

GREEN PRACTICES OF ENERGY-EFFICIENT HOUSEHOLD APPLIANCES IN INDIA

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Abstract *Home appliances have made our lives easier. We make use of them on a daily basis. It is a requirement for human beings in today's world. Consumer has now changed their decisions towards purchasing eco-friendly goods due to the growing awareness in the present environmental problems. Green consumption has been around in developed countries for a long time and has become increasingly essential for the environment. Even emerging countries are taking steps to manufacture environmentally friendly products so that the products they produce are less harm to the environment. For a better tomorrow, many developed and developing countries are adopting green consumption patterns as a pillar of natural development. Thus, this paper does not miss to discuss the carbon footprints in India and the steps taken by the companies for the Eco Products in Home Appliance Industry.*

Keywords *Energy-Efficient Household Appliances, Carbon Footprints in India, Eco Products*

INTRODUCTION

Home appliances have made our lives easier. We make use of them on a daily basis. It is a requirement for human beings in today's world. As the population increases, so does the need for things, and as the demand increases, so does the cost of life. People have a variety of options when acquiring goods and services, particularly in the case of household appliances, to meet their requirements and desires. Household appliances require a significant amount of energy, resulting in frequent power shutdowns and environmental degradations. As a result, the government bears the cost. There comes the renovations of energy-efficient appliances from various companies. To address this issue, businesses have developed Energy-Efficient Appliances. In today's market, the customer is king. Consumers are now well-versed in purchasing goods. They are all-knowing everything. For the sake of the future, they favour environmentally responsible products. Consumer has now changed their decisions towards purchasing eco-friendly goods due to the growing awareness in the present environmental problems. So, to grab a larger market share it is important for all the companies that they need to make a first move in order to save the environment. Green consumption has been around in developed countries for a long time and has become increasingly essential for the environment. Even emerging countries are taking steps to manufacture environmentally friendly products so that the products they produce are less harm to the environment. For a better tomorrow, many developed and developing countries are adopting green consumption patterns as a pillar of natural development.

RESEARCH METHODOLOGY

The word methodology is made up of two words: Meta and Hodos, both of which imply "method." A method necessitates a number of strategies, each of which contains a number of steps to demonstrate the information. In this paper, the researcher attempted to gather data from secondary sources such as journals, websites and books in order to compile a strong literature review.

OBJECTIVES OF THE STUDY

- To study the energy-efficient household appliances in India.
- To study the carbon footprints in India.
- To study the Eco Products in Home Appliance Industry.

WHAT ARE ENERGY-EFFICIENT APPLIANCES?

Energy-Efficient Appliances are home appliances with energy-saving features. The usage of more energy-efficient appliances leads lower power bills, while also helping to protect the environment by reducing dangerous pollutants like carbon dioxide. The term "energy efficiency" refers to the use of less energy to offer a service. LED light bulbs, for instance, may produce the same amount of light as incandescent light bulbs while using 75 to 80 percent less electricity.

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By adopting energy-efficient models of these products on a large scale, future electricity usage in households can be greatly reduced. Standards and Labeling (S&L) programme in India by BEE has given three characteristics of its efficiency in the Indian appliance industry.

These standards and Labelling are required on eight appliance types, including air conditioners and refrigerators, and no model can be sold without at least a 1-star rating. For 13 appliance categories, including ceiling fans and washing machines, the programme is voluntary, and manufacturers can sell these items without BEE labelling and with an efficiency rating of less than one star.

For any appliance, BEE starts with a voluntary S&L programme and usually makes it mandatory in two-three years.

Table 1: List of Appliances on the Standards and Labeling (S&L) Programme

Mandatory Appliances	Voluntary Appliances
Frost Free Refrigerators	Induction Motors
Tubular Fluorescent Lamps	Agricultural Pump Sets
Room Air Conditioners	Ceiling Fans
Distribution Transformers	Domestic LPG stoves
Room Air Conditioners (Cassette, Floor standing, Tower, Ceiling)	Washing Machine
Direct Cool Refrigerators	Computer
Electric Geysers	Ballast
Colour TV	Office Equipment
	Solid state inverters
	Diesel Generator
	LED Lamps

BEE also tightens standards and labelling on a regular basis to stay current with and promote the most efficient commercially available technologies. As a result, today's 5-star model may become a 3-star model in the future, while more efficient vehicles may receive the new 5-star label. BEE has tightened frost-free refrigerator ratings on a regular basis, and while the present 5-star ratings are commensurate to international norms, the 1-star rating still has its opportunity for improvement.

GREEN MARKETING AND ENERGY CONSUMPTION IN INDIA

After China and the United States, India is the world's third-largest CO₂ emitter. Climate change poses a serious threat to businesses and investments today. In this approach, a country's financial development is dependent on the long-

term availability of reasonable and abundant energy sources. According to the Bureau of Energy Efficiency's (BEE) review of primary energy consumption statistics, India accounted for 4.7 percent of global energy consumption at the end of 2013, and India was the world's fourth largest primary energy consumer after China (22.4 percent), the United States (17.8%), and Russia (5.1 percent). Domestic, service sector, industrial, agriculture, and transportation are just a few of the industries that use energy. Residential and commercial energy usage accounts for around 14% of overall energy consumption in India, according to the TERI energy data directory. This report mostly focuses on the domestic market. Consumers have recently begun to contribute to Energy Savings possibilities. Because of the rising cost of electricity usage and emissions, businesses are also adopting cleaner technologies, such as the switch to renewable energy sources. The inquiry into the efficient management of energy resources using Green Marketing Tools is still in its early stages. Because market researchers have missed the impact of advertising on energy conservation.

