

特高压半波长输电系列论文

特高压半波长交流输电经济性分析

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摘要:

基于我国能源资源情况, 论述了特高压半波长交流输电技术在我国的应用前景。通过计算单位容量年费用, 对比了特高压半波长交流输电和特高压直流输电的相对经济性, 得出了特高压半波长交流输电的整体经济性优于±800、±1 000 kV特高压直流输电。分析了特高压半波长交流输电的社会效益, 给出其控制费用上限, 并针对电厂接线方式和输电容量对其进行了敏感性分析。

关键词: 特高压半波长交流输电 年费用 控制费用 敏感性

Economic Analysis on UHV Half-wavelength AC Power Transmission

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Abstract:

Present condition of energy resources in China is analyzed and the prospect of applying UHV half-wavelength AC power transmission in China is discussed. By means of calculating annual cost of unit capacity, the economy of UHV half-wavelength AC power transmission is compared with that of UHVDC power transmission, and the results show that the UHV half-wavelength AC power transmission is more economical than the ±800 and ±1 000 kV UHVAC power transmission. The social benefit of the UHV half-wavelength AC power transmission is analyzed, the upper-limit of control cost for UHV half-wavelength AC power transmission is given, and the sensitivity analysis on wiring mode of power plant and transmission capacity is performed.

Keywords: UHV half-wavelength AC transmission annual cost control cost sensitivity

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