

2021 / Case Study

Providing a Lighting Lifeline to the Outback

Tjuntjuntjara, Western Australia, Australia



"We Believe Technology Improves Navigation."

“Our airstrip is our lifeline. Keeping the airstrip operational 24/7 is essential for the community’s survival and well-being. Avlite’s Solar Powered (AV-70) RF lights were the most suitable units for our requirements, and they are reliable in the harsh desert environment we operate them in (45 °C summer temps). The batteries are robust, lasting quite a few years before needing replacement. Avlite also provides excellent technical support.”

Ian Brincat

Community Services Manager

Paupiyala Tjarutja Aboriginal Corporation

Tjuntjuntjara is run by Paupiyala Tjarutja Aboriginal Corporation, whose board is fully indigenous and local to the community.

Providing a Lighting Lifeline to the Outback

Industry

Rural Airstrip

Headquarters

Western Australia, Australia

Installed In

2021

Background

Tjuntjuntjara is one of the most remote indigenous communities in Australia. It is located in the Great Victoria Desert of Western Australia and has about 150 local indigenous members and 20 support staff.

The support staff runs the small community’s services, including a store, a school, health services, and mechanical service.

The isolated nature of this community means access via vehicle is from Kalgoorlie in the southwest (630 kilometres or 392 miles of dirt track) or Ceduna in the southeast (900 kilometres or 560 miles away). These roads become impassable during wet weather, and the community has been cut off from the outside world on numerous occasions due to rain. The drive to or from Kalgoorlie when conditions are good takes well over 8 hours in a four-wheel-drive vehicle.

Another challenge the community faces is that electricity supply is limited to diesel generators and solar systems with battery back-up.

The Challenge

Tjuntjuntjara has a 1200 metre (3950 feet) gravel airstrip aligned east-west which averages two to three flights per week. The aircrafts vary and include regular scheduled mail/freight and passenger transport, police visits and visiting medical and services providers.

The most critical fly-in fly-out visitor is the Royal Flying Doctor Service (RFDS). While the local clinic performs most of the day-to-day medical care and support, the RFDS is often required to treat and evacuate patients requiring more specialised and emergency medical care. It is unknown when this care would be necessitated.

The Tjuntjuntjara Airstrip required solar lighting as the community is not connected to the mains. A self-sufficient system was a non-negotiable.

Product Overview

Application: Rural Airstrip

Date: 2021

Products:

- AV-70 RF Solar Aviation Lighting
- AV-IWI

Tjuntjuntjara,
Western Australia,
Australia



Solution

Paupiyala Tjarutja Aboriginal Corporation came to Avlite Systems to develop a total lighting solution to achieve continuous access to the Tjuntjuntjara community.

Community Services Manager, Ian Brincat helped select AV-70's with RF and an Illuminated Windsock Indicator.

"The airstrip has no mains electricity available and solar power was our only option. Also, Avlite is an Australian based company with an excellent reputation for quality and service," said Ian Brincat.

The AV-70 is a completely self-contained LED lights, designed to suit a range of aviation and general applications. For Tjuntjuntjara Airstrip, they are utilised as runway and apron lighting.

RF radio control was optioned and uses our proprietary AvMesh RF Communications technology. The system is operated by a wireless handheld controller that enables personnel to remotely activate and set specific characteristics of lights within their airfield. It comes standard in 2.4GHz frequency with 128bit security encryption.

It can turn all lights on or you can allocate lights into 'light groups' and remotely control each group or set units to synchronised flashing. This is all operated through the controller with a straight-forward menu that makes the radio-controlled airfield lighting system very easy to operate.

The Illuminated Windsock Indicator (AV-IWI) provides a visual aid of the wind direction and speed at a set location on the rural airfield.

The installed unit is equipped with solar LED lighting with up to 100,000-hour life with minimal maintenance required. The LED light uses nearly 90% less power than halogen lamps and also comes centre mounted LED obstruction light. The nylon sock is treated for rot, mildew and water repellence.

The airstrip also runs two separate ADS-B receivers in the community to allow tracking of nearby flights to and from the community.



Outcome

Avlite lights and windsock are a major financial investment for a small community such as Tjuntjuntjara. They rely on the WA Regional Airports Development Scheme (RADS) and the federal Remote Airstrip Upgrade Program (RAUP) to help fund the airstrip maintenance and equipment. Avlite made this project possible. Having an airstrip operational 24 hours a day, 7 days a week is essential for the safety of the Tjuntjuntjara community

These provide the visual aid necessary to allow and facilitate night-time landings by any aircraft but most importantly by the RFDS. Employing the RF capabilities of the lights allows the airstrip to be up and running at a moment's notice, connecting our community to the emergency resources it needs to keep functioning.



Contact Us!

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



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