

# UNDERGROUND

**Distribution lines, the power lines that connect directly to homes and businesses, are often placed underground. So why not bury high-voltage transmission lines too?**

**The answer is complex.**

Progress Energy carefully evaluates each transmission project to determine whether an overhead or underground installation is most suitable. Burying transmission lines requires newer, much more complicated technology. Underground transmission lines have a greater environmental impact, cost more and take longer to repair than overhead lines.

- Underground transmission lines cost four to 10 or more times more than overhead lines. In general, underground transmission lines cost about \$10 million per mile dependent upon numerous factors including voltage, engineering and design. This cost does not include the cost of real estate or relocation of other underground facilities.
- Installation requires extensive digging that can have a significant impact on natural resources such as wetlands and wildlife habitats. Typically, that means a 16-foot-wide trench that's 6-9 feet deep.
- Other construction issues include the need for manholes that are approximately 9 feet deep and 24 feet long or greater for every 1,500-2,000 feet of transmission line for straight pulls.
- Though underground transmission lines are protected from trees, they are still subject to damage. When an outage does occur, it is much more difficult to locate the problem, resulting in longer restoration times. Also, if there is any flooding in the wake of a storm, work on underground lines cannot begin until the water has receded.

Of the more than 200,000 miles of transmission lines in the U.S., less than 3 percent are underground. At Progress Energy we will continue to evaluate each transmission project to determine the safest, most effective installation for our customers and our communities.

