

Life Cycle Costing and Environmental Impact of Green Tiger Electric Two-wheeler in Bangladesh

Name of the student

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This report is submitted to the School of Business and Economics, United International University, as a partial requirement for the fulfillment of the degree of Bachelor of Business Administration.

**Life Cycle Costing and Environmental Impact of Green Tiger Electric Two-wheeler
in Bangladesh**

Submitted to:

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Submitted by:

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**School of Business and Economics
United International University**

Date of submission

11/24/2025

Letter of transmittal

Date: 11/24/2025

To:

Professor Dr. Md. Shariful Alam

Department: BBA

Subject: Submission of Internship Report – *"Life Cycle Costing and Environmental Impact Analysis of Green Tiger Electric as Two-Wheelers in Bangladesh"*

Dear Sir,

With due respect, I would like to inform you that I, Aman Ullah Al Mamun, a BBA in Marketing Student, have completed my Internship at *Green Tiger Electric Vehicle Company Ltd.* as part of the academic requirement of my degree program.

During this Internship, I gathered and analyzed data on the *Life Cycle Costing and Environmental Impact Assessment* of electric two-wheelers in Bangladesh.

This report has been prepared based on my practical experience, collected information, analysis, and observations during the internship program. I hope this report meets your expectations and serves its purpose in the academic evaluation process.

I am writing to express my gratitude for your kind guidance, support, and valuable suggestions throughout the preparation of this report.

Sincerely

Aman Ullah Al Mamun Khan

ID: 111 131 026

Department of BBA

Certification of similarity index

This is to certify that the internship report titled “**Life Cycle Costing and Environmental Impact Analysis of Green Tiger Electric Two Wheelers in Bangladesh**” has been prepared by **Aman Ullah Al Mamun Khan, ID: 111 131 026, a student of the BBA, United International University.**

I verified the report using the university's plagiarism detection system and found a similarity index of **25%, which is within the acceptable limit.**

This report is entirely original and has been prepared solely for academic purposes.

Supervisor's Signature

Name: Dr. Md. Shariful Alam

Department: BBA

United International University

Date: 11/24/2025

Declaration of the student

I, Aman Ullah Al Mamun Khan, ID 111 131 026, a student of **the BBA Department and United International University**, hereby declare that my internship report titled **"Life Cycle Costing and Environmental Impact Analysis of Green Tiger Electric Two-Wheelers in Bangladesh"** is entirely my own work.

I confirm that I have not submitted any part of this report for any previous research, publication, or academic purpose. I have not copied any portion from other sources, and I have properly cited and acknowledged all data, information, and references used in this report.

This report has been prepared solely for academic purposes as a partial requirement for the completion of the internship program at my university.

Signature of the Student

Name: Aman Ullah Al Mamun Khan

ID: 111 131 026

Department: BBA

University: United International University

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Acknowledgement

Firstly, I would like to thank the management of Green Tiger Electric Vehicle and all my colleagues for allowing me to undertake an internship on a significant project, such as life-cycle costing.

I also express my gratitude to my internship supervisor, Dr. Md. Shariful Alam, Professor at the School of Business & Economics (SoBE) & Director. Sir gave me his valuable time to complete my internship project, along with advice and essential information, which helped me to complete my internship report.

I am especially grateful to the sales, finance, and technical teams of Green Tiger Electric Vehicle Company for providing me with all the necessary information for the life-cycle costing of the two-wheeler electric vehicle and the environmental data for the environmental impact analysis.

And finally, I would like to thank all the teachers of the United International University BBA Department for their sincere help in preparing this internship report.

Abstract/ Executive summary

This internship report analyzes the life cycle costing and environmental impact of the Green Tiger Electric Vehicle Two-Wheeler. The report primarily discusses the acquisition costs (purchase price and registration fee), operating expenses, maintenance costs, battery usage, and replacement costs of two-wheeler electric vehicles. It also examines the significant environmental impact of electric cars.

This report calculates the life-cycle cost of a two-wheeler electric bike by combining the purchase price, registration fee, operating costs, maintenance costs, and battery costs. In the case of Environmental Impact Analysis, we have analyzed the environmental impact of electric vehicles, including reduced air and noise pollution and reduced dependence on fuel.

