

AEP Company Requirements

For general protection requirements, refer to AEP's interconnection requirements document entitled "Requirements for Connection of New Facilities or Changes to Existing Facilities Connected to the AEP Transmission System." For the purposes of bidding, refer to the information below for specific relay design and engineering requirements outlined in this Designated Entity document for which the TO standards must be followed. Coordination with AEP must take place prior to actual work commencing on the project.

Any newly constructed transmission line will have fiber optic cable installed with it. Dual current differential protection will be used as the line protection scheme when fiber optic cable is installed.

If a new station cuts an existing transmission line, the line protection on the two new lines will utilize either a current differential scheme using fiber optic cable or a directional comparison blocking (DCB) scheme using power line carrier equipment. Whether the line protection scheme is current differential or DCB, the line relays used will be GE L90 and SEL411L.

If fiber is already present on the line being cut, then dual current differential schemes will be used on each of the newly formed lines.

If the existing line uses power line carrier equipment, then each newly formed line will use a DCB scheme over power line carrier. An exception would be if one of the newly formed lines is 5 miles or less, then fiber will be installed on that line to utilize current differential protection.

If the line being cut uses some means of communication other than fiber or power line carrier, the old communication medium will be replaced with either fiber (for lines 5 miles or less) or power line carrier equipment.

Lines at 200kV and above will utilize redundant high speed protection and dual communication channels (i.e. 2 independent fiber routes, mode 1 coupling for carrier equipment 500kV and above, and phase-to-phase coupling for carrier equipment less than 500kV).

Direct transfer trip (DTT) equipment is installed on lines 200kV and above. For lines 500kV and above, dual DTT is installed.