre of concrete and every mobilisation has to be trucked or flown in.

THE SYSTEM AS FOUND



Original PAPI units and control cabinet, degraded by weather and dust



Legacy units with the site's solar array on the horizon



Existing solar array and concrete pad, retained for the new system

Solution

Aviation Renewables supplied a new 2-box Solar Series LED PAPI paired with a Solar Series Power System, and sent an installation team to the mine site to carry out the work.

Reusing the foundations while updating the wiring gave the mine a modern, solar-powered PAPI system without the added cost and downtime of a completely new installation.

SCOPE OF WORK

Foundation Reuse

The existing concrete foundations from the damaged PAPI were assessed and reused, avoiding the cost and time of new excavation and concrete work.

Rewiring

The new LED PAPI units and power system required different wiring, so the team rewired the system to match the new equipment while keeping the foundations in place.

On-Site Installation & Commissioning

Aviation Renewables' technicians completed the full installation and commissioning of the new solar PAPI system in three days on site.

Outcomes

RESTORED APPROACH GUIDANCE IN DAYS, NOT WEEKS

The mine airstrip regained reliable, solar-powered PAPI guidance within three days of the team arriving on site, minimizing the operational impact of the outage.

Reusing the existing foundations kept the replacement cost-efficient for the client while still delivering a fully updated LED PAPI and power system suited to the site's remote, off-grid conditions.

As a solar-powered system, the new PAPI carries low ongoing maintenance requirements.

That is an important consideration for a site without easy access to grid power or frequent technical support, where every service visit has to be planned and flown in.

WHY THIS PROJECT MATTERS

A damaged approach lighting system at a remote site can be replaced quickly without discarding existing infrastructure. By reusing the airstrip's foundations and adapting the wiring to the new Solar Series LED PAPI, Aviation Renewables restored critical approach guidance in days rather than weeks – an approach well suited to mine sites and other remote airstrips where operational downtime carries a direct cost.

THE NEW SYSTEM, INSTALLED

