

عنوان مقاله:

Investigation of Micro-grids Including Wind Turbine, Solar System, Fuel cell and Battery Connected to the Network

محل انتشار:

دوماهنامه نخبگان علوم و مهندسی، دوره 8، شماره 1 (سال: 1402)

تعداد صفحات اصل مقاله: 8

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خلاصه مقاله:

In this research, the investigation of micro-grids including wind turbines, and solar, along with energy storage (battery) will be done. The energy storage of these resources can be used for various purposes such as increasing reliability, improving power quality, flattening the load curve. Despite the unlimited access to wind and solar energy, a self-supporting wind or photovoltaic generator system cannot provide a ۲۴-hour load. In other words, because the production of power in wind power plants is highly dependent on the presence of wind, they cannot be classified in the group of conventional generators. This fluctuating nature has caused challenges in the power grid, so that most of the time, changes in wind and solar energy cannot fully provide the distributed load. One of the best options to solve this challenge is to use an energy storage system. Energy storage as a natural option to add the flexibility needed to integrate higher amounts of wind energy into the power grid has been considered for many years. In fact, electricity generation systems from renewable sources are required to use batteries to compensate for this deficiency in order to facilitate the operation of this system in order to increase the allowable wind power level in the network.

کلمات کلیدی:

Micro-grid, Power Quality, Wind Turbine, Solar System, Energy Storage

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