

Optimization of Battery Dispatch

February 20, 2025

1 Problem Description

The integration of renewable energy sources in smart grids requires efficient energy storage management. This project focuses on optimizing the dispatch of multiple batteries to balance supply and demand while minimizing costs and ensuring reliability.

2 Objective Function

The goal is to optimize battery dispatch by minimizing energy costs, reducing grid dependency, and extending battery lifespan. This involves managing charging and discharging schedules efficiently.

3 Project Material

To analyze the problem, a real-world dataset on battery operation and energy demand will be used.

3.1 Dataset

The dataset that will be used is available in the following link:

<https://www.sciencedirect.com/science/article/pii/S2352340922007971?via%3Dihub>