

AMOBILE THERMAL IMAGING SOLUTION IMPROVES INSPECTION EFFICIENCY FOR THE ASIAN ELECTRIC POWER UTILITY

Substation equipment and power distribution grid aging happen. Electric power utilities require regular inspections of aging infrastructure through techniques to detect the failures and breaches for timely maintenance. The inspection scope includes transmission towers, insulator bushings, power transformers, load tap changers, circuits, and surroundings, etc. However, the high workload and poor environments of electricity equipment inspection are issues for utilities to deal with.

Challenges of Electric Power Inspection

Traditional power examinations are conducted by a workforce that is not only low efficiency but also faces rising costs due to unplanned maintenance. In recent years, drones are utilized for inspection. Nevertheless, the immature technologies regarding image clarity, accuracy, and flight security, etc. are the current barriers. A large electrical power utility in Asia came to AMobile Solutions looking for smart, compact, and portable inspection devices to improve the inspection efficiency and failure detection rate.

SMART Thermal Imager

Thermal imaging technology can enhance inspection and maintenance accuracy and reliability, as well as preventing inspectors from being close to superheated and dangerous areas in order to improve safety. AMobile customized the Mobile Inspection Assistant for customers, the G60, which provides not only thermal imaging for detecting any abnormal temperatures of the equipment and around the substation but also a PTT (push-to-talk) function to communicate with other G60 devices and backend center while the network signals are poor.

Improved Maintenance Efficiency

NFC and UHF modules are embedded for crew identity verification to ensure security and multi-data collection for easy controlling and management of equipment in the substations. Also, G60 integrates with the customer's software, the smart inspection management platform, so all data can be accessed real-time and reports can be generated automatically. Furthermore, early warnings of impending equipment failures will be sent to the devices and control center for reasonable crew dispatch and higher work efficiency.

