

Earthquake-resistant photovoltaic containers for power grid distribution stations





Overview

How do earthquakes affect urban power system resilience?

The accuracy of the model is supported by the use of real-world data. Frequent earthquakes significantly impact China's power system. Enhancing power system resilience is essential to maintain supply during disasters. However, factors affecting urban power system resilience during earthquakes are unclear, hindering policy development.

How do earthquakes affect the power grid?

Akdag et al. argue that earthquakes may cause cracks and collapses, thereby damaging the power transmission infrastructure (Akdag, 2024), while Ghafory-Ashtiany et al. believe that earthquakes can cause numerous components to be disconnected from the grid simultaneously (Ghafory-Ashtiany & Arghavani, 2022).

What is the research on seismic resistance of power systems?

Research on the seismic resistance of power systems has evolved from statistical analyses of earthquake impacts (IEA, 2011), to reliability analyses under seismic conditions (Vanzi, 1996), to proposals for earthquake prevention and mitigation strategies (Artis et al., 2022).

How do earthquakes affect power equipment?

In conclusion, the impact of extreme earthquakes on power equipment is huge (He, Xie, et al., 2021). Secondly, earthquakes can also disrupt the normal operation of the power system, resulting in widespread power outages (Kizito et al., 2021).



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