

LiDAR Surveying (Spring 2009)

What is LiDAR Surveying?

LiDAR (Light Detection and Ranging) is a relatively new aerial surveying technology to determine the shape of the ground surface and to differentiate between natural and human-made features. By merging GPS positioning and other technologies, laser mapping is used to map the topography of the transmission line routes and the three-dimensional positioning of obstacles, objects and equipment within the routes. This data will help to develop 3-D topography, which will allow more accuracy to design the transmission lines and structures.

What did the LiDAR surveying entail?

Surveying and photography was done using helicopters with flight patterns, heights, and distances similar to those of Progress Energy's normal maintenance activities for existing transmission lines.

There were laser-like beams from the helicopter. Are these dangerous?

The technology used is safe and poses no dangers to our customers or wildlife.

When did the surveys occur?

Surveys occurred in spring 2009.

Who performed this work?

This work was performed by GeoDigital, an industry leader in this type of surveying.

Does this mean there will be no ground surveying activities for this project?

LiDAR will not eliminate our need for ground surveying for this project but it will assist in significantly reducing ground surveying efforts. With LiDAR, we can cover 60 to 120 miles per day.

This sounds like an expensive way to do surveys. Wouldn't ground surveys be more cost-effective?

A LiDAR survey can produce accurate results in less time and in greater detail than traditional ground-survey methods. This innovative new technology is also cost-effective: Typical ground surveying costs between \$20,000 and \$25,000 per mile, where as aerial LiDAR ranges from \$1,500 to \$2,000 per mile, which is a significant cost savings.