



aviationrenewables

# PROJECT REPORT



**LOCATION** Southeast Asia

**DATE** November 2014

**CLIENT** Regional Airport

**EQUIPMENT** Solar Series PAPI  
Solar Series MAPPs Hybrid Power System

**APPLICATION** Solar LED PAPI System for 24/7  
Operations

## SYNOPSIS

Aviation Renewables was tasked with the design, installation and training of the Solar Series PAPI systems powered by a Solar Series Hybrid MAPPs system to provide both on demand or 24/7 continuous operations at the Regional Airport in Southeast Asia.

## CHALLENGE

The Regional Airport is located high in the mountains. The surrounding terrain provided challenges for pilots to maintain the correct approach profile. In cases of MVFR weather, airlines would often cancel flights due to the challenging terrain.



## SOLUTION

Aviation Renewables designed and provided a versatile navigational aid system, comprised of the Solar Series LED PAPI and the Hybrid MAPPs power systems operated by a ground-based controller for Bamyan airport operations. The Precision Approach Path Indicator powered by the Solar Series Hybrid MAPPs ties into the offsite grid power in the event of 24/7 continuous operations, providing the correct glide slope for the pilots. With a remote location and limited communications, a proven solution was installed saving the airport and community significant costs while allowing for more power to the surrounding community.

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This project presented a challenging feature with a fence line located right along the safety zone, thereby requiring a highly efficient solar system to operate the Solar Series LED PAPI while eliminating any other possible alternatives. With the civil works completed, Aviation Renewables completed the installation of the Solar Series LED PAPI's and MAPPS hybrid power system within two days.

Aviation Renewables delivered, installed and provided training for the Solar Series LED PAPI's & MAPPS power systems, a completely self-contained airfield LED PAPI system designed to suit both the climate of the airfield and the power requirements of the PAPI's for operations at this remote location.

The Solar Series LED PAPI is the most efficient PAPI in the market making installation and operations extremely efficient while reducing up front installation and maintenance costs in addition to zero operating costs. The highly efficient LED design is ideal for installation at all types of aerodromes, from intl. airports to remote airstrips or emergency operations.

The airfield is located within the outer territory of the Republic. With a runway length of approximately 2595 m by 23 m wide and temperatures as low as  $-20^{\circ}\text{C}$  in the winter and  $40^{\circ}\text{C}$  in the summer, the conditions can be extreme.



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