عنوان مقاله:

An Observability Based Monitoring scheme for Voltage Stability Margin: A Practical System Case Study

محل انتشار:

بیستمین کنفرانس توزیع برق (سال: 1394)

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خلاصه مقاله:

This paper presents a practical approach for voltagestability margin (VSM) monitoring in a pilot project, in whichtwo related steps are considered. Through the planning stage of apractical project, it is necessary to make the grid observable toactualize the VSM monitoring during the operation. So, anobservability based VSM monitoring scheme is proposed in thiswork. Firstly, using observability analysis and state estimationrequirement, optimal location of metering devices is determinedfor the Hormoz distribution grid as a practical system case study.Secondly, using the information sent by metering devices, theVSM monitoring is evaluated using artificial neural network(ANN) application during the operation. To assess theperformance of the proposed method, it is compared with a case,in which metering infrastructures are connected to the whole ofbuses. For further simulation, input data combinations of .theANN application are varied throughout two different scenarios

کلمات کلیدی:

component; Smart Grids, Voltage Stability Margin,Artificial Neural Network, Observability Analysis