Cost Analyses and Optimization of a PEMFC Electric Vehicle Model

Yu-Ting Teng and Fu-Cheng Wang*

Abstract

This paper develops a proton exchange membrane fuel cell (PEMFC) electrical vehicle, and discusses the optimization of power management using the New European Driving Cycle (NEDC). The PEMFC electric vehicle consists of a hydrogen generation subsystem to extend its moving range. We design power management strategies, and consider three driving situations to compare the driving costs and battery capacity for optimization.