ENERGY AND CLIMATE
PANORAMA

Customer Facilitation in the Adoption of

E-BIKES

Towards Decarbonizing the Transport Sector

About Us

Who we are

We are a dedicated team of researchers and experts who recognize the urgent need for action in addressing climate resilience and energy transition in Pakistan. Our mission is to develop and implement effective policies for cleaner, renewable energy sources like solar and wind, aligning with Pakistan's 2030 goal of 30% renewable energy in its electricity mix. As a multidisciplinary team, we leverage expertise in three key disciplines of study—Energy Systems Engineering, Thermal Energy Engineering, and Electrical Power Engineering—to drive our mission forward. We are united by a shared vision of creating a sustainable and resilient future for Pakistan, where cleaner energy sources play a pivotal role in reducing the nation's vulnerability to climate-related challenges.

What we do

We conduct in-depth, evidence-based research to analyze and improve energy policies in Pakistan. Our focus is on advancing renewable energy solutions and engaging stakeholders to ensure effective policy implementation. Our methodology involves a critical examination of current energy policies to pinpoint areas of improvement and formulate strategies for the widespread adoption of renewable energy sources across various levels.

In line with our commitment to fostering sustainable practices, we have established a fellowship program as part of our broader initiatives that aims to facilitate evidence-based research for promoting energy transition in Pakistan. Through research studies, surveys, and forecasting, we plan to assess various aspects of energy transition, including the adoption of renewable energy technologies and their impact on climate change. Our approach involves active engagement with stakeholders to address their concerns and facilitate the effective implementation of policies, fostering the growth of renewable energy manufacturing and marketing facilities.

Contact Us

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Executive Summary

This report explores the potential for transitioning from fossil fuel-based 2-wheeler vehicles to electric bikes (e-bikes) in Pakistan's transportation sector. The social benefit of this transition is reduced carbon emissions and sustainable mobility. The study focuses on understanding consumers' perception of e-bike use, challenges faced by suppliers, and the financing landscape for e-bikes. The research is aligned with Sustainable Development Goals (SDGs), particularly SDG 7 (Affordable and Clean Energy), SDG 11 (Sustainable Cities and Communities), and SDG 13 (Climate Action).

The automobile sector is evolving globally towards cleaner technologies due to environmental concerns. In Pakistan, a gradual rise is evident in private vehicles, especially motorbikes, contributing to pollution and financial costs. E-bikes offer a viable alternative, aligning with the global shift towards electric transportation. However, their adoption is hindered by various factors, including policy challenges, infrastructure concerns, and financing difficulties.

The study presents findings from a user survey, supplier responses, and interviews with bankers. The user survey gauges satisfaction levels with e-bikes, covering aspects like driving experience, speed, cost per kilometer, pollution reduction, and safety standards. The responses indicate a generally positive perception of e-bikes among users. However, concerns about purchase price and distance coverage remain. Supplier responses from ezBike, a prominent bike-sharing company in Pakistan, highlight challenges such as financial constraints, bike damage, asset management, and on ground operations in different communities. These insights shed light on low incentives for offering e-bike sharing services.

Availability of bank finances can accelerate the E-bike adoption among commuters. We interviewed banker and find that most commercial banks in Pakistan are currently not providing finance to e-bikes customers, primarily due to the issues related to the lack of standardized bikes and e-bike manufacturers. Extremely high interest rates are also a big hurdle to attracting consumers. However, there is potential for regulatory intervention from the government and the State Bank of Pakistan to promote financing for e-bikes as part of environmental responsibility initiatives.

In conclusion, promoting e-bike adoption is pivotal in achieving SDGs related to clean energy, sustainable cities, and climate action. Overcoming challenges through advocating for regulatory support, provision of charging infrastructure at workstations and markets, promoting standardized e-bike models, ensuring availability and dealership networks, and facilitating affordable financing options to enhance accessibility for a broader demographic. The findings underscore the potential of e-bikes in reducing the environmental footprint, easing traffic congestion, and improving the overall transportation landscape in Pakistan.

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