



aviationrenewables

PROJECT REPORT

LED PAPI SYSTEM INSTALLED AT EASTERN CARIBBEAN INTERNATIONAL AIRPORT



LOCATION Eastern Caribbean

EQUIPMENT LED PAPI 6.6 amp.

DATE 2022

APPLICATION LED PAPI System for IFR Non-Precision Operations

CLIENT Civil Aviation Authority

SYNOPSIS

Aviation Renewables was awarded a contract to deliver, install and commission a 6.6 amp LED PAPI for IFR non-precision operations at an Eastern Caribbean international airport. With a runway resurfacing project and airfield ground lighting (AGL) replacement program in progress, the operator requested Aviation Renewables to remove its conventional style halogen PAPI and replace with an FAA certified four box LED PAPI, isolating transformers, power cables and electrical conduit. Over the period of five days, Aviation Renewables provided surveying, civil works, installation of LED PAPI Light House Assemblies (LHAs), LED PAPI maintenance and operating training, and commissioning of a four box LED PAPI system. During the entire LED PAPI installation, commercial, air carrier and private operators were able to continue operations for both day and night movements.



CHALLENGE

After decades of constant sunshine, hurricane rains and salt laden winds, the halogen PAPI adjustment screws for each LHA were rusted beyond repair. With the airport planning to replace its halogen airfield lighting with an FAA certified LED runway lighting system, Aviation Renewables was asked to install an LED PAPI from the manufacturer of the Constant Current Regulator (CCR) and Airfield Lighting Control & Monitoring Unit (ALCMU) currently operating at the airport.

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SOLUTION

The four box LED PAPI will offer five steps of LED PAPI lighting intensities to support VFR, non-precision IFR and precision high intensity LED runway lighting standards. In addition, with a history of missed approaches due to low cloud and heavy rainfall at the coastal runway, the Air Traffic Control (ATC) tower was able to increase safety of operations for both day and night operations at this Eastern Caribbean international gateway.



Transitioning from a halogen PAPI to an LED PAPI will deliver significant savings to the airport and the airfield electrical team over many decades through reductions in: energy consumption, electricity costs, AGL maintenance, replacement bulbs, adjustment procedures and missed approaches. In addition, the installation of a second LED PAPI at the opposite approach end with high intensity LED runway lighting will bring additional savings while increasing safety of operations to the international airport. With Solar Series wind cones currently operating at the international airport, Aviation Renewables continues to support Caribbean airports with LED PAPI Lighting, LED Runway Lighting, LED Wind Cones, Portable Runway Lighting and Onsite Services for the installation, training and commissioning of LED Airfield Lighting and Renewable Power Systems.

