

# PENELEC TAKES PROACTIVE APPROACH USING EXACTER TECHNOLOGY



## PENELEC

*Penelec partnered with Davey Resource Group to employ predictive asset health analytics to prevent outages from equipment failure.*

## THE CHALLENGE

Penelec, a subsidiary of FirstEnergy, serves approximately 600,000 customers in 31 Pennsylvania counties. With the responsibility to bring those customers reliable electric service, Penelec wanted to stay one step ahead of any outages from equipment failure.

Davey Resource Group (DRG) had partnered with Penelec on other small scale projects in the past, employing Exacter, DRG's strategic partner used to assess the condition of overhead distribution equipment. Those smaller projects helped widen the scope for the

latest initiative, covering 1,800 miles of three-phase distribution lines to inspect all types of equipment conditions.



ASSET  
MANAGEMENT



ENVIRONMENTAL  
CONSULTING



LINE  
CLEARANCE



STORM  
RESPONSE



VEGETATION  
MANAGEMENT



TELECOM  
CONSTRUCTION

## THE SOLUTION

The DRG team started by defining the circuit they wanted to examine and drafting a formal program detailing the scope and projected improvements. Vehicles equipped with Exacter technology drove around the specified zone collecting data. The data was then sent to the Failure Signature Library where false positives and unrelated data from the environment were removed and a more accurate picture of which poles needed closer examination was produced.

Certified ultrasonic scanner personnel performed field locating, determining exactly which piece of equipment was emitting the radio frequency detected by the vehicle. The utility was then provided with the data, which populated their GIS database with the failure signature events for the equipment with problematic conditions. A criticality measure was also provided, which identified the potential customer minutes of interruption (CMI) an item would cause by failing, allowing Penelec and other clients to prioritize action items.

## THE RESULTS

On average, DRG was able to find one piece of equipment in a state of irrevocable deterioration every 5.59 miles for a total of 322 components identified. Knowing what overhead equipment is contaminated or damaged means Penelec can schedule the replacement of those parts during a time of low usage. Penelec also increased their efficiency by detecting multiple components that needed maintenance in close proximity, which allowed the utility to work on the components at the same time.

Penelec plans to replace all the electrically eroding pole hardware during the summer of 2019 and expects to see improved reliability in distribution equipment failures.



**CONTACT US FOR MORE INFORMATION**

[WWW.DAVEYUTILITYSOLUTIONS.COM](http://WWW.DAVEYUTILITYSOLUTIONS.COM) | [INFO@DAVEY.COM](mailto:INFO@DAVEY.COM)