EXECUTIVE SUMMARY

ULC Robotics conducted an unmanned aerial vehicle (UAV) inspection of a 12-acre substation in New York State. ULC’s pilots flew multiple sensors in a single, expertly executed inspection, delivering superior productivity and data capture while improving safety, system reliability, and utility efficiency.

CHALLENGES

Our electric utility customer identified several obstacles impeding their goal of more secure substations and enhanced operations efficiency.

- Lack of current visual asset and condition data
- Collection of infrared data requires the use of handheld devices
- Spontaneous manual inspection by different groups affects productivity and incurs repetitive travel and labor costs

ULC proposed an in-depth aerial inspection and analysis of their substation and was able to identify several areas in which UAV are able to deliver significant improvements over traditional inspection methods.

RESULTS:

- 100% data capture
- Delivery of high-resolution color and thermal imagery
- All data captured in half day (10-minutes flight time) versus two days

By performing inspections using UAVs, multiple substations could be surveyed in just 1 day, far outperforming the current rate of 1 substation in 1 to 2 days using conventional inspection methods.
INSPECTION & RESULTS

Using first-class, high-resolution and thermal imaging cameras mounted on a US-built multirotor UAV, ULC completed the entire substation inspection in approximately 2 hours (including set-up) and provided:

- Detailed visual data to help meet inspection requirements and identify issues with substation condition, vegetation growth, and security breaches.
- High resolution visual and thermal imagery of the substation, providing current information not available from Google Earth view or any out-of-date survey data.
- A full set of geotagged visual images.

By utilizing the powerful technology employed by UAVs, ULC Robotics can promote a more efficient use of utility resources, enhance electric system reliability and security, and improve the safety of employees.

ULC AERIAL SERVICES

From proactive asset monitoring to facility security, our team of experienced UAV pilots, engineers and project managers work with electric and gas utility companies to deploy US-built UAS while focusing on delivering high-quality, actionable data.

Contact us to learn more about our UAV Electric Utility Inspection Services: 1-631-667-9200 / www.ulcrobotics.com

AIRCRAFT:
ULC US-Built Multirotor UAS
PAYLOAD:
42MP DSLR & FLIR Thermal Cameras
ALTITUDE:
200ft / 61m
AIRSPACE:
Class G