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Power system cascading risk assessment based on complex network theory

Zhuoyang Wang, David J. Hill, Guo Chen, Zhao Yang Dong

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HIGHTLIGHTS

- An improved complex network model for power system risk assessment is proposed.
- The proposed model can evaluate the risk of the system comprehensively during a cascading event by combining the topological and electrical information.
- A new cascading event simulation module is introduced to identify the power grid cascading chain from a system-level view.
- Simulations show the proposed model is more effective in risk assessment during cascading event.