This report shows that, in life-cycle costing, the overall cost of Green Tiger's electric two-wheeler is lower than that of petrol bikes, including purchase price and maintenance costs. In terms of environmental performance, electric bikes emit zero carbon emissions compared to petrol bikes and significantly reduce noise pollution.

The government needs further to reduce the registration fee for Green Tiger Electric Vehicles, install charging stations in various locations, and provide subsidies for electric vehicles to encourage more people to use them and further reduce harmful environmental impacts.

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List of Equations

Equation 01: Total Life Cycle Cost (LCC) Formula

Initial Cost+ Operating cost+ Maintenance cost+ Replacement cost+ Disposal Cost+ Other cost

Equation 02: Annual Energy Cost calculation

Energy Cost = Battery capacity × Charging Cycle × Electricity Rate

Equation 03: Battery Degradation Rate Equation

Equation 04: CO2 Emission Reduction Calculation

Equation 05: Net present value of operating Cost

List of Abbreviations

The complete form of all abbreviations or acronyms used in my report will be listed alphabetically in this list.

Abbreviations	Full form
EV	Electric vehicle
E2W	Electric Two-wheeler
LCC	Life Cycle Costing
LCO	Life Cycle Operating Cost
GT	Green Tiger
CO ₂	Carbon Dioxide
DoE	Department of Environment
ISO	International Organization for Standardization
BMS	Battery Management System
SOC	State of Charge
SOH	State of Health
kWH	Kilowatt-hour
KM	Kilometer
BDT	Bangladeshi Taka

CHAPTER I: INTRODUCTION

I.1 Background of the Report:

In the last few years, Bangladesh's population has been increasing, along with the expansion of its public transport system. So, ordinary people in the country are now leaning towards oil bikes, but the rise in oil prices and the smoke they emit pose environmental risks. In contrast, the additional cost of oil becomes an economic burden for ordinary people. So, in Bangladesh, electric bikes can be a sustainable alternative to oil-powered bikes, helping protect our country's environment and providing economic security for ordinary people. With that aim, Green Tiger Electric Bike has been developing eco-friendly, cost-effective electric bikes for the ordinary people of this country since 2009. This message promotes electric bikes to people and the environment of this country as a better alternative to oil-powered bikes.

The demand for electric bikes in Bangladesh is increasing every day. In the fiscal year 2002–2023, consumers purchased 2,446 electric bikes, and this number rose to about 10,053 in the fiscal year 2024–2025. Despite this growing popularity, most people still have little knowledge of electric bikes. For example, they can hardly find any information about the life-cycle cost of an electric bike. It is also essential to analyze operating costs, maintenance costs for different bike parts, battery-charging costs, resale value after use, and the overall sustainability of electric bikes compared to petrol bikes in Bangladesh.

The primary purpose of my report is to research the life-cycle costs and environmental impacts of Green Tiger Electric Vehicles in Bangladesh. This report will help us understand how economically and environmentally viable electric bikes can be, which will be important for both electric bike consumers and policymakers to make better decisions about electric bikes.

As Bangladesh works tirelessly to transform its transportation system and reduce fuel consumption by 2025, the Green Tiger electric vehicle could be a timely solution. Therefore, it is crucial to evaluate how electric bikes can help us economically, their initial cost, and their environmental impact.

I.2 Objectives of the Report:

One of the main objectives of the report is to assess the life-cycle cost of the Green tiger electric two-wheeler, including the purchase cost of two scooters, battery replacement cost, maintenance costs (including Motor, controller, and converter changes), and operating costs.

Consider the cost savings the Green Tiger Electric Vehicle offers compared to a conventional petrol bike.

Discussing the environmental advantages and disadvantages of Green Tiger Electric Vehicles compared to conventional petrol bikes in Bangladesh

Creating a trusted database of potential information, such as financial benefits, electric bike-related information, guarantee and warranty policies, maintenance rules, and environmental benefits, before purchasing a Green Tiger electric bike.

I.3 Motivation of the Report:

I chose this topic for my report due to the following motivations:

Bangladesh is a city of traffic jams. Every day during our commute, we see many oil-powered bikes that emit pollution and smoke, and Green Tiger Electric Bike can be a viable, eco-friendly two-wheeler alternative.

Conventional petrol bikes cause noise pollution, whereas the Green Tiger electric bike can run completely silently, making it an effective solution to reduce noise pollution.

