

Improvement of relay protection of a wind farm collector network.

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The article analyzes modern methods to enhance the reliability and efficiency of wind energy systems during their integration into the Russian power grid. It discusses algorithms and technical solutions for relay protection and automation, including relay protection and automation terminals powered by current transformers and reclosers. The study examines how these technologies optimize protection functions and improve wind energy system stability, particularly in remote and hard-to-reach regions. Recommendations for equipment implementation and configuration are proposed to improve wind energy systems performance and increase overall system reliability.

Key words: relay protection, wind energy system, relay protection and automation terminals, reclosers, power system stability, protection optimization.