

How It Works

Underground Transmission Using XLPE Solid Dielectric Cable

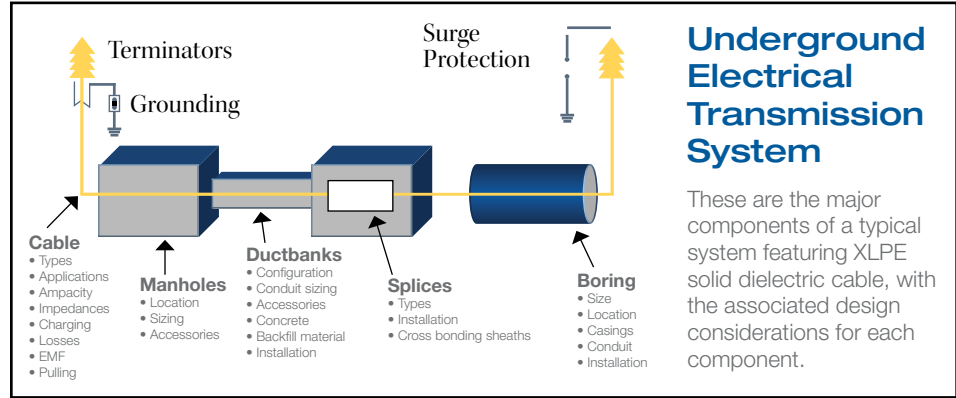
Utilities turn to underground electrical transmission systems for many reasons, ranging from congested urban development to airport expansions to the purely aesthetic.

But whatever the reason for taking electrical transmission lines underground, the cable must be designed for existing and future power needs. Some of the factors that affect the cable and overall design of the underground cable transmission system:

- Depth of the cable underground
- Soil characteristics and temperature
- Other nearby heat sources
- Type of construction — tunnel, duct bank or direct bury

Other Major Design Considerations

Cable: Additional design factors in choosing a cable include impedances, charging current, electromagnetic fields and system grounding.



Lengths of cable: Vary depending on voltage or the size of conductor. Length is determined by the pulling capacity of the cable or the length of cable that can be shipped on a reel.

Splices: Contained in splice vaults, which are 6 to 8 feet wide, approximately 8 feet deep and 20 to 30 feet long. The dimensions are determined by voltage and the size of the splice.

Terminators: Power is transferred from the underground cable to the substation or overhead transmission line at both ends of an underground system.

For more information, contact Ron Jenssen, (816) 822-3827.