The operating costs of an electric bike are much lower than those of a traditional petrol bike. For example, the cost of 1 liter of petrol is 120-130 taka, while charging the battery of an electric bike costs 15-20 taka. Therefore, the Green Tiger electric bike is very economical.

Bangladesh imports a large amount of fuel each year, which costs us a significant amount of foreign exchange. Through the Green Tiger Electric Biker, we can reduce fuel costs and increase the country's income by saving foreign exchange.

So my report is not just for internships or academic results or needs; it can provide a practical guide to establishing a modern transportation system, a sustainable economy, and a green environment for Bangladesh.

I.4 Scope and limitations of the report:

In this internship report, the life-cycle cost and environmental impact of the two-wheeler electric bike, which is widely known and popular in Bangladesh, have been discussed and analyzed in detail.

This report discusses the life-cycle costing of Green Tiger Electric Vehicles, including the cost of purchasing an electric bike, the bike's electricity consumption, maintenance costs, the cost of replacing the battery if it is damaged, and the resale value of the old bike.

Differences between Green Tiger electric bikes and conventional petrol bikes in Bangladesh have been identified and analyzed.

I discussed in detail how electric bike batteries and lighting affect the environment, carbon emissions, and electricity consumption.

1.5 Definition of Key Terms:

I have provided definitions for the terms used in my report.

Life Cycle Costing: A method of determining the total financial valuation of a product over its entire life cycle, from purchasing the product to using it, repairing or maintaining the product, and finally disposing of it.

Environmental Impact: It assesses the positive and negative environmental impacts associated with the collection of raw materials, the production of a product, and its disposal throughout its entire life cycle.

Electric Two-Wheeler:

An electric two-wheeler uses a rechargeable battery and runs without fuel, relying entirely on electricity.

Life of Battery:

A battery's life refers to the length of time it operates effectively based on its specific or estimated lifespan after repeated charging and discharging cycles.

Carbon Footprint: Carbon dioxide or other gases produced by the use of fuel oil that pollute the environment

CHAPTER II: COMPANY AND INDUSTRY PREVIEW

2.1 Company Analysis

2.1.1 Overview and history:

Green Tiger Electric Bikes began operations in 2009. Their initial objective was to provide electric bikes to customers at affordable prices while also highlighting their environmental benefits. Green Tiger Electric Bikes has worked to demonstrate how electric bikes offer financial savings compared to petrol bikes and how customers can protect the environment by using them.

Mizanur Rahman Rashed, the founder of Green Tiger Electric Bikes, first learned about electric bikes after traveling to China, and the cost of electric bicycles and their environmental impact inspired him to work with them in Bangladesh.

Initially, the company imported directly from China, but now some parts of the electric bikes are manufactured and assembled in Bangladesh. Green Tiger Electric Bike works to empower women. They provide women with bike-riding training at a nominal cost and offer attractive discounts for students who pay in installments or in whole.

2.1.2 Trend and growth:

Oil prices are rising in Bangladesh, making it difficult for petrol-powered bikers to afford them, so demand for electric bikes is increasing to reduce costs. For example, 1 liter of petrol costs 120 taka and can cover 55-60 kilometers, but charging an electric bike costs 15-20 taka and can cover 100-120 kilometers.

The Bangladesh government is working to increase environmental awareness. Because electric bikes have a low environmental impact, more conscious people are opting for them.

In Bangladesh, the demand for electric bikes is increasing as electricity is now available almost everywhere in rural Bangladesh.

Nowadays, the popularity and demand for electric bikes are increasing, as most banks offer EMI installment facilities.

Due to the low cost of electric bikes, various organizations and delivery men are interested in buying electric bikes instead of petrol bikes for delivering small parcels and couriers.

Green Tiger previously used only lead-acid batteries, but has now started using lithium batteries, which are longer-lasting and have a much lower environmental impact.

In the last 3 years, Green Tiger Electric Bike has opened more than 70 service centers and trained more than 350 people to repair electric bikes, making after-sales service easier for customers and ultimately increasing electric bike sales.

2.1.3 Customer mix:

Targeted Customer:

People from Dhaka city and rural areas who want to travel at a low cost.

The number of female drivers is increasing day by day, and demand for female bikers is growing as affordable bike training for women becomes available.

Green Tiger Electric Bikes provides various facilities to its B2B clients. For example, our B2B partners are Ad Din Welfare, Stead Fast, Beximco, Fakir Fashion, and Shop Up.

