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CASE STUDY : IMPACT OF GREEN TECHNOLOGY ON INCLUSIVE GROWTH OF BUSINESS ORGANIZATION

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ABSTRACT

The impact of rising population and rapid growth of Industries has created a challenges for prosperity and survival of human civilization. Development and application of green technology is vital for the growth of industries and betterment of the environment. Present research study aims at finding out the impact of green technology on inclusive growth of business organization. In order to examine the impact, researcher has selected 4 companies namely Suzlon Energy Ltd, LG Electronics, Tata Consultancy services, Samsung. Researcher has used secondary data collected from various sources, with an attempt to study the impact of green technology on business organization for inclusive growth. Data have been analyzed and interpreted by using case studies. Result of the research shows that production and manufacturing techniques of industries have been considerably changed for inclusive growth and contributing to enhance economic development. Agriculture and service sectors was also found to be contributing for betterment of planet. The paper also highlights various benefits and limitations of green technology. Finally it concludes with recommendations for the improvement in certain areas of business strategies.

Keywords : Prosperity, Survival, Green technology, Economic development, Business strategies

Introduction

Earlier days, people used main sources, the sun, for generating the heat. They also used various domesticated animals as the means of transportation. However as more and more natural resources were found it led to great convenience for the users. This has resulted in a lot of energy crisis due to high dependence on the fossil fuels such as petrol, coal, oil, natural gas, etc. These resources are depleting at a higher rate as and when the time moves on. Hence various attempts has been made to develop alternative fuels and new means of generating energy.

Green technology refers to technology of creating products and services that are environmentally friendly. It can be also referred to as 'Clean technology'. It comprises of using science and technology for protecting the environment. The primary aim is that to make sure environment remains protected. Green technology goals is becoming vital for wide range of Industries such as manufacturing, energy, agriculture, etc.

The aim of green technology is to preserve the environment. Green technology has even used to minimize the effect of damages caused in the past. In this competitive world due to development and expansion of businesses, green technology extends advantages to this business organization financially by creating a cleaner and safer environment.

Objectives of the study

- To know the impact of green technology adopted by business organization.
- To study the strategies implemented by the businesses for gaining long term benefit of green technology for inclusive growth.
- To know about the recent developments and innovations in green technology.
- To study the role of business organizations to

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preserve the environment.

- To give some meaningful suggestions for improvement in the field of green technology.

Literature Review

In today's time, global warming is the topic of prime importance. Due to the condition of tge country, people may prefer to use products that are eco-friendly and productive to the environment. In this, the socio-cultural variable is attached. It is because of global warming that people use eco-friendly products (Keller, K.L., 2003).

Green technology helps the company to cater environment friendly goods to the consumers and hence fulfils the first responsibility (Crane, Mc Williams, 2008).

The use of green technology does not contradict with any laws or legislations of any country; in fact it is encouraged by most countries (Day, 2009).

The use of green technology helps other realize the benefits of using it and at the same time creates awareness for many individuals about the damage being done to the environment (Tolhurst, Pohl, Matten and Visser, 2010).
Related Published articles was referred.

Research Methodology

The study is descriptive. The study is based on secondary data. References were taken from Periodicals, Newspaper Articles, Journals, Magazines, Research Papers published by various authors, Books and other related publications, Published reports and references taken from the various websites.

Significance of the study

a) The study will be useful to policy makers of the businesses for framing policies in this regard.

b) The study is useful for controlling the wastage of resources by using green technology.

c) The study is useful for the business organization to make advancement in the area of green technology for sustainability and inclusive growth.

d) The study will be also useful for researchers to undertake further research in this area.

Limitations of the study

The paper is based only on secondary data published in various books, reports, research papers, journals, newspaper articles. There was a time constraint and scarcity of resources due to which primary data could not be collected and used for a more detailed study.

