

2020 / Case Study

# Solar LED Airfield Lighting Aids United States Air Force Counterterrorism Efforts

*Undisclosed Location*



*"We Believe Technology  
Improves Navigation."*

“The teams...were very impressed with everything. From a pilot’s perspective, it (the airfield) was beautiful, and the operators would be very appreciative to have all the components... IR capable. Again thank you for all the help along the way! We look forward to working with you all for our upcoming projects.”

## Lieutenant Colonel

U.S. Air Force

## Product Overview

**Application:** Airfield

**Date:** 2019

### Products:

- AV-PAPI (Precision Approach Path Indicators)
- AV-MALSR (Medium Intensity Approach Lighting System & Runway Alignment Indicator Lights)
- AV-REIL (Runway End Indicator Lights)
- AV-426, AV-70 (Runway and Taxiway Lights)
- AV-ERGL (Elevated Runway Guard Lights)
- Wind Socks and Signs
- Airfield Lighting Controller

## Solar LED Airfield Lighting Aids U.S. Air Force Counterterrorism Efforts

### Industry

Military

### Headquarters

United States

### Founded In

1947

## Background

A shift in the strategic focus in combating terrorism is changing how the United States Air Force is operating aircraft and remotely piloted aircraft (RPA’s or drones) out of isolated airbases. Violent extremists and local government instability in a rugged, desert region necessitated an increase in USA and partner-country counterterrorism efforts to minimize the spread of dangerous, aggressive militant groups. A new flight operations base was needed to conduct discreet missions.



*The entire solar airfield lighting solution, including these solar panels and battery boxes, were installed in less than two weeks.*



*Solar LED ERGL in position to signal entry onto active runway.*

## The Challenge

The U.S. Air Force required a full airfield and base camp to support Intelligence, Surveillance and Reconnaissance (ISR) efforts for troops in one of the world’s most remote regions. The lack of hardwired infrastructure in the region dictated that the airfield use an independent energy source. The airfield development challenges are complex due to its desert location, which is then bordered by jagged mountains.

Traditional, AC powered airfield lighting was cost prohibitive to deliver, install and operate.

Available electrical service in the region was unreliable and insufficient to satisfy the airfield lighting needs of the airbase. Generators would be an unacceptable alternative power source since fuel costs were as high as \$600/USD per gallon, and required convoy and security details. Additionally, the Department of Defense mandated sustainable energy sources be used, where possible, to prevent loss of life and offset the expense of high fuel and delivery prices.

The U.S. Air Force specified solar airfield lighting for the new base.



*A solar LED AV-70 Taxiway Light sits in front of the five AV-426 Runway End Lights.*



*Avlite's four box Precision Approach Path Indicator (PAPI) has the sharpest color transition line of any LED PAPI available.*

## Solution

Avlite supplied a complete solar LED airfield lighting solution to the airbase within the critical time frame required.

The supplied LED approach and airfield lighting solutions for the Category 1 airstrip included Avlite's patented Precision Approach Path Indicators (PAPI), Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights (MALSR), Runway End Indicator Lights (REIL), Runway and Taxiway Lights, Elevated Runway Guard Lights (ERGL), Illuminated Wind Socks and signs. All of the products are tested to MIL STD 810.

The Radio Control option provides encrypted operational flexibility from control tower or other convenient on-field locations. The system allows for individual group control, so that lighting systems can be individually controlled. Night Vision Goggle (NVG) mode can also be activated via the Radio Control for discreet and flexible lighting operation at night.

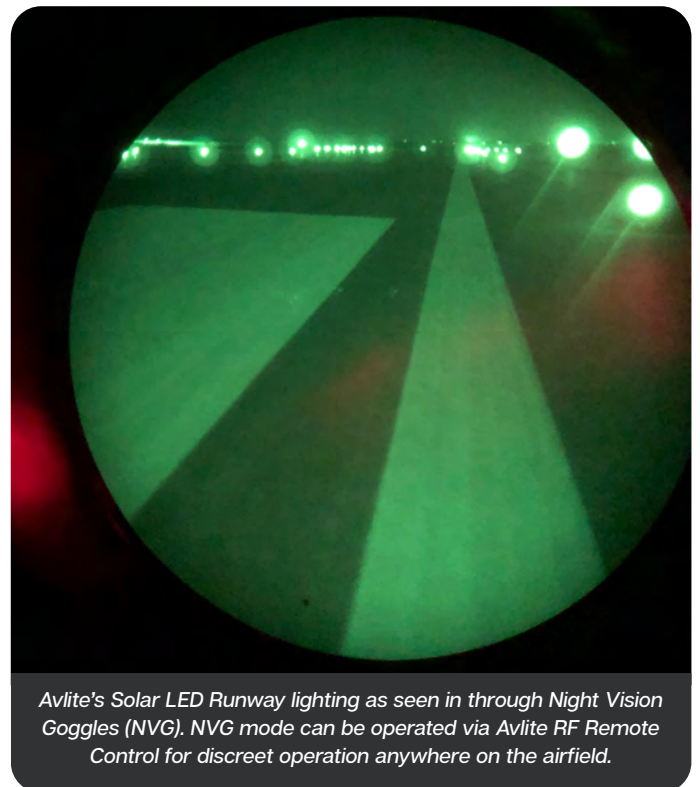
All of Avlite's solar LED airfield lighting products satisfy the National Defense Authorization Act for Fiscal Year 2010 Regarding Use of Renewable Energy Sources to Meet Energy Needs, Section 2842, and meet or exceed the requirements of the United Facilities Criteria Visual Air Navigation Facilities (UFC-3-535-01) issued by the Department of Defense.

Avlite has a proven record of accomplishment for field reliability and is proud to be the industry's only program of record for United States Army and United States Department of Defense solar airfield lighting systems.

## Outcome

Avlite's solar airfield lighting helps the United States Air Force discreetly operate RPA's in support of their global counterterrorism measures, keep ground forces safe while increasing security and goodwill for the region in which the airbase is located.

Solar airfield lighting provides an easy to install and certified lighting solution, which is reliable, self-contained, secure and proven in the harshest terrains by the world's largest military.



*Avlite's Solar LED Runway lighting as seen in through Night Vision Goggles (NVG). NVG mode can be operated via Avlite RF Remote Control for discreet operation anywhere on the airfield.*



# Contact Us!

Avlite's airfield solutions are easy-to-install and scalable. We have a solution for every budget.



Avlite's Solar Airfield Sign (shown with battery box and solar panel) provides brilliant illumination of important runway information.

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