

Balancing the mode of long-distance power transmission with series compensation installations.

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This article discusses the problem associated with balancing the normal mode of long-distance power transmission equipped with series compensation installations. Two options for balancing the mode are being considered: the traditional option by transposing the line and the option based on the use of series compensation settings with different parameters in phases. Mode balancing is illustrated by the example of long-distance power transmission class 500 kV and line length 1000 km using two series compensation units, evenly distributed in the middle part of the line, which ensures throughput at the same level in terms of static stability and permissible voltage conditions along the line.

Key words: long-distance power transmission, installation of series compensation, maximum power mode, mode asymmetry, line transposition, phase coordinates.