On the expansion of the simplest power system aperiodic stability limit reaching criterion to the complex systems case.

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A simplest power system aperiodic stability limit reaching criterion generalization to the case of complex systems satisfying the known correspondence conditions of the EPS characteristic equation constant term sign and the EPS steady state equations Jacobian sign is obtained. The found criterion has the same demonstrative interpretation as the criterion for the simplest system, and makes clear the physical picture of reaching the complex power system aperiodic stability limit.

Key words: electric power system, steady-state aperiodic stability, steady-state operating condition, Jacobian.