Simulation-Based Optimization for Smart Grid Management

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Abstract. This research focuses on simulation-based optimization techniques for improving smart grid management. By modeling complex grid systems and using optimization algorithms, the study aims to enhance the efficiency and reliability of power distribution. The findings reveal significant potential for these techniques to support the development of more resilient and sustainable energy systems.

Keywords: Smart Grid, Simulation-Based Optimization, Power Distribution, Energy Systems, Sustainability

Introduction

The efficient management of smart grids is crucial for the sustainability and reliability of modern energy systems. This paper presents a simulation-based optimization framework designed to improve smart grid operations. By accurately modeling grid systems and applying advanced optimization algorithms, we aim to enhance power distribution efficiency and reliability. Our research demonstrates the potential of these techniques to contribute to the development of resilient energy infrastructures capable of meeting future demands.

References

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