عنوان مقاله:

Weighted Least Squares Algorithm for State Estimation of Distribution Networks Integrating PMUs

محل انتشار:

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خلاصه مقاله:

Over the past twenty years, power grids industry in many countries has been improving. In this situation, the function of state estimation is becoming more important, because it is the main tool to monitor and control based on real-time data received from the measurement units. Phasor Measurement Units (PMUs) are very important devices for monitoring and controling of power systems. By installing PMUs in power systems, the voltage magnitude and angle values can be measured directly and have higher accuracy compared to other conventional measurements such as supervisory control and data acquisition (SCADA). In this paper, state estimation results are calculated by the Weighted Least Square (WLS) method to achieve the accurate measurements in power system. The method is implemented and tested on IEEE-14 bus system to demonstrate the validity of WLS method.

کلمات کلیدی:

Electric Power System; State Estimation; Phasor Measurement Unit; Weighted Least Square

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