



● INSTALLED AND COMMISSIONED IN TWO DAYS

PROJECT REPORT

Remote Weather Reporting and Solar Airfield Lighting Upgrade at a South American Airstrip

Summary

A remote airstrip in South America partnered with Aviation Renewables to close two long-standing gaps: no automated weather reporting, and inadequate runway lighting for day and night operations.

As part of a planned infrastructure upgrade, Aviation Renewables supplied and installed an MWS-C600 Micro Weather Station paired with a Remote Weather Advisory System (RWAS), alongside a full run of solar LED A704-VL runway and AV70 taxiway lighting across the gravel strip. The airstrip gained real-time weather intelligence and reliable, self-contained LED airfield lighting, improving safety margins and operational consistency without adding grid-power dependency.

LOCATION

Remote airstrip, South America

DATE

2026

EQUIPMENT

MWS-C600 Micro Weather Station
Remote Weather Advisory System
A704-VL & AV70 Solar LED Runway
& Taxiway Lighting

APPLICATION

Remote weather reporting and
solar LED airfield lighting

2 days

INSTALL AND
COMMISSIONING

50 units

A704-VL RUNWAY LIGHTS

30 units

AV70 TAXIWAY LIGHTS

6,500 ft

CLOUD HEIGHT
FROM 35 MI

Challenge

OPERATING WITHOUT RELIABLE WEATHER DATA OR RUNWAY LIGHTING

Remote airstrips like this one often operate with minimal infrastructure and no connection to national weather networks.

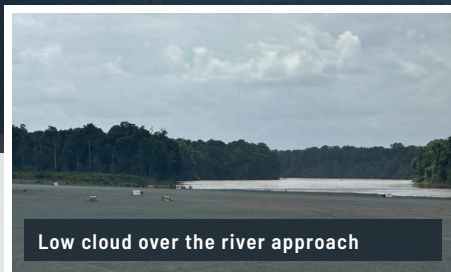
Pilots and ground crews relied on visual weather reporting rather than instrumented data. With no on-site weather station, there was no consistent visibility into cloud height, visibility and other conditions critical to safe departures and arrivals — a gap felt most acutely on night operations such as medical evacuation flights.

Any solution had to be self-sufficient, low-maintenance and durable without regular on-site technical support.

Grid power was not a dependable option, making renewable, standalone systems a requirement rather than a preference.

SITE CONDITIONS

Unbroken rainforest in every direction — no grid, no weather network, weather judged by eye.



Low cloud over the river approach



Dusk on the strip — no runway lighting



Gravel apron, no grid power

Solution

Aviation Renewables designed a self-contained package built around solar power and remote monitoring, matched to the airstrip's operational needs and site conditions.

With no trenching, wiring runs or grid tie-in, crews could position, anchor and commission each solar-powered light independently — completing the full installation in just two days.

SCOPE OF WORK

MWS-C600 Weather Station

Micro Weather Station with integrated LIDAR ceilometer, delivering real-time cloud height, visibility and standard meteorological readings.

A704-VL Runway & AV70 Taxiway Lighting

Approximately 50 solar A704-VL runway lights along the runway, plus 30 solar LED taxiway lights for apron and taxiway operations.

Remote Weather Advisory System

RWAS relays current conditions to pilots and operations staff as an automated VHF broadcast, closing the gap left by no weather network connection.

Site-Matched Installation

Units positioned and commissioned to suit the airstrip's layout and solar exposure, with training for site personnel on ongoing operation.

Outcomes

IMPROVED SAFETY AND OPERATIONAL READINESS

For the first time, the airstrip has an on-site source of real-time weather information, giving pilots and operators the data for safer go/no-go decisions.

In one recorded observation after commissioning, the system detected cloud height at 6,500 feet from roughly 35 miles out – well ahead of what a visual report could offer. The airbase's chief pilot, who also flies night medevac missions, described it as “a great step ahead” over visual reports alone.

Solar A704-VL runway and AV70 taxiway lighting extends safe operating hours into low-light and nighttime conditions.

Because every system installed is solar-powered and self-sufficient, the upgrade needed no new grid connection and carries low ongoing maintenance – well suited to the airstrip's remote setting.

WHY THIS PROJECT MATTERS

Remote airstrips can close critical safety gaps with self-contained, renewable infrastructure rather than costly grid extensions or ongoing diesel generation. By combining the MWS-C600 weather station and RWAS with solar A704-VL and AV70 airfield lighting, Aviation Renewables delivered a single, coordinated upgrade addressing both weather awareness and runway visibility – an approach readily repeatable at other remote airstrips facing similar constraints.

THE NEW SYSTEMS, INSTALLED

