

Application of PMU to improve the efficiency of power system control.

Goriachevskii K. S., Sinyansky I. V., Chechulina N. E.

Protection devices eliminating the asynchronous modes are designed to divide the power system into parts when detecting asynchronous rotation of electrical machines. The existing devices measure electrical parameters at the installation site. In a number of cases, it is impossible to unambiguously determine the position of the electric swing center only from these data. The ubiquitous distribution of devices for phasor measurements in electric power systems makes it possible to use the data of PMU for the implementation of such automation. PMU application in the protection system allow to directly calculate the angle on electric transmission, thereby providing direct control of the position of the electric swing center without performing calculations in complex resistances.

Key words: power system, relay protection, emergency automation, phasor measurements.