Suzlon Energy Ltd

Suzlon is one of the world's largest and leading producers of Wind Turbine Generators (WTGs). Suzlon aims in creating sustainable economic, ecological and social development. They are moving closer of fulfilling the vision of a greener tomorrow. By tapping the abundant and natural resources of wind and solar as energy sources, as well as combining them to bring about wind-solar hybrid solutions, suzlon facilitates the offering of a affordable and consistent power. The vision statement of a company is to be a technology leader in the wind sector, to be in the top three wind companies in the key markets of the world, to be a global leader in providing profitable wind power solutions, to be the 'Company of Choice' for stakeholders. Suzlon offers End-to-End solutions. It has implemented both forward and backward integration. It offers services that comprise all segments of setting up a power plant project as well as maintaining it through its operating life.

Corporate Social Responsibility : The Suzlon Foundation

CSR initiative of suzlon contributes to the commitment to combat climate change. The Foundation enables sustainable development and inclusive growth by adopting best practices such as :

- to protect resources and creating harmony by balancing growth, equity and justice.
- facilitating environmental well-being through effective environmental management, soil and water conservation, rainwater harvesting and promotion of eco-friendly livelihoods.
- ensuring minimal impact on the natural environment.

LG Electronics

LG focuses on environmentally sustainable solutions, developing Eco-Design and distributing Eco-Products to help create a safer, cleaner world. It not only enhance consumer: lives, but also encourage an environmentally responsible lifestyle.

LG Electronics strategies for Products with greener

features :

1. Reduce Resource Consumption
   - Reduce Product volume and weight.
   - Use recycled materials
2. Increase Recyclability
   - Increase the use of recyclable materials.
   - Design for easy disassembly.
3. Enhance Energy Efficiency
   - Reduce power consumption.
   - Reduce standby power.
4. Replace Hazardous substances
   - Reduce the use of heavy metals.
   - Reduce the use of hazardous chemical substances.
5. Improve Home Environment
   - Minimize product noise and vibration.
   - Minimizing negative environmental impacts in living environment.
6. Reduce CO_2 Emissions
   - Use renewable energy.
   - Reduce CO_2 emissions throughout the product life cycle.

Case study of LG :

LG was able to reduce the type of plastic materials of approximately 12 percent in their washing machine model (FR16WPW) compared to the previous model (FR46C5MCNH) and reduce the number of components by 4 percent through an improved product structure, increasing the recyclability of the product and ensuring ease of disassembly.

Operational Efficiency Targets :

- 50% reduction in carbon emissions in the production stage compared to 2017 (by 2030)
- Achievements of carbon neutral through external GHG emission reduction project.

Tata Consultancy Services

Carbon and Energy Management

TCS reducing its carbon footprint through data center power management. TCS achieved its 2020 target of reducing its specific carbon footprint by 50% (relative to baseline year 2007-08). TCS' energy and carbon management process is supported by green infrastructure, green IT, and IT enabled operational efficiencies. Over 50% of total real estate portfolio is certified green building space. 80% of all TCS- owned real estate is IGBC/LEED – certified green infrastructure. Key features of green buildings include onsite renewable energy through rooftop solar photovoltaic (PV) panels, solar thermal installations, chillar waste heat recovery unit, energy efficient design.

Energy and carbon performance (baseline year 2007 – 2008) :

- 51.4% reduction in specific electricity consumption
- 13 LEED – certified campuses
- 52.5% reduction in specific carbon footprint
- 8.45% of total power from renewable resources

Water Management

TCS water management plan is based on water treatment, recycling and replenishment. For achieving water neutrality by 2020, TCS implemented water – efficient fixtures at new offices and campuses, ensuring 100% treatment and recycling of sewage and rainwater harvesting.

Water performance (baseline year 2007-08) :

- Specific water consumption reduced by 14.72%
- 69% of water recycled of total sewage generated
- 13% increase in rainwater harvesting potential over the previous year

Waste Management

TCS believe in making the best out of waste – by using it in different process.

Methods of waste management by TCS :

- Hazardous and e-waste is disposed through government authorized recyclers in compliance with local regulations
- Food and garden waste is composed and/or bio digested are sent to piggeries as feed
- Paper wastes are sent for recycling
- Printer and toner cartridges are sent back to the manufacturers under product take back arrangements.

Samsung

Samsung Electronics have set the following green management goals to reduce greenhouse gas, to manufacture products with minimal environmental

impact, and to achieve a circular economy.

