



LOCATION Georgetown, Guyana

DATE 2021

CLIENT Cheddi Jagan International Airport

EQUIPMENT Solar Series LED PAPIs & Solar Series Wind Cones

APPLICATION Solar LED Airfield Lighting System for 24/7 Operations

SYNOPSIS

Aviation Renewables was tasked with the planning, surveying installation and commissioning of Solar LED PAPIs and Solar LED Windcones in Georgetown, Guyana. These visual aids will be used permanently following the completion of a runway extension project. The savings in installation cost, maintenance cost and electricity made the solar LED PAPI the desired option for this gateway to the country.



CHALLENGE

Cheddi Jagan International Airport, in Georgetown Guyana, is nearing completion of a runway extension project. As part of the project, new lighting was installed during resurfacing of the existing runway. In order to meet cost and sustainability goals for the project, the airport consulted Aviation Renewables on ways to implement ICAO-compliant lighting that would make an impact on both financial savings and the environment.



SOLUTION

Aviation Renewables installed a solar powered LED PAPI and solar powered LED windcone as part of the permanent visual aids package on the airfield. These two products are fully compliant to ICAO standards, and present significant savings in both energy and carbon emissions.

The LED PAPI has a solar power system that is appropriately sized to power the LED PAPI 24/7, with additional redundancy for extended periods of cloudy weather. With no electrical inputs required, the airport saves a large amount of electricity, but also allows the airport to reduce the number of CCRs and circuits they require. This is a massive reduction in initial cost when compared to a conventionally powered system.

The Solar LED Windcones operate autonomously with almost no maintenance required. With an individual solar power system for each wind cone, the internal luminaire and obstruction light operate dusk to dawn through an automatic photocell switch. The tilt-pole design allows for easy replacement of the windsock fabric by one person, when required. With no other maintenance or electrical inputs, the Solar LED Windcone will offer long-term savings over a period of 15 years or more.



Aviation Renewables worked with the airport on the initial design layout, and attended the site for surveying, installation, commissioning and training. Over the course of one week, the team was able to complete two Solar LED PAPIs and two Solar LED Windcones, without impacting airport operations.