



CASE STUDY

Large Joint Forces Air Base Expands Solar LED Lighting to Increase Operations and Safety

Northwest Iraq



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Project Overview



Application

Large Joint Forces Air Base Expands Solar LED Lighting to Increase Operations and Safety



Product

AV-EAGLE Elevated Airfield Ground Lighting for Runway Edges
AV-70 Taxiway Lights
AV-MALSR Medium Intensity Approach Lighting System & Runway Alignment Indicator Lights
AV-REIL Runway End Indicator Lights
AV-ERGL Elevated Runway Guard Lights



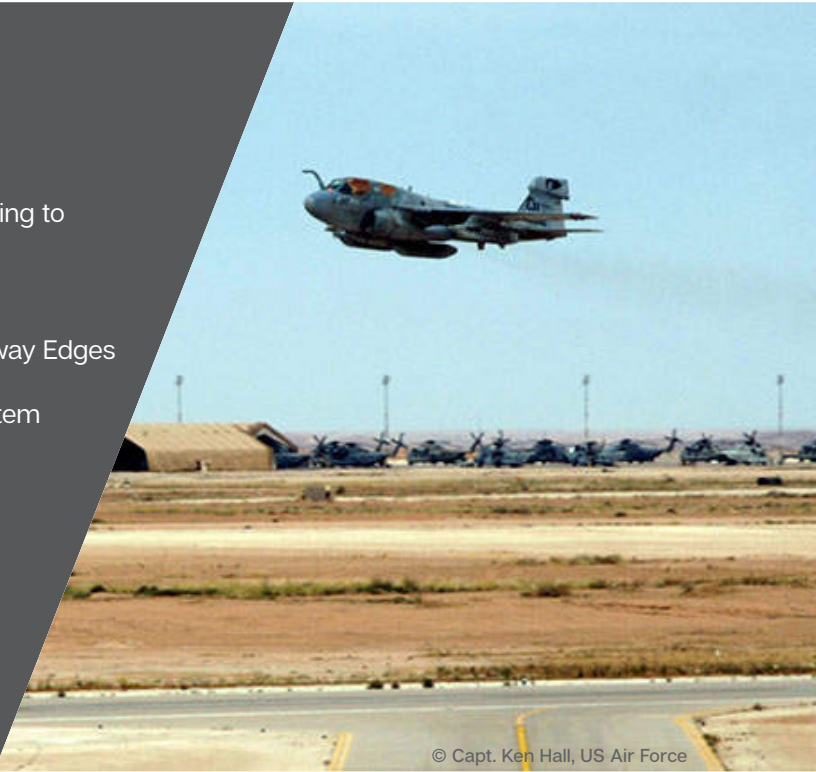
Location

Northwest Iraq



Date

2018



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Background

Ayn al-Asad Air Force Base is one of the largest airbases in Iraq. It is located in the Anbar province of western Iraq, about 100 miles (160km) west of the capital city, Baghdad and a short 300 miles from the Persian Gulf. It has served as an Iraqi/U.S. Armed Forces joint service base.

Built in the 1980's with funding from the former Yugoslavia, it had been the hub for fuel and cargo transportation and supplies during Operation Iraqi Freedom when the regime of Saddam Hussein was disseminated.

Its perimeter is almost 15 square miles (24 km) with two runways, 14,000ft and 13,000ft in length, and multiple taxiways and hangars. It is surrounded by desert, rock and scrublands.

Challenge

Al-Asad's strategic location and increased capacity were critical to support ground troops, who had the mission of maintaining consistent rule and stability in the region. Therefore, an overhaul of the flight operations was identified, with the objectives of increasing throughput and safety of aircraft operations.

The existing airfield lighting on the main runway was hardwired, aged and intermittently operating; the second runway was unlit. In 2010, the base required expanded air operations. To accomplish the expansion, the second runway needed to be lit for 24/7 operation. New lights were also required to operate in covert mode so that departing and approaching aircraft could do so in blackout, undetectable conditions.

The base's secluded location made bringing equipment to al-Asad's runways and taxiways difficult, expensive and dangerous for supply trucks.

Solar airfield lighting was specified for al-Asad, with Covert mode as an essential element, for enhanced military capability and personnel safety.