Middle or low-income people and students in Bangladesh may be interested in the Green Tiger electric bike due to its relatively low price.

When it comes to age groups, people aged 21-35 and 40-50 are the main buyers.

Over the past few years, Rajshahi, Jessore, Pabna, Natore, Thakurgaon, and Chittagong have reported the highest numbers of targeted customers."

2.1.4 Product/service mix:

Line up for the product:

Line up for the product: Here are the different models of Green Tiger electric bikes, their ranges, and prices.

High Range and long Mileage bike:

Number	Model	Price	Range
1	JR Vive	96500	100/120 Klm
2	JR V2	97000	100/120 Klm
3	JR Sprint	98500	100/120 Klm
4	JR Fenix	99500	100/120 Klm

Low-range and low-price Bike:

Number	Model	Price	Range
--------	-------	-------	-------

1	JRL Vive	84000	55/60 Klm
2	JRL V2	89500	55/60 Klm
3	JRL Sprint	91500	55/60 Klm
4	JRL Fenix	91900	55/60 Klm

Main Features of an electric scooter:

Motor: 1000-watt brushless waterproof Motor. (1-year Replacement Guarantee)

Controller: 48/60-volt controller (6 Months Replacement Guarantee)

Battery: 48-volt Lead Acid battery, 60-volt Lead Acid Battery (Both are 6 months Replacement Guarantee), 48-volt 50 Ah Lithium battery (1 year Replacement Guarantee and 3 years' service warranty)

Speed: Top speed 55 kilometers per hour.

Sales Service and Extra facilities:

Providing after-sales service through service agents.

Guaranteed availability of spare parts at affordable prices.

For customer convenience, delivery is provided nationwide by courier, and online payment is available.

There is a three-wheeler facility for the physically challenged.

Manufacturing and Distributing Channel:

Green Tiger Electric Bike imports motorcycles from China and assembles some components in Bangladesh while manufacturing others locally.

The company sells its products nationwide through both dealers and its own showrooms.

To ensure strong after-sales service, Green Tiger employs 120 well-trained service agents nationwide.

2.1.5 Operations:

The Green Tiger factory in Bangladesh receives several parts of the electric bike as SKD units, including the bike body, Motor, and controller. The factory team then assembles these components and distributes the finished bikes to customers and dealers.

We have service agents in Dhaka, Rajshahi, Chittagong, Rangpur, Natore, Pabna, Dinajpur, Comilla, and other major cities in Bangladesh, through which we provide one-stop service to our customers. Moreover, we organize online training and various seminars to raise their awareness of electric bikes.

2.1.6 SWOT analysis:

Strengths:

Green Tiger Electric Bike has been in Bangladesh since 2009. Therefore, this brand has long been known and trusted by the people of our country.

Green Tiger Electric Vehicles provides bikes to customers at affordable prices that require less maintenance and benefit customers financially.

With more than 100 dealer points across Bangladesh, buyers can easily purchase a bike.

By providing the most service agents, customers receive easier after-sales service.

Weakness:

Green Tiger pays high tariffs on a large share of imported electric bikes, thereby increasing the life-cycle cost.

There are many weaknesses in the disposal of used lead-acid and lithium batteries, which affect the environment.

Bangladesh still lacks a proper charging infrastructure for electric bikes.

Opportunities:

The use of electric bikes is increasing daily in Bangladesh. If the government introduces new supportive policies and special incentives, people will adopt electric bikes even more.

By installing charging stations at various locations and properly maintaining them, companies can increase the use of electric bikes across platforms such as ride-sharing, parcel delivery, and more.

In the near future, manufacturers may set up domestic plants to produce electric bikes and lithium batteries.

After completing service agent training, I can secure employment as an electric bike agent and provide after-sales service to customers.

Threats:

Day by day, new brands and international competitors are entering the Bangladesh market. For example, DX New Energy, Yadia, Walton, Tailg

Due to import dependence, if the dollar value increases, business risk rises, and local prices rise.

Due to reliance on imports from China, spare parts are often unavailable, and when the dollar rises, their prices rise as well.

The rising electricity prices in Bangladesh are negatively affecting electric bikes.

Due to rising raw material prices for battery production, it has become difficult to produce batteries locally.

