

## Solar Energy South Africa

# Zhejiang University Electric Microgrid

## Applications



Electric motorcycle



Electric Forklift



Electric Boat



Golf Cart



RV



Audio Equipment



Solar Street Light



Household Energy Storage



Energy Storage System



## Overview

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What is Wenzhou Nanji microgrid project?

Wenzhou Nanji of Zhejiang microgrid project was funded as a national “863” demonstration project by National Research Foundation of China. The total investment is about 0.15 billion yuan. The system consists of 1000 kW wind power generation, 545 kW PV power generation, 30 kW ocean power generation and 1600 kW diesel power generation.

What is AC microgrid in China?

AC microgrids are most commonly used architecture in China. Several commercial AC micro-grids have been set up in several cities. Wenzhou Nanji of Zhejiang microgrid project was funded as a national “863” demonstration project by National Research Foundation of China. The total investment is about 0.15 billion yuan.

What is the development process of micro-grids in China?

Similar to other countries, development of micro-grids in China has gone through from the early stage of AC microgrids to the current varieties of AC, DC and hybrid AC/DC micro-grids based on their applications. Many technical problems have been solved and new problems are continuously appeared during the development process.

Can DC microgrids be used in China?

Although research and applications of DC microgrids in China start later, a good progress has been achieved. In March 2014, China’s first practical building integrated photovoltaic DC microgrid system ran successfully. The DC micro-grid locates at the campus of Xiang’an Energy Engineering, Xiamen University.

Can EV charging load prediction improve energy security in campus microgrids?

In order to improve the efficiency and stability of renewable energy sources and energy security in microgrids, this paper proposes an optimal campus microgrid design that includes EV charging load prediction and a constant power support strategy from the main grid.

What is a hybrid ac/dc microgrid?

A hybrid ac/dc microgrid consists of alternating current (ac) subgrid (s), direct current (dc) subgrid (s) and intermediate bidirectional power converters (BPCs). The presence of dc distribution networks complicates the operation and corresponding control of the hybrid ac/dc microgrid.

## Zhejiang University Electric Microgrid

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### **Min CHEN , Associated Professor , PhD , Zhejiang University, ...**

Parallel operation of distributed generation is an important topic for microgrids, which can provide a highly reliable electric supply service and good power quality to end customers when the

### **Miao YU , Associate Professor , Ph.D. , Zhejiang University, ...**

A hybrid ac/dc microgrid, which consists of alternating current (ac) subgrid(s) and direct current (dc) subgrid(s), can efficiently integrate ac and dc loads, distributed generators (DGs) with



### **Muhammad WASEEM , PhD Electrical Engineering , Zhejiang University**

Zhejiang University simulated, and optimized from a techno-economic perspective based on electric load profile, geographical locations, and meteorological data. Microgrids in smart ...



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