

## عنوان مقاله:

Battery Energy Storage System in Autonomous Network Based on Wind Turbine for Transient Stability Improvement

## محل انتشار:

دومین همایش ملی انرژی های نو و پاک (سال: 1392)

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## خلاصه مقاله:

The necessity to solve global warming problems by reducing CO<sub>2</sub> emission in electricity generation field had led to increasing interest in micro grids (MGs), particularly those containing the renewable such as solar and wind generation. This paper endeavors an investigation of transient stability improvement of micro grid by based BESS (battery energy storage system) controller used in micro grid for analyzing the optimum capability of plant under transient conditions. After that, we compare the system results by one-phase and three-phase faults to demonstrate the effectiveness of the controller in transient stability response. Micro grid is formed by using wind turbine power plants feeding linear and nonlinear loads. The BESS controller permits the selection of an optimized battery voltage level and allows independent current control of each phase. The main emphasis is given on maintaining constant voltage and frequency within the micro grid under transient conditions. Micro grid with wind power plant and BESS controller is modeled in MATLAB/SIMULINK software.

## کلمات کلیدی:

microgrid, battery energy storage system, transient stability improvement, wind turbine

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/277009>

