

Chapter 4 Review: Transmission circuits

What piece of equipment made AC transmission systems possible?

What has happened to the voltages of AC transmission circuits over the history of the system?

What are the factors to consider when determining if a transmission line should be constructed underground?

1.

2.

3.

4.

What is the difference between a monopolar system and a bipolar system for DC transmission?

What is necessary to convert DC transmission voltages to AC voltages for distribution?

What are the reasons that AC transmission lines are typically three phase?

Why, historically, have transmission line voltages continued to get higher?

What are typical subtransmission voltages?

What is the load limiting factor of transmission lines?

What allows overhead conductors to carry higher currents than underground conductors?

What are the two most common insulating compounds used underground transmission cable?

What are high pressure oil filled (HPOF) cables used for?

What is HTS cable?

What advantage do underground DC transmission cables have over underground AC cables?

What factor limits the use of underground DC cable?

What are the environmental considerations that need to be addressed when considering where to build a transmission line?

What are the principles that should be used as guides when selecting a route for a transmission line?

What is the purpose of acquiring a right of way much wider than is necessary to construct a line?

Are the electric fields of transmission lines hazardous to humans?

What are ways electric fields from transmission lines can become hazardous?

What is corona?