

Design and Develop an E-Rickshaw as a Sustainable Energy Solution

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Abstract

Sustainable energy alternatives for local transportation are explored in this essay via the lens of Electric Rickshaws. Rickshaws are often utilized for local transportation. With a focus on reducing negative impacts on the environment and promoting sustainable mobility, the goal is to create alternatives to traditional automobiles that operate on fossil fuels that are both ecologically benign and economical. In the article's first portion, we learn why it's so important to find new ways to use energy in the transportation sector. After that, the article focuses on the rise of rickshaws as a cleaner alternative to traditional automobile. The low cost and the ability to carry a few passengers at once make rickshaws ideal for short trips in heavily populated regions with high levels of air pollution. This paper provides information on the design of electric rickshaws, including the structure, power transmission, power modes, controllability, and stability of the vehicles. In the section titled "Findings and Discussion", we emphasize the many advantages of electric rickshaws as well as the opportunities for their broad use. Countries like Sri Lanka, who embrace this environmentally friendly and economically viable alternative, stand to gain considerable economic, social, and environmental advantages. The effective execution of this project will help to the creation of a transportation system that is more environmentally friendly and efficient in its use of energy, as well as solve the urgent problems of urbanization, pollution, and resource depletion.

Keywords: *E-rickshaw, Sustainable energy solution, Transportation, Clean energy, Environmental impact*