2.2 Industry analysis

2.2.1 Specification of the industry:

The electric bike industry in Bangladesh is growing very rapidly. The electric bike industry encompasses the production, import, local assembly, distribution, and after-sales service assurance of electric bikes, all provided by the company. Green Tiger Electric Company generally supplies electric scooters, including lightweight, low-speed scooters; high-mileage (up to 120 kilometers) and low-mileage (60 kilometers) models; lead-acid and lithium batteries. The reasons or pillars for this industry's popularity in Bangladesh are rising oil prices, low maintenance costs, increased environmental awareness, and the government's supportive attitude towards electric bikes.

However, several obstacles remain, including consumer awareness and understanding of electric bikes, limited knowledge of battery prices and lifecycles, insufficient space for charging stations, and the government's ambiguity regarding electric bikes.

2.2.2 Size, trend, and maturity of the industry:

Size:

Although no specific information is available on the market share of electric bikes compared to petrol bikes in Bangladesh, relevant stakeholders have said that sales of electric bikes have been increasing since 2022. Green Tiger Electric Bike, which used to sell 30 bikes per month even 3 years ago, currently sells more than 150 bikes per month.

Although exact sales figures for electric bikes in Bangladesh over the last five years are unavailable, importers brought in about 2,500 bikes in 2022–2023 and about 11,000 bikes in 2024–2025

Trend:

The electric bike segment has grown significantly in the last few years, partly because world-famous brands like Walton, Yadea, Dix New Energy, and Sunra are operating in Bangladesh.

The number of electric bikes being sold in Bangladesh every day can increase by 30/35% in the future by 2030.

Maturity:

As the maturity of electric bikes in Bangladesh is increasing, about 12/15 world-renowned brands from different countries are now operating in Bangladesh.

Domestic customers' trust and confidence in electric bikes have increased over the past year and a half, thanks to the presence of foreign brands alongside domestic ones.

Now the electric bike service network is available across the country, along with the convenience of home service, which is making customers interested in buying electric bikes.

2.2.3 External economic factors:

Electric bike motors, controllers, converters, and body kits are entirely dependent on imports, so if the dollar rises in the international market, the exchange rate will have a volatile impact on import prices.

Our country's GDP is increasing day by day, boosting the purchasing power of wealthy families, who are increasingly interested in buying electric bikes for their daily commute.

Bangladesh has largely solved the electricity problem in its cities and villages. Rising oil prices have encouraged people to choose electric bikes. However, a decrease in oil prices or an increase in electricity prices could reduce electric bike usage.

There needs to be a clear policy on subsidies or tax breaks for electric bikes. In addition, the government should provide financial incentives for local production.

When buying an electric bike, customers need easy access to loan, lease, and EMI facilities.

2.2.4 Technological factors:

Battery: Advanced lithium batteries for electric two-wheelers that provide a long life span, low charging cost, advanced BMS, SOC meter, GPS tracking, and fast charging facility, which plays a positive role in the electric bike market.

Charging Station: The lack of charging stations everywhere in Bangladesh is becoming a problem for electric two-wheelers.

Motor for electric bike: The Motor is waterproof. Another technology is that it can store energy during braking and return the charge to the battery.

Lock System: Two-wheeler electric vehicles use remote lock technology that allows you to lock and unlock the bike, start the bike, and lock the rear wheel Motor, helping prevent vehicle theft.

Mobile app: Users can now control electric two-wheelers through a mobile app, turning the bike on and off and tracking its location.

There are additional barriers, supplier power, buyer power, threats, and industry rivalry in the electric two-wheeler market. We will analyze using Porter's Five Forces Model.

2.2.5 Barriers to entry:

Since electric two-wheelers are import-dependent, significant capital is required. To strengthen the distribution network, products often have to be supplied to the rest of the market. Moreover, it requires official service centers for after-sales service, factories for local assembly or production, and many skilled workers, all of which require substantial capital.

Electric two-wheelers require many skilled people to work across all electric vehicle technologies, such as motors, controllers, converters, GPS, and batteries, which often creates a barrier to entry into this market.

Unlike established companies like TVS, Honda, Bajaj, and Suzuki, which enjoy substantial brand value and customer trust, electric vehicles remain relatively unknown in Bangladesh. Companies entering the electric two-wheeler market must invest heavily in branding and marketing. These efforts require skilled personnel and incur additional costs, making market entry quite challenging.

