

Sustainable Solutions in Public Transportation Systems

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Abstract. This paper investigates sustainable solutions in public transportation systems, emphasizing the adoption of green technologies and energy-efficient practices. The research analyzes the implementation of electric buses, renewable energy sources, and smart grid systems in various cities. Results indicate that these sustainable practices not only reduce carbon emissions but also enhance the efficiency and reliability of public transit networks. The study provides a comprehensive overview of current trends and future prospects for sustainable public transportation, offering valuable insights for transit authorities and policymakers committed to environmental sustainability.

Keywords: Sustainability, Public Transportation, Green Technologies, Electric Buses, Renewable Energy

Introduction

The transportation sector is a significant contributor to global carbon emissions, necessitating the adoption of sustainable solutions to mitigate environmental impact. This study explores the integration of green technologies in public transportation systems, focusing on electric buses, renewable energy sources, and smart grid infrastructure. By examining case studies from cities leading in sustainable transit practices, the research evaluates the effectiveness of these solutions in reducing emissions and improving system efficiency. The paper aims to guide transit authorities and policymakers in the development of environmentally sustainable public transportation networks, ensuring long-term ecological benefits.

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