Technology Improving Our Lives

How Drones Help Keep The Lights On

(NAPSA)—Electricity is something that many take for granted, but without it, we wouldn't be able to go about our everyday routines. That's why electric companies work so hard to maintain the power grid. Today, electric companies are exploring a new way to protect the grid from any disruptions to our power.

Falling trees and overgrown vegetation can interfere with power lines and cause outages. For this reason, careful monitoring of all vegetation near electric company assets is a very important part of electric companies' maintenance strategies.

How Drones Fit into the Equation

Traditionally, electric companies have used a combination of helicopter flights and field crews to inspect their power lines. Electric companies are now looking to add long-distance drone flights into the mix to complement existing methods.

Drone technology and the big data that drones collect have immense potential to improve reliability and efficiency by streamlining the inspection of large assets such as transmission and distribution lines, as well as generation assets (e.g., conventional power plants) and renewables (e.g., wind and solar). Drone inspections allow electric companies to map the trees growing near their lines to determine the height, species and distance from the power lines for each tree.

The data for each individual tree is then added into an algorithm that automatically calculates the future growth rate of the tree and when it would be at risk for falling or growing into the power lines. With each successive inspection of the power line, this growth algorithm becomes even more precise. This information helps electric companies target the trees that need maintenance to prevent them from interfering with power lines as well as help them plan when that maintenance needs to be scheduled.

Drones help electric companies maintain the power grid more efficiently so that they can offer customers better service.

Drones can also detect problems with the different technical components of the grid, such as corroded components, poor connections and electrical discharge. This allows electric companies to focus their maintenance budgets where they will make the most impact.

The Edison Electric Institute and Sharper Shape Partnership

Although these electric company drone inspections have already proven successful in Europe, long-distance drone flights have yet to be implemented for this purpose in the United States. That's where the partnership between drone service company Sharper Shape and the Edison Electric Institute comes into play. The EEI Sharper Utility partnership aims to fast-track commercial drone inspections of power lines in the U.S. In fact, the pair recently submitted a waiver application to the Federal Aviation Administration (FAA) for permission to demonstrate drone flights with select U.S. electric companies.

Drones are one more tool that can help electric companies conduct streamlined power line inspections. Utilizing drones can help improve the reliability, resiliency and security of the power grid, which ultimately benefits electricity customers.