In many parts of Bangladesh, dealers are not yet available. Therefore, the company must open its own showrooms and hire its own sales staff, which increases expenses and creates a barrier to market entry.

2.2.6 Supplier Power:

All the essential parts of electric two-wheelers, such as body kit, Motor, controller, wiring set, converter, and battery, are almost import-dependent; nothing is available locally.

Suppliers play a vital role in the electric two-wheeler market. But sometimes, suppliers ask for excessive prices, do not provide the right products, and changing suppliers is necessary, which is very difficult and expensive.

2.2.7 Buyer Power:

Although demand for electric two-wheelers is increasing, many alternative options are available to buyers, including oil-powered bikes from domestic and foreign manufacturers.

People in Bangladesh are very price-conscious. When it comes to buying good products, the prices are a little high, but Bangladeshi people always want assurance of getting the best products at a low cost.

2.2.8 Threat of Substitutes:

We know that the main competitors of electric bikes are petrol-powered bikes, which offer attractive designs, high speeds, brand value, oil pumps in different places, and easy availability of parts, posing a significant threat to electric two-wheelers.

Buses, metro rail, Pathao, and Uber are becoming increasingly popular in Bangladesh, posing a threat to electric bikes.

Currently, BUET is testing electric-powered rickshaws; in addition, battery-powered rickshaws are readily available in Dhaka city at low fares, posing a challenge for electric two-wheelers.

2.2.9 Industry rivalry:

There are many competitors of Green Tiger Electric Bike in Bangladesh. Earlier, oil companies like Hero, TVS, and Honda ran oil bikes; now, they also run electric bikes alongside them. For example, Runner used to sell only oil bikes, but now Yadea has brought electric bikes. Moreover, businesses in other sectors, such as Nasir Glass and Pran Company, have introduced electric bikes under the Syntrax and Raydo brands, respectively. Apart from that, there are also companies like Dix New Energy, Salida, and EZGo.

Although the electric bike market is growing, many international and local companies are competing in it. They are competing a lot on marketing, branding, spare parts, after-sales services such as home service, and product prices.

CHAPTER III: INTERNSHIP EXPERIENCE

3.1 Position, duties, and responsibilities:

Position:

I am working as a project intern at Green Tiger Electric Vehicle. My main topic in this internship project is Life Cycle Cost Analysis and Cost Assessment, as well as Environmental Impact.

Duties and Responsibilities:

Information Collection:

Collect detailed cost data related to the procurement of various raw materials of Green Tiger Electric Vehicle, such as two-wheeler body kit, Motor, controller, converter, chassis, main wiring, wheel rim, electricity consumption for two-wheeler assembly, recycling of batteries when they are damaged, destruction of lead acid or lithium batteries after use, etc.

Total cost of an electric vehicle in its lifetime:

I created a costing model to determine the purchase, maintenance, and replacement costs of the Motor, controller, and battery for an electric two-wheeler. I calculated this costing model over the entire life cycle of the electric two-wheeler."

Environmental Impact:

We have assessed the environmental impacts of electric bikes throughout their life cycles. For example, the production of lithium or lead-acid batteries, their end-of-life disposal, the effect on the national electricity grid from charging two-wheelers, the destruction of the plastic body kit used in electric two-wheelers, etc.

Making a difference:

Petrol bikes are very popular in Bangladesh. This report compares petrol bikes with electric bikes in terms of cost, maintenance, and environmental impact.

3.2 Training:

During this Internship

I received comprehensive training.

Service Agent Training: I learned how to perform minor servicing on electric two-wheeler

ISO Workshop Training:

I received training on ISO 14001:2015 and ISO 9001:2015, covering the sales and service of electric vehicles and lithium batteries, as well as the manufacturing and assembly of two-wheelers

Insight into the Industry:

Gain expert and hands-on knowledge about electric two-wheeler technology, such as motors, controllers, battery chemistry, and recycling processes.

Data Collection:

Received strategic training on potential costs and environmental impact data of electric two-wheelers in the Bangladeshi market.

3.3 Contribution to departmental functions:

Research-oriented:

Green Tiger Electric conducts many research activities. We are supporting their research by creating a database for life-cycle cost and environmental analysis.

Strategic Contribution:

Providing advice on how Green Tiger's two-wheeler can increase sales by creating a marketing strategy that highlights its economic savings and environmental benefits.

