conferenceseries.com SciTechnol

Expert Opin Environ Biol 2017, 6:4
DOI: 10.4172/2325-9655-C1-018

4th International Conference on
GREEN ENERGY & EXPO
&
6th International Conference on
RECYCLING: REDUCE, REUSE & RECYCLE November 06-08, 2017 | Las Vegas, USA

Microgrid testbeds around the world: State of art

Eklas Hossain
Oregon Institute of Technology, USA

This paper deals with the recent evolution of microgrids being used around the world in real life applications as well as laboratory application for research. This study is intended to introduce the subject by reviewing the components level, structure and types of microgrid applications installed as a plant or modeled as a simulation environment. The paper also presents a survey regarding published papers on why the microgrid is required and what the components and control systems are which constitute the actual microgrid studies. It leads the researcher to see the microgrid in terms of the actual bigger picture of today and creates a new outlook about the potential developments. Additionally, comparison of microgrids in various regions based on several parameters allows researchers to define the required criteria and features of a special microgrid that is chosen for a particular scenario. The authors of this paper also tabulated all the necessary information about microgrids and proposed a standard microgrid for better power quality and optimizing energy generation. Consequently, it is focused on inadequate knowledge and technology gaps in the power system field with regards to the future and it is this which has been illustrated for the reader. The existing microgrid testbeds around the world have been studied and analyzed in this study. Later, those investigated distribution systems are classified based on region (North America, Europe and Asia) and as presented in literature, a significant amount of deviation has been found. Several tabulated data sheets have been used to compare and contrast the existing test systems. This research has been concluded with worthy findings and potential areas of research that would enhance the current distributed network as well as introduce microgrid testbeds comprehensively and aid designers in optimizing green distributed system efficiency for a reliable power supply.

eklas.hossain@oit.edu