



CASE STUDY FLASHBACK

Nigerian Air Force Airfield

Kainji, Nigeria



Project Overview



Application

General Aviation Airfield with Precision Approach Path Indicators.



Product

- AV425-RF
- AV-72-RF-B
- AV-PAPI
- AV-ERGL
- AV-Windcones
- Custom reflective airfield signage
- AV-155 Airport identification beacon



Location

Kainji, Nigeria



Date

2012



Overview

The Nigerian Air Force (NAF) is the air branch of the Nigerian Armed Forces. Established in 1964, it is one of the largest in Africa, consisting of nearly 20,000 personnel.

Air combat training is an essential part of the NAF program. The Air Force has various aircraft in its fleet, including Chinese Chengdu F-7s, Dassault-Dornier Alpha Jets, armed helicopters and military transport aircraft. They are also expecting the delivery of Super Tucanos. All of these aircraft require specific training.

Background

The NAF needed to run full night-time flights from their airfield at Kainji. By offering these flights, the NAF would be able to provide more pilots with night-time training, and under improved lighting conditions.

By improving their flying skills under night-time conditions, they could better aid the people of Nigeria.

First, to provide full night-time flights, the NAF required an airfield lighting system that had the lowest up front running and lifetime costs. They needed to be able to easily remove and relocate this new system as needed. The runway operators also needed simple, user-friendly ground controls to make sure the runway activated on command.

This new system would need to be reliable and durable, as the runway would be subject to heavy use and harsh weather conditions.



Challenge

In 2012, the NAF commissioned new lighting for the Kainji airbase. This lighting would be mainly used by the 99 Air Combat Training Group.

Because the airbase is positioned in a remote location with a lack of hardwired infrastructure, traditional AC powered lighting would be costly to deliver, install, and operate. Therefore, the lighting solution they chose would require independent energy sources.

Avlite was able to install a complete solar runway system in conjunction with partners Transtek Systems Limited. Ease of installation and operation was a must for the NAF, with on going support necessary.



Solution

The NAF chose Avlite solar airfield lighting through our Nigerian distributor, Transtek Systems Limited, for its independent energy source and reliability record. The other key aspects critical for the Air Force was the certification of our lights to both FAA and ICAO standard, and our secure and encrypted AvMesh™ RF Network.

The Kainji Airfield was implemented in two Phases:

- **Phase One** was the deployment of 136 AV425-RF units. The first 102 units were set up in Runway configuration spaced in 60-meter intervals, with the remaining 34 units configured for the Approach lighting application. The first phase also included the installation of one four box PAPI system.
- **Phase Two** involved the installation of 300 AV72-RF taxiway lights in 60-meter intervals. Avlite also delivered 12 Elevated Runway Guard Lights (ERGL), two Windcones, nine reflective Airfield Signs, and an Airport identification beacon. During the second phase, another 4 box PAPI system was installed to allow the runway to be used in both directions.

Each phase of the project took under three weeks. Quick installation was possible as no trenching cabling or power supply was needed.

Avlite solar-powered runways are designed to be the most cost-effective option for general airfield applications, irrespective of their location. Avlite airfield solutions also have minimal running costs.



Today

Since the installation in 2012, only one change in batteries has taken place. The airfield remains fully operational. Avlite's continued partnership with Transtek Systems Limited helps provide maintenance as required, a key component for the NAF.

Avlite is now a preferred supplier of lighting for the NAF. At the Kainji airbase, our solar airfield lights have proven their durability, reliability and function. We expect a second PAPI to be installed shortly.

The airfield lighting system has allowed hundreds of pilots to train and develop further skill sets to assist the NAF.

Avlite commits to continuous improvement and investment in its product line up. Since the installation of the Kainji airfield, we have updated our product line to continue to give our customers an unrivalled user experience.



"The Nigerian Air Force Airfield in Kainji is an excellent example of the Avlite product range reliability and durability. It has required minimal maintenance from our distributor in Nigeria, Transtek Systems, who continue to maintain a positive relationship with the Nigerian Air Force.

Avlite is proud to continue to install runways like Kainji across the world with ongoing success."

Jordon Holcomb, Project Manager for the Kainji project in 2012



All Avlite Systems products are manufactured to exacting standards under strict quality control procedures. Avlite's commitment to research and development, investing in modern equipment and advanced manufacturing procedures has made us an industry leader in solar aviation lighting. By choosing Avlite Systems you can rest assured you have chosen the very best.

- ✓ Experienced & Trained Personnel
- ✓ Worldwide Distribution Team
- ✓ Agile Manufacturing
- ✓ Product Innovation
- ✓ Precision Construction
- ✓ Total Quality Management
- ✓ ISO9001:2015
- ✓ Rapid Turnaround

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