

## **The Development and Power Management of a Stationary PEMFC Hybrid Power System**

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### **Abstract**

This paper proposed a stationary hybrid power system that consists of a 3kW proton exchange membrane fuel cell, a LiFePO<sub>4</sub> battery set, and a solar module. We first established the system architecture and collect the lab's load data for analysis. Then we integrated the hybrid power system and designed power management strategies for sustainable operation. Last, we developed a Matlab<sup>TM</sup> SimPowerSystem model based on experimental responses, and discussed the impacts of power management strategies on system efficiencies.