Weekly Discussion:

Green Tiger holds meetings every week, where I regularly participate and try to offer support by providing honest advice.

Contributing to the Presentation:

During my Internship, I assisted and participated in creating presentations on Life Cycle Costing and Environmental Analysis.

3.4 Evaluation:

Green Tiger Electric Vehicle is evaluating me based on my ability to work efficiently, arrive at the office on time, complete reports accurately, and work together with the team to find solutions.

While working at Green Tiger, I proactively analyzed complex technical data and identified how different departments used it to support overall company development.

In life-cycle cost and environmental impact analyses, I accurately completed each stage to identify the actual costs and ecological impacts.

3.5 Skills applied:

Analytical Ability: During my Internship at Green Tiger, I analyzed life-cycle cost and life-cycle inventory data.

Data Research Management:

In this case, we have collected data from relevant companies, industry reports, academic papers, and local people on electric two-wheelers, which we have verified and managed over time.

Technical:

Creating cost analysis models using Google Spreadsheet and Microsoft Excel, and providing various inputs through ERP. With its help, I highlighted the overall production costs of electric two-wheelers, the cost comparison with petrol bikes, and maintenance costs.

Presentation:

We analyzed various costs, environmental impacts, and maintenance costs through graphs, charts, tables, and Excel, and converted the results into a helpful format.

Issue Solving:

Information on electric two-wheelers is limited. I have identified various inconsistencies in this limited information and tried to resolve them, which has helped make my internship report more accurate.

3.6 New skills developed:

During my Internship at Green Tiger, I gained valuable new experiences and skills that will further enrich my professional and academic knowledge. I tried to share some of the new skills I have acquired:

Impact Analysis:

Before interning at Green Tiger Electric Vehicles, I only knew that electric two-wheelers were economically viable and had no environmental impact. Still, thanks to my internship here, I learned to put that into practice.

Product Lifecycle:

Learned how to make rational decisions that are sustainable for Green Tiger and Two Wheelers by analyzing the costs and environmental impacts of each stage of the life cycle of an electric two-wheeler.

Policy Analysis:

We have gained the ability to analyze the impact of the government's tax on two-wheelers, registration fees for number plates, post-use recycling on our cost analysis, and the impact at the consumer level.

Information Analysis:

I have acquired the skills to deliver presentations using Excel and PowerPoint to collect and verify information from Green Tiger Electric Vehicles' various departments and from customers who use two-wheelers.

Increase technical knowledge:

Through my Internship at Green Tiger, I have gained technical knowledge, including concepts related to motors, controllers, converters, batteries, and their types. I have gained skills by understanding them.

Identify and solve the problem:

I have gained skills in identifying incorrect or inadequate information while working, identifying cost inconsistencies during cost analysis, and resolving them.

Time Management:

While interning at Green Tiger, I worked on time despite the pressure. I gained experience in preparing reports and presentations, analyzing them with officials and classmates, and completing the work within a specified time frame.

Team Work:

I collaborated with a team to solve problems and make decisions. This experience strengthened my ability to work effectively with others and enhanced my communication skills.

3.7 Application of academic knowledge:

The Green Tiger internship allowed me to apply the academic knowledge and concepts I learned at university to real-world situations, helping me connect my education to practical industry experience.

Knowledge of environment:

Through the knowledge gained from university, I have applied the environmental principles learned in practice and see how to incorporate environmentally friendly processes into an organization's production and product life cycle.

Cost Analysis:

Through cost accounting taught at the university, I applied the principles of making critical financial decisions for the organization by calculating the two-wheeler production cost, after-sales cost, maintenance cost, new-use cost, and battery and spare parts cost.

Research Methods:

While studying at university, I learned how to conduct proper research, collect data, and analyze it to arrive at the right results. I applied this in practice during my Internship at Green Tiger and analyzed the results.

Communication Skills and Reporting:

While studying at university, I gave many presentations, wrote reports, used my experience with Green Tiger to prepare official reports, analyzed various data, and gained the skills to present it in meetings.

Operations Management:

I studied supply chain management at university, through which the entire process, from product production to raw material supply and disposal, is mapped out.

CHAPTER IV: CONCLUSIONS AND KEY FACTS

4.1 Recommendations for improving departmental operations

I did an internship at Green Tiger Electric Vehicle, so my recommendations will focus on improving production, sales, and after-sales service.

