
By coordinating the power of PV inverters, the effective regulation of voltage in the grid-connected substation area is ensured, providing the new ideas and methods for solving the voltage ...

This report from GridLab provides an introduction to voltage regulation concepts, including advantages and disadvantages of various control modes. The authors include ...

tructs a voltage-regulation control model, achieving the uniform voltage regulation in the grid-connected substations. The experimental results show that this method can efectively reduce...

This report proposes a methodology to implement an optimized voltage reduction scheme by operating voltage regulators, capacitors, and autonomous smart inverter volt-VAR control to ...

To address this, a consistency control method for the voltage regulation in the grid-connected substations is proposed, based on the photovoltaic-inverter power coordination.

Unfortunately, the uncertain nature of photovoltaics and DERs can result in undesirable voltage fluctuations in distribution feeders. Inverters equipped with advanced power electronics can ...

Reactive power output is based on the distribution system voltage following a specified volt-var response "curve" which typically would have a deadband around the target voltage where no ...

This report builds upon prior research work by EPRI [6], which proposed an approach to adjust the voltage setpoints of voltage regulators to avoid overvoltage due to DER generation ...

Abstract: Rapid integration of distributed energy resources, such as solar photovoltaic (PV), can lead to overvoltage challenges in distribution feeders due to reverse power flow and low power ...

This paper proposes a robust voltage control strategy for grid-forming (GFM) inverters in distribution networks to achieve power support and voltage optimization.

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