

Can Progress Energy Florida put the transmission lines under ground?

While distribution lines that serve homes and businesses have been buried underground for decades, installing transmission lines – which carry much higher voltages – underground is a young technology, and a much more complex endeavor.

- In general, underground lines have more environmental impacts, cost significantly more and take much longer to repair than overhead lines. That is why Progress Energy carefully evaluates each transmission project to determine if an underground solution is appropriate.
- While underground lines are protected from most interference from trees or limbs, they are still subject to outages.
 - When an outage occurs, it is much more difficult to locate and fix a problem.
 - An outage on an underground transmission line could take up to several weeks to repair. This could create delays in restoring power to our customers.
 - If an area floods during a storm, work on an underground line cannot begin until the water recedes.
- Out of sight isn't out of mind. Placing transmission lines underground requires extensive trenching and installation of vaults and duct banks.
 - This construction typically has much greater environmental impact than installation of overhead transmission structures.
 - Typically, a minimum 16-foot wide trench must be dug at least 6.5 feet deep to accommodate the line and prevent cave-ins during construction. The size and depth can vary significantly for higher voltage lines.
 - Manholes 7 feet deep and 14 feet long are needed every 1,500 to 2,000 feet for cable-pulling and -splicing. This extensive trenching has more impacts on natural resources, such as wetlands and wildlife habitat. The number, size and depth of the manholes can vary significantly for higher voltage lines.
- Today, there are more than 200,000 miles of overhead transmission lines in the United States, compared to about 5,000 miles of underground transmission lines (2.5 percent of total). About 1 percent of Progress Energy's transmission lines are under ground.
- Installing transmission lines under ground can cost four to 10 times more than building overhead lines. On average, underground transmission lines can cost \$10 million per mile, but costs can vary significantly depending on the number and voltage of the lines.