Battery technology:

The battery is a crucial component in the electric two-wheeler sector. At present, we depend heavily on imported lithium, lead-acid, and graphene batteries. We must research these batteries thoroughly and invest in local production to reduce our reliance on imports. Local manufacturing will lower overall costs, keep money within the country, and create significant employment opportunities.

Spare parts local production:

Most electric two-wheeler body kits are plastic and break easily. Currently, all these parts come from abroad. If we start producing these parts locally, we can reduce the life-cycle cost of electric bikes. We need dedicated research, government incentives, and industry support to begin manufacturing these components in Bangladesh.

Battery return program:

Users can return their old electric two-wheeler batteries. Companies must dispose of these batteries safely. When customers return old batteries, the company can offer discounts or gifts on their next purchase. This initiative will help companies recover used batteries and support environmental protection through proper disposal.

Two-wheeler maintenance:

By giving customers proper advice on life-cycle costs, we introduce a low-cost maintenance model for electric two-wheelers. As a result, the company retains loyal customers for an extended period.

Customer Concept:

When customers first consider buying an electric two-wheeler, they often find it expensive. If we explain the economic benefits—such as savings from not buying fuel—and the environmental advantages, including the fact that electric bikes pollute less than oil-based bikes, we increase customer awareness. We can promote these benefits through awareness campaigns at seminars, schools, colleges, and among working-class communities.

Charging Stations:

Customers frequently travel long distances on their two-wheelers, but they struggle because there are few charging stations nationwide. Therefore, the company, in partnership with the government, should install charging stations at key locations.

Incentives:

Policymakers should reduce the cost of number plates for electric two-wheelers and offer tax exemptions for long-term users.

Customer support team:

Since electric two-wheelers are still new to many people, they may have many questions after purchase, for which every company, including Green Tiger, should have strong customer support.

4.2 Key understanding

Life Cycle Cost Saving:

When customers use electric two-wheelers for a long time (5 to 7 years), they can save a lot of money compared to petrol bikes. Electric bikes are 45-70% cheaper than petrol bikes, and their maintenance costs are lower. This makes the customer financially profitable and brings many environmental benefits.

Battery management:

A two-wheeler is a useless vehicle without a battery. The use of electric two-wheelers is increasing day by day. But in that proportion, there is no noticeable initiative or awareness on the disposal of old batteries, either privately or publicly. There is no significant policy by the Bangladesh government on the reuse of lithium, lead-acid, or graphene batteries.

Important parts:

There is no policy or infrastructure to properly dispose of critical components of electric two-wheelers, such as motors, controls, and converters, when they break down. There is also no way to fix them and reuse them.

Customer Knowledge:

The customer's perception and knowledge of two-wheelers remain very limited. Therefore, at the field level, the government and the company can provide customers with a clear understanding of the advantages and disadvantages of electric two-wheelers.

Conclusion

Conclusion:

We can conclude this report by analyzing the life cycle costing and environmental impact analysis of the Green Tiger Electric Two-Wheeler, and we have found that electric bikes will not only provide economic benefits to the customer but also play an effective role in generating foreign exchange and creating a green environment for the future of Bangladesh.

We are now very optimistic about electric two-wheelers in Bangladesh. In the near future, we can make electric two-wheelers with our domestic technology, as well as batteries and their improved versions in our country, so we have to fulfill our due responsibility. We hope that our government will provide simple policies and incentives for electric two-wheelers. Above all, if the right policies and improved waste management are in place, the Green Tiger electric bike will open a new horizon not only in Bangladesh but also worldwide.

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Appendix-A:

Technical Specification of GT Electric Two-wheeler:

- Battery alchemy
- Battery competence
- Motor torque and watt
- Controller quality
- Chassis dimension
- Rear Shock absorber type
- Charging time of the battery

Raw data for calculation LCC:

- Distance of the electric two-wheeler travelled
- Rate of electricity per kWh
- Proper maintenance cost per year
- Battery, Motor, and Converter Replacement cost

Environmental Impact Assessment:

- Estimates the amount of emissions
- After the End-of-Life assumption of the disposal
- Battery energy consumption per charge

Extra charts:

- Battery performance details of a Two-wheeler
- Cost Breakdown chart of Two-wheeler
- Oil bike and Electric Two-wheeler comparison chart

