

OFFICE OF THE MANAGING DIRECTOR

New Airfield Ground Lighting System designed for energy efficiency, cost savings and safety compliance.

Mount Hagen's Kagamuga Airport in the Western Highlands Province is the first of eleven airports in Papua New Guinea which is currently operating the latest Technology in Airfield Ground Lighting.

The new System was installed and commissioned in February 2021 at Kagamuga Airport under Phase 1 of the Civil Aviation Development Investment Program (CADIP) which is funded by the Government of PNG and supported by the Asian Development Bank.

The new Airfield Ground LED Lighting System is compliant with ICAO requirements and standards and comprises;

- Runway Edge Lights – White/White and White/Orange
- Turning Pad Lights – Blue
- Threshold Lights – Green
- Taxiway Lights – Blue
- Holding Point Lights – Orange
- PAPI Lights
- MAG Lights – Mandatory Airfield Guidance Lights
- Power supply and controls including CCRs and UPS
- AGL controls and switching

"The benefits of this new system include, energy efficiency and cost savings due to low electricity consumption, low maintenance costs and replacement of lights, due to the longevity of the lamps, which have a life span of 15 years" explains Rex Kiponge, NAC Managing Director and CEO.

"The system also enables greater visibility of the runway, thereby enhancing safety and compliance during night operations, bad weather and poor visibility conditions.

"This is how NAC is moving forward in terms of promoting operational sustainability and cost reduction at our airports as outlined in the NAC Strategic Direction 2020 – 2030." Mr Kiponge added.

The lifespan of the lamps in this LED Lighting system is 15 years. This means under normal circumstances, NAC will not replace the lamps for 15 years. In addition, the LED Lights consume very little electricity but produce excellent lighting compared to the Halogen lamps which are replaced every 6 months and which are still in use at Jacksons and Tokua Airports.

LED PAPI Lights

PAPI refers to Precision Approach Path Indicator Lights which are a set of lights positioned beside the runway which provide pilots with a visual indicator of their aircraft's position relative to the correct glide path for the runway.

Part of this new system used at Kagamuga Airport, include the LED PAPI Lights. These are the latest PAPI Lights being introduced to all airports around the world. LED PAPI Lights are gradually replacing the Halogen PAPI Lights. The LED PAPI Lights were first installed at Goroka Airport in 2017 and so far NAC has had no issues and complaints from the airlines regarding these. The life span for these new LED PAPI lights is 18 years with very low power consumption, compared to the Halogen which has a life span of 12 months and a high power consumption. So far, the airports that have LED PAPIs are Goroka in 2017, Hagen in 2021 and Gurney in 2021.

The other airports that will also have LED PAPI installed are; Kavieng, Momote, Madang, Nadzab, Wewak, Vanim, Hoskins, Tokua and Jacksons.

New Solar Powered & LED Lighting for Apron

Mount Hagen is also the first airport in the country to have a containerised solar system which is the same as a solar farm. The Containerised Hybrid is a 48-Volt Solar System supplied by OFF-GRID Europe, a German Company specialised in design and manufacture and a major supplier of solar systems in Europe.

The system was specifically designed to provide lighting for the Hagen Airport Apron and can be monitored and maintained remotely.

Street LED Lighting

Kagamuga Airport also uses Solar Powered Street LED Lighting around the airport precinct where important facilities of the airport including the Air Traffic Control Tower, Fire Station, Maintenance Workshop and staff housing are located. The use of these Solar Street LED systems will reduce electricity costs to NAC for up to 10 years. End/

Approved for publication



Mr Rex Kiponge

Managing Director and CEO



LED Light System at Kagamuga Airport as seen from an aircraft



Installation of the PAPI LED Lights



Solar Powered Apron Lighting



Containerised Hybrid 48 Volt Solar system



Solar Street Lights installed around the Kagamuga Airport Precinct