



PROJECT REPORT

LED AIRFIELD LIGHTING SYSTEMS ENSURE CONTINUES OPERATION BY DAY OR BY NIGHT



LOCATION Toronto Pearson Intl. Airport (TPIA)

EQUIPMENT Portable LED Airfield Lighting Systems

DATE February 2017

CLIENT Greater Toronto Airport Authority

APPLICATION Emergency Taxiway LED Lighting Systems

SYNOPSIS

Aviation Renewables was tasked with the design, supply, training and commissioning of two portable LED lighting systems for TPIA, Canada's largest and most renowned international airport. The portable LED taxiway lighting systems will be used for emergency airfield lighting operations, construction and maintenance activities. The two portable LED taxiway lighting systems can be stored, transported and charged within a rugged, road worthy transport trailer. Aviation Renewables successfully delivered two portable LED taxiway lighting systems within 8 weeks time in order to guarantee 24/7 TPIA operations during year round operations.



CHALLENGE

The Greater Toronto Airport Authority (GTAA) required the portable LED taxiway lighting systems capable of meeting ICAO & FAA photometric lighting standards via radio control in order to support day and night operations. GTAA required the portable LED airfield lighting systems to be transportable, capable of charging while in storage and be ready to deploy within minutes to support 24/7 year round operations. The portable LED taxiway lighting systems and mobile charging system meet all CSA (Canadian Standards Association) lighting and electrical standards which required onsite customization of the portable charging trailers and a mobile charging system. With the holiday season approaching, Aviation Renewables was able to deliver, train and commission a complete turnkey LED taxiway lighting system within two months time, meeting the airports goals.



SOLUTION

The portable LED taxiway lighting solution is the most installed, tested and proven, battery powered LED airfield lighting system in the market. With simple drop-in magnetic charging bays and fast recharge times of 8 hours or less, the emergency LED airfield lighting system can be rapidly deployed within minutes. When not in use, the recharging trailers provide safe storage with maintenance free trickle charging capabilities. An advanced radio frequency mesh network control system allows the network to propagate and expand its operating range within the vicinity of the airfield.



Due to an unexpected power failure that resulted in the loss of the airports taxiway inset lighting, GTAA required a rapid response time that would not only alleviate the immediate concern for day and night 24/7 operations but also provide a long term asset for future operations such as construction, taxiway rerouting, natural disasters, power interruption or training exercises. After careful consultation, Aviation Renewables recommended the portable LED taxiway lighting systems with radio control and a mobile charging system to accommodate any future requirements which included the supply of additional obstruction and barricade lights delivered to TPIA in the months thereafter. This custom solution allowed GTAA to mitigate their risk of any future power failures, thereby delivering increased resilience for uninterrupted, 24/7 operations during winter, spring, fall of summer operating conditions. The CALKIT portable airfield lighting system offers the best combination of convenience, performance and quick-deployment with immediate return on investment that is often realized in a one time unexpected event. Aviation Renewables is proud to support Canada's largest airport along with its focus to improve safety, reduce its footprint and decrease costs as a leading global airport.