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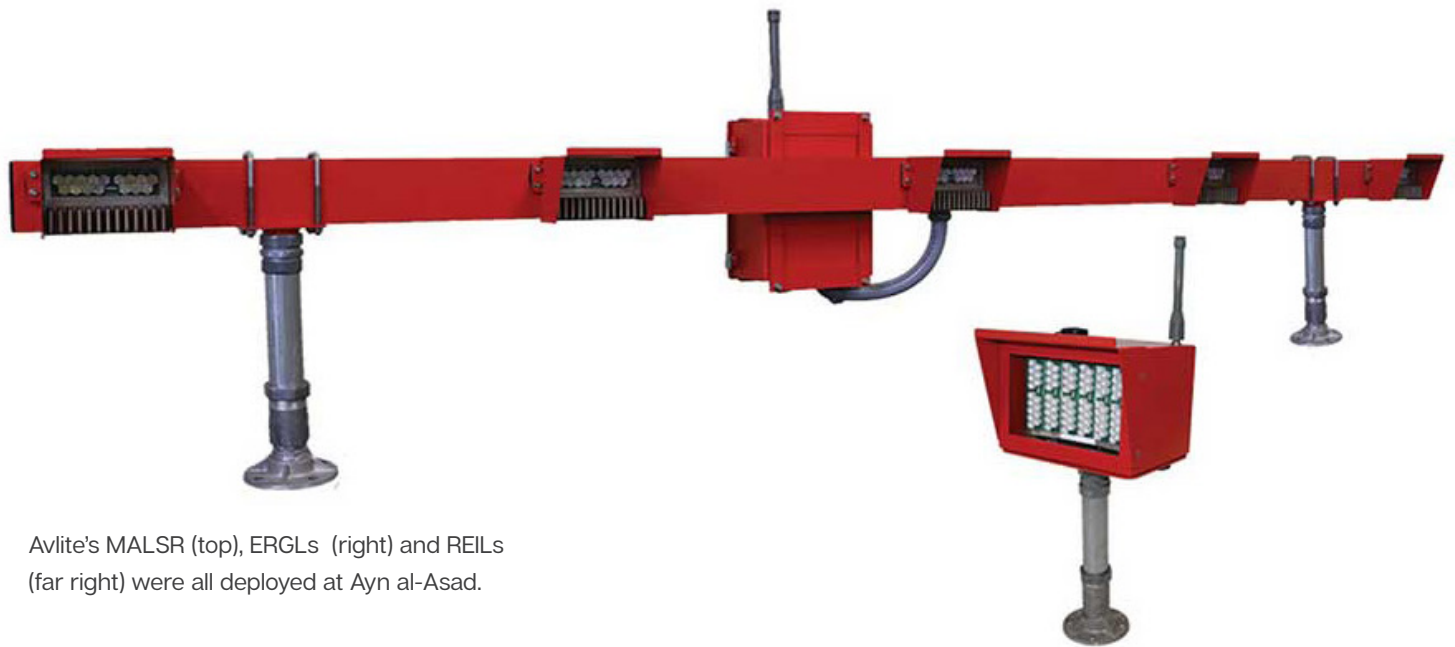
557th Expeditionary Rapid Engineer Deployable Heavy Operational Repair Squadron handled the airfield upgrades at Ayn al-Asad Air Base.



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Al-Asad taxiways lined with Avlite's AV-70 LED Solar Taxiway Light. al-Asad was headquarters for the 7th Division of the Iraqi Arm.





Avlite's MALSR (top), ERGLs (right) and REILs (far right) were all deployed at Ayn al-Asad.

Solution

Avlite initially provided expeditionary lighting with rapidly deployed, self-contained solar LED Elevated Airfield Ground Lights (EAGLE). These medium intensity runway edge lights are designed for VFR (visual flight rules) and non-precision IRF (instrument flight rules) landings.

Since Avlite's solar powered LED lights were the only ones that could support NVG flight operations, Avlite approach lighting systems were added in 2018 to further increase capacity and safety. Avlite solar LED Approach Lighting and Incursion Protection included:

- Medium Intensity Approach Lighting Systems with Runway Alignment Indicator Lights (AV-MALSR)
- Runway End Indicator Lights (REILs)
- Elevated Runway Guard Lights (ERGLs)

All of the supplied equipment can quickly be deployed or relocated, and is tested to MIL STD 810.

Avlite solar LED airfield lighting products are tested and compliant with IP68 standards for water and dust protection. The lights also 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.

The Radio Control option provided encrypted operation from the control tower or other on-field position, allowing the lights to be controlled in separate groups. Covert mode can also be activated by the Radio Control for discreet operation at night.

Outcome

Avlite's complete solar LED lighting solutions fulfilled all U.S. Air Force requirements. Flight capacity expanded with the new airfield lighting, and the Covert mode increased safety for troops and air operations. RF Control added operational flexibility around operation control. Ayn al-Asad Air Base achieved their expansion objectives using airfield lighting from a single, USA made manufacturer - Avlite.



“Avlite is proud to supply the U.S. Air Force with airfield lighting to support the safety and success of their flight operations.”

– Jeffrey Trottier
Avlite DOD Business Development Manager





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