UNMANNED AERIAL UTILITY INSPECTION SERVICES

ADVANCING AERIAL INTELLIGENCE FOR ASSET INSPECTION

ULC provides unmanned aerial inspection services for utility and energy companies to analyze the current state of their assets and identify factors that influence the future health of their facilities. Our team delivers more data with greater precision using custom developed aircraft and advanced sensors while lowering costs, improving safety and getting more inspections done in less time.

PROGRAM BENEFITS

Lower the Cost of Compliance
Meeting state and federal regulations is a heavy burden on utility resources. Our services enable you to meet requirements at a lower cost while using fewer resources.

Improve System Reliability
Unmanned aerial inspection over utility assets identifies ‘outages waiting to happen,’ so utilities can address concerns before they become emergencies.

Improve Safety and Avoid Hazards
Since UAVs are operated remotely, utility personnel do not need to climb heights or navigate hazardous terrain. The need for scaffolding or suspension equipment is also avoided.

Improve Asset and Facility Access
Aerial inspections of hard-to-access infrastructure avoids the need for utility personnel to traverse challenging terrain using vehicles or by foot or be suspended at heights.

Minimize Downtime of Critical Systems
UAV operators perform most inspections while utility assets are in operation to negate the time and disruption required to shut down critical systems.

Reduce Inspection Costs
Inspections of assets, facilities and right-of-ways are a large undertaking for utilities. Our team remotely captures highly detailed data to meet or exceed inspection needs.
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MOST ADVANCED UAV TECHNOLOGY

Our custom-developed unmanned aerial systems are designed for autonomous and semi-autonomous operations near utility infrastructure:

- Centimeter accurate GPS positioning
- Triple redundant autopilot sensors
- Adaptable payload configurations including LiDAR, HD imaging and video, gas leak detection, thermal and more
- Extended flight times with nominal payload

The Forefront of Beyond Visual Line of Sight Flight: Additional features such as long-range control and enhanced communications are being integrated into our aircraft to enable fully autonomous UAV flights that extend beyond the visual line of sight of our team.

DATA DELIVERY & MANAGEMENT

ULC Aerial Services delivers comprehensive reports that includes a range of maintenance and engineering data. Our team can also customize outputs and integrations to meet the requirements of existing utility workflows and procedures.

- Management of Visual, LiDAR and Thermal Data
- Standard or Customized Reporting
- Secure Data Storage and Transfer
- Integration with Utility GIS Systems

We work with utility companies and sensor developers to integrate new sensors into our UAV platform and develop methods for processing and reporting the data.

APPLICATIONS

Our unmanned aerial services reduce the cost of electric and gas utility inspections, surveys and patrols while enhancing reliability, compliance and efficiency.

Long Range Pipeline Patrols
ULC Aerial Services deploys UAVs to inspect gas pipeline right-of-ways and assess areas for problematic conditions such as encroachment, ground disturbance, vegetation overgrowth and missing pipeline markers.

Vegetation Management
Long-range flights over utility right-of-ways allow for cost effective identification of vegetation clearances, undergrowth assessment, hazard tree identification, audit of tree trim contractors and predictive modelling.

Gas Leak Detection
Utilizing gas sensors mounted to our specially designed UAVs, we accurately identify leaks, determine the source of the leak and quickly assess their severity so that proper actions can be taken to remedy the problem.

Emergency Response
Our team deploys UAVs before and after storms and emergencies to integrate advanced comparative data in conjunction with utility outage management systems (OMS) to improve decision making and reduce service restoration times.

Aerial Mapping and Surveys
ULC Aerial Services delivers cost effective mapping and site surveys to engineering and construction teams to support infrastructure projects, provide documentation of construction progress and more.

Electric T&D Inspections
Our team works with electric utilities to conduct UAV inspections over electric transmission and distribution facilities and right-of-ways to find and fix issues to improve system reliability.