Hybrid Storage Model

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1 Introduction

This model describes the energy flows in a two- storage system. It will be formulated as a dynamic programming problem.

2 Model

2.1 Constraints

- Supply demand balance:

- Stored energy changes, including constant leakage loss:

- Bounds on stored energy:

- Bounds on charging:

- Bounds on discharging:

2.2 Objective Function

- Minimize charge and discharge rates for the first storage device (battery)

- Minimize power loss due to energy transfers

References