

## عنوان مقاله:

Improving Flexibility and Control the Voltage and Frequency of the Island Micro-Grid Using Storage Devices

## محل انتشار:

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## خلاصه مقاله:

Micro-grid is a small low voltage powersupply network designed to power a local sensitive load setincluding distributed generation systems, distributed energystorage devices, and loads. Mostly, the required power by thesystem is provided by renewable resources that are unsafe andchangeable yielding difficulties to control these systems incomparison with conventional power systems. Fluctuations inthe generated power may cause some problems with normalcontrol performance, in which proper performance of amicro-grid is possible only if there is a proper control system. Moreover, modern power systems need to increaseinformation and flexibility in control and optimization toensure the balance of production and load under severedisruption. In this paper, the performance of voltage andfrequency control of the islanded micro-grid is investigatedusing the developed VBD control and its purpose is toincrease the flexibility in the applications of energy storagedevices. The micro-grid and power generation resources andVBD control method and its control over the storage devicesare discussed in details. Performed simulation in MATLABsoftware includes a transient and dynamic micro-gridresponse with a comparison of the .presence of storage deviceson the voltage and frequency control of the micro-grid

## کلمات کلیدی:

Micro-grid, VBD control, Energy storage, Flexibility

## لینک ثابت مقاله در پایگاه سیویلیکا:

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