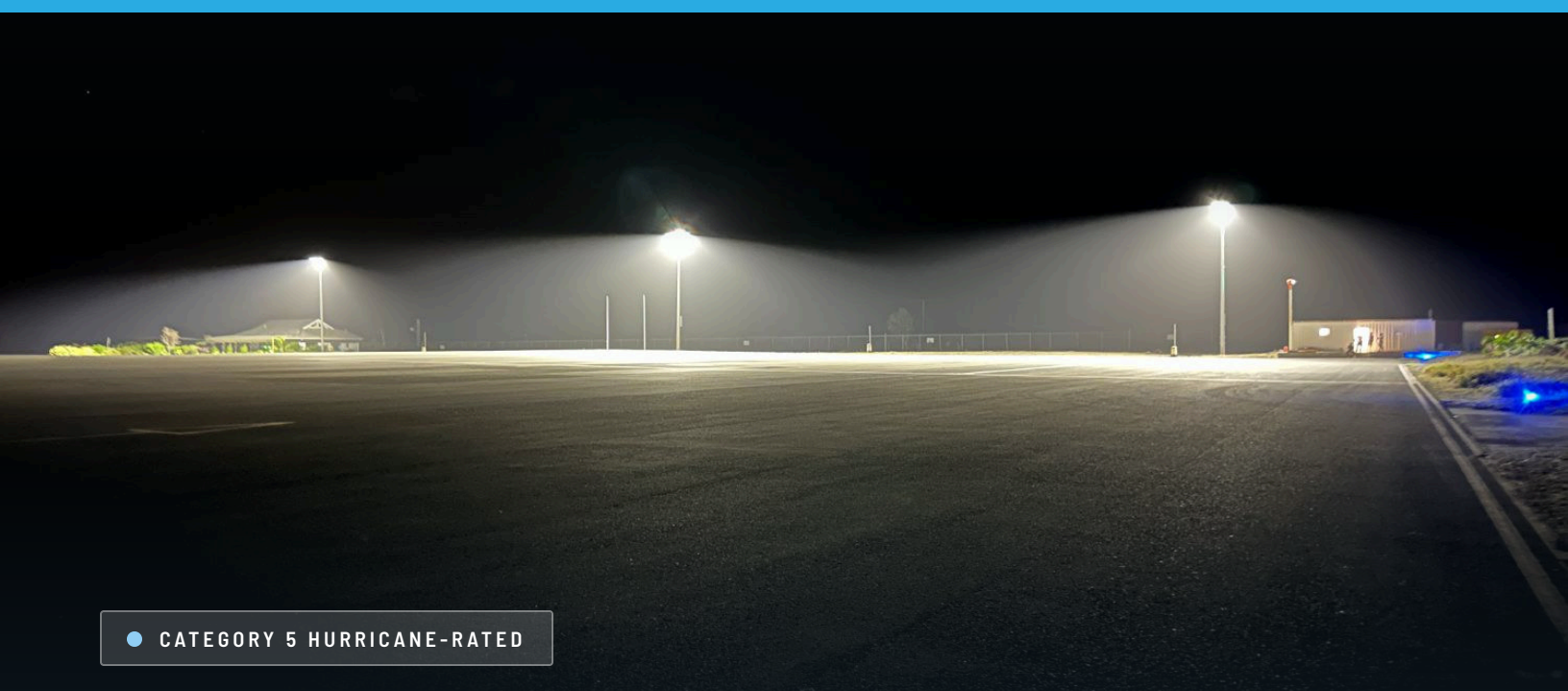




● CATEGORY 5 HURRICANE-RATED

PROJECT REPORT

LED Apron Lighting Installed at Barbuda's New Burton-Nibbs International Airport

Synopsis

As part of the phased development of Barbuda's new Burton-Nibbs International Airport, Aviation Renewables supplied a Musco Light-Structure System featuring Total Light Control (TLC) for LED technology for the apron, and managed the on-site installation.

The airport, which opened in October 2024, replaced the island's original storm-damaged airfield. The new apron lighting was engineered to withstand Category 5 hurricane-force winds, giving the island reliable, resilient lighting from the first night – the same standard Aviation Renewables applies across the Caribbean and North America.

LOCATION

Codrington, Barbuda,
Antigua and Barbuda

DATE

2026

CLIENT

Burton-Nibbs International
Airport (BBQ)

EQUIPMENT

Light-Structure System with
Total Light Control (TLC) for LED

APPLICATION

LED Apron Floodlighting

191 mph

CATEGORY 5 WIND RATING

15.2 m50 FT. GALVANIZED STEEL
POLES**10** units

TLC-LED 550 LUMINAIRES

10 years

ZERO MAINTENANCE COST

Challenge

In September 2017, Hurricane Irma — one of the most powerful Atlantic storms on record — struck Barbuda directly, severely damaging the island's original airport and much of its infrastructure. That airfield's short runway suited only small STOL aircraft and could not meet the island's long-term needs.

Antigua and Barbuda undertook a full rebuild, constructing the new Burton-Nibbs International Airport (IATA: BBQ), a roughly US\$55 million project which opened in October 2024 and replaced the original facility entirely.

Solution

Aviation Renewables supplied a complete Musco Light-Structure System with Total Light Control (TLC) for LED technology for three new pole locations on the apron.

The galvanized steel poles and precast bases are engineered to withstand Category 5 winds, addressing the community's top concern for any new airport infrastructure on the island. The system was factory-built and pre-aimed to minimize on-site labour and ensure consistent, accurate lighting performance from the first night.

SYSTEM SUPPLIED

- (3) 50 ft (15.2 m) galvanized steel poles
- Rated to 191 mph — structurally certified for full Category 5 hurricane winds
- (3) precast concrete bases with integrated lightning grounding
- Factory-wired poletop luminaire assemblies with (10) TLC-LED 550 factory-aimed luminaires
- Factory-wired and tested remote electrical component enclosures with pole-length wire harnesses
- (1) Lighting Contactor Cabinet with photocell and pushbutton high/low intensity control, UL Listed as a complete system
- Musco Constant 10™ product assurance — materials and on-site labour covered for 10 years

The lighting had to withstand Category 5 hurricane-force winds — sustained winds of 191 mph (307 km/h) or greater — not just minimum code requirements.

With no existing lighting infrastructure on the apron, every component had to be designed and installed from scratch — on an operational airfield — while remaining low-maintenance for a small island facility with limited on-site technical resources.



Outcomes

With the new apron lighting system in place, Burton-Nibbs International Airport can support safe, reliable nighttime aircraft handling from the system's first night in service.

The Category 5 hurricane-rated, factory-aimed design gives the airport and the Barbuda community confidence that its critical apron infrastructure will withstand future storms.

The Constant 10™ warranty eliminates 100% of maintenance costs for 10 years, covering materials and on-site labour.

It is supported by Musco's Lighting Services team of more than 170 members – keeping long-term upkeep costs to a minimum for the island's new international gateway.

Planning apron lighting for a new build, an expansion, or an HID retrofit? Request a photometric design at aviationrenewables.com/led-apron-lighting/

