

# Spotting Damaged Utility Poles with Greater Speed and Precision

South Florida | *Deployed on 4G LTE*

## SCENARIO

The faster and more accurately utilities can assess storm and wind damage to utility poles, the sooner they can restore power and either replace or reinforce these assets. To this end, Florida Power & Light (FP&L) implemented a new family of sensors for cost-effective, real-time monitoring.

## SOLUTION

FP&L partnered with Ubicquia to develop solar-powered tilt/vibration (TVM) wireless sensors equipped with dual rechargeable batteries and capable of self-powering for 10 years. Onboard GPS enables the sensors to report their exact location and provide daily information on pole tilt, vibration, and solar panel and battery status. FP&L receives immediate alerts for any reading that exceeds the utility's threshold.

## RESULTS

FP&L installed approximately 4,000 TVM sensors on poles in the western coastal area of its service territory.

All nodes maintained LTE communications during Hurricane Ian in late 2022. Data from before, during, and after the storm revealed that approximately 2.6% of the poles had a significant tilt. GPS coordinates showed exactly which poles were affected.

This sensor data enabled FP&L to identify areas where pole restoration was most needed and validated the capabilities of the TVM sensors and LTE communications, laying the groundwork for future deployments.