- Greenhouse gas reductions in product use phase – 250 million tons (*total from 2009 to 2020)
- Compliance of newly developed products with Eco – label standards – 90%
- Waste product collected globally – 3.8 million tons (*total from 2009 to 2020)
- GHG emissions intensity – 1.5 tons CO_2e/100 million KRW
- Waste recycling rate of Samsung locations – 95%
- Water use intensity – 50 tons/100 million KRW

Samsung Electronics developing highly energy – efficient products, installing equipment with minimum greenhouse gas (GHG) emissions, and harnessing new and renewable energy.

Case Study of Samsung :

Galaxy S8 and QLED TV : Developed with Eco – design process.

The device samsung's galaxy S8 received a tremendous response and those innovations were no exception in terms of environmental features. Samsung Galaxy S8 did not settle merely meeting the environmental standards of each location but comprehensively examined the potential environmental impact of the device using the Eco – design process. In addition to this, QLED televisions also attracted attention for its cadmium – free Quantum Dot technology, overcoming the technological limitations of previous Quantum Dot technologies which failed to remove cadmium usage to achieve efficiency. In recognition to its environmental commitment, the Galaxy S8 and S8+ received the highest Gold Rating from the renowned US Electronic Product Environmental Assessment tool (EPEAT), while QLED TVs won the sustainable Materials Management (SMM) Gold Award for cutting edge from the U.S. Environmental Protection Agency in January, 2017.

Samsung Electronics environmentally sensitive substance management history :

2018 – Plans to restrict the use of 4 types of phthalates (DEHP, BBP, DBP, DIBP) in all components.

2016 – Restricted use of 4 types of phthalates (DEHP, BBP, DBP, DIBP) in new components.

2015 – Banned the use of hexabromocyclododecane (HBCD) and nonyphenol.

2013 - Released phthalate and antimony – free products (some components of laptops, TVs, monitors and home theatre products)

Analysis and Interpretation

It was found that Suzlon CSR initiative is contributing to combat climate change. They are focusing on greener tomorrow by making efficient use of renewable energy resources.

LG Electronics was successful in launching Eco-products for safer and cleaner Environment by adopting good strategies. They are focusing on more operational efficiency targets, which seems to be achievable in future.

Tata Consultancy Services being a huge organisation has taken a environmental issue as a serious responsibility. They are continuously taking initiative on Carbon and Energy management, water management, waste management etc. Green Infrastructure is one of the success feature of TCS.

Samsung Electronics have set their green management goal and working towards its achievements. They were able to produce high energy efficient products. Galaxy S8 and QLED TV was a product with Eco – design and earned profit for the company.

These organisations commitments towards environment have made them successful in the market. Apart from these organisations, there are some other businesses which are lacking funds for the implementation of green technology. Due to drawbacks of green technology some businesses are finding it risky for its implementation as they may face loss of revenue.

Conclusion

Various Industries and organisation started producing goods and services by adopting green technology. They are even availing various government tax credits. The companies are able to make huge profits by producing green products. Business organisations are making continuous efforts for producing good quality product and to have a healthy environment. Policies and strategies are also framed by huge organisations with regards to green technology for sustainable development

and Inclusive growth. Focus has been made for improving the quality of life for all. Production and manufacturing process are changed to conserve and minimize the impact on the environment. Green technology proved to be cost effective as it requires less maintenance. Business organisations are contributing to enhance the national economic development by using green technology. Even in transport sectors advancement in green technology have been made.

Recommendations

- Green buildings for companies can be constructed to conserve natural resources, to protect biodiversity and ecosystem and to improve air and water quality. Greener structure will maximize environmental and economic performance.
- As natural resources are being consumed faster there is huge demand for paper and paper-based process, the businesses can be moved to a paperless office system to reduce the impact on ecosystem.
- Energy Efficiency measures should be implemented by businesses to reduce carbon footprint.
- Waste recycling should be done to lessen the harmful disruption and damage being done to the natural world.
- The consumer should be made aware about the importance of green products so that the business can change their strategy for sustainable growth.
- A company should explicitly promote its sustainable performance – and those of its products and services – as a key component of its business activities.
- A company should create awareness how a green product or service can help consumers save key resources.
- Packaging is the first thing that consumer observes. In addition to green products and services, the business should also focus on packaging to go green.

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