

This paper aims to minimize active power loss and voltage deviation and maximize PV consumption to improve the operational efficiency of the distribution network.

This novel form of the distribution function is introduced here with the capability to accurately represent details of the underlying time-series data and variations in these operational performance parameters.

In this paper, a Reinforcement Learning (RL)-based approach to optimally dispatch PV inverters in unbalanced distribution systems is presented.

The input-oriented model and the output-oriented model are used to evaluate the overall efficiency, technical efficiency and scale efficiency of distributed PV stations and compare the ...

A characteristic of Stage 3 is a high level of DERs (e.g., solar PV nameplate capacity over 15% of distribution system peak). These high levels exist today in several states and utility service areas.

Abstract--The intent of the study detailed in this paper is to demonstrate the benefits of inverter var control on a fast timescale to mitigate rapid and large voltage fluctuations due to the high penetration ...

In particular, the high penetration of PV into main grids requires the development of new grid and PV inverter management strategies, greater focus on solar forecasting and storage, as well as ...

In this research, demand response impact on the hosting capacity of solar photovoltaic for distribution system is investigated.

This experimental setup provides a realistic and comprehensive framework for assessing smart grid resilience under coordinated PV-BESS operation and high EV penetration, while ensuring ...

This study sets its sights on distributed PVs as its research focal point, embarking on an exploration of the planning intricacies inherent in the integration of distributed PV generation into ...

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