

For solar-plus-storage--the pairing of solar photovoltaic (PV) and energy storage technologies--NLR researchers study and quantify the economic and grid impacts of distributed and ...

Abstract: Aiming at the characteristics of large-scale distributed photovoltaic systems, this paper establishes a network-based robust optimal planning method. Taking the maximum access capacity ...

This paper presents a novel approach to addressing the challenges associated with energy storage capacity allocation in high-permeability wind and solar distribution networks.

Conventional approaches for distributed generation (DG) planning often fall short in addressing operational demands and regional control requirements within distribution networks. To ...

In this paper, we introduce a mixed-integer linear programming approach that optimises the size, location, and scheduling of energy storage in a distribution network with high penetration of ...

The paper provides a comprehensive set of numerical results, leveraging detailed data on energy demand, local solar irradiance, and energy storage systems to validate the proposed ...

This paper focuses on the optimal planning of energy storage systems within rural distribution networks integrated with distributed new energy sources, aiming to minimize the total ...

Recent advances in energy-storage systems now offer the potential to create new solutions that are both transportable and flexible, enabling their deployment on distribution networks to...

A resilient distribution system utilizes local resources such as customer-owned solar photovoltaics (PV) and battery storage to quickly reconfigure power flows and recover electricity services during ...

In this paper, a new framework is proposed for the optimal siting and sizing of solar photovoltaic distributed generations (PVDGs) and battery energy storage systems (BESSs) in the ...

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