ENERGY WASTE: WHAT'S THE BIG ISSUE?

According to a research published in Nature Climate Change, India's percentage carbon dioxide (CO₂) emissions climbed slower in 2016-19 than in 2011-15, but were still much higher than the global average of 0.7 percent. For instance, China had a 0.4 percent increase in emissions from 2016 to 2019, while the US saw a 0.7 percent decrease, both of which dwarf India's emissions in absolute terms.

When the pandemic slow down the economic development in 2020, India's emissions fell 9.7%, slightly higher than the global average of 9.6%. The percentage changes are based on information provided by the countries.

Lockdowns to combat the COVID-19 pandemic in 2020 reduced worldwide CO₂ emissions by 2.6 billion tonnes, or 7% less than in 2019. Lockdowns are "neither a viable nor desirable solution" to the climate catastrophe, according to the experts, and 2020 was a "stop button" that could not realistically persist while the globe relied heavily on fossil fuels.

Annual CO₂ reductions of 1-2 billion tonnes are required in the 2020s and beyond to keep global warming within the 1.5 °C to far below 2 °C target set by the UN Paris Agreement. Because of human-caused greenhouse gas emissions, the planet has warmed by more than 1 °C since the Industrial Revolution. In comparison to 2011-2015, 25 of the 36 high-income nations showed a decline in emissions from 2016 to 2019. Apart from the United States, the European Union (-0.9 percent) and the United Kingdom were also included (-3.6 percent).

CONSUMERS OPTIONS TO GO FOR ENERGY-EFFICIENT HOME APPLIANCES

According to the World Commission on Environmental Development (1978), Sustainable development means “filling current demands without jeopardising future generations’ ability to satisfy their own requirements.” The necessity to incorporate economic and ecological concerns in decision-making through enacting policies that preserve the quality of agricultural development and environmental protection is a recurring theme throughout this strategy for sustainable development. The end result of green marketing is environmental conservation for both current and future generations. Green marketing include the creation of energy-efficient operations, improved pollution controls, recyclable and biodegradable packaging, and environmentally safe products, all of which contribute to long-term development.

Bosch Home Appliances with Green Technology Inside

Responsibility at the touch of a button. Bosch household appliances are made with special consideration for the environment. Bosch work in all areas in a truly sustainable manner. It begins prior to manufacture and finishes with the recycling of the packaging material. The “Green Technology within” signet distinguishes our most efficient models. Around 40% of our patent applications are related to environmental preservation and resource conservation. Household appliances from Bosch are now among the most energy-efficient and cost-effective in the world. This is beneficial to the environment. Bosch’s dishwashers are so well-packaged that we can now transport even more things at once. This saves not only on packaging materials but also on fuel, lowering CO2 emissions.

Philips

Eco Vision Phillips has contributed significantly to the field of green marketing. Royal Philips Electronics announced the “EcoVision4” programme in 2007. Eco-friendly product sales climbed to EUR 11,238 million in 2012, accounting for a large portion of total revenue. Green Product sales as a percentage of overall Group sales increased to 45 percent in 2012, up from 39 percent in 2011, and are on course to attain the new goal of 50 percent in 2015. In 2012, they invested EUR 569 million in Green Innovation to guarantee that their green channel is properly stocked. In addition, the company introduced 91 new green products to the market. Philips also announced new voluntary recycling activities in India, Brazil, Argentina, and China, in addition to its

focus on improving the energy efficiency of its products and operations. They offer goods that help to minimise expenses, energy usage, and CO2 emissions through their eco design approach. The Philips Green emblem indicates that the products outperform their competitors in terms of environmental performance. According to data, Philips’ green marketing strategies have had a beneficial influence on consumers, since sales have climbed significantly since the start of its EcoVision4 programme. The consumer’s opinion of their goods is positive, and they are willing to spend extra for it.

Panasonic

Green Innovations Panasonic has introduced a line of items manufactured from recycled materials as part of its quest to become the No. 1 Green Innovation Company in the Electronics Industry. Panasonic offers new products that use sophisticated sensors to make daily life more comfortable and environmentally responsible. The new range is painted in an earth-tone colour, with Earth beige on the exterior and matching colours on the control panels of all its goods. According to a Panasonic survey, as individuals have become more environmentally conscious, recycled content is becoming a more crucial part in their shopping decisions. The company lauched lot of items that included a Frige, rice cooker, dryer, and vacuum cleaner, all of which used recycled resin and vacuum insulation produced from recycled materials. Panasonic AVC Networks Company received a silver award from the Japan Environment Association’s “Eco Mark Award 2013.” (JEA). The AVC Networks Firm has won this award for the past two years; in 2012, the company earned the “Product of the Year” award for its “DIGA” Blu-ray Disc Recorder (DMRBRT230 and 5 other variants) at the “Eco Mark Award.” The Company focuses on the following three environmental policies in order to provide superior products to its customers: increasing their goods’ energy-saving performance while supporting the 3Rs (reduce, reuse, recycle). Reducing the usage of chemicals that have a substantial negative influence on the environment. Panasonic has stated that it will continue to conserve energy and resources, recycle materials, and safeguard the environment in order to improve the core performance of its products.

LG’s

Greenovation One of the LG’s Corporate Social Responsibility is green marketing. LG Electronics Company has used green marketing in the creation and marketing of products to reduce negative environmental effects. LGE’s green aim is to provide values that improve the quality of life for its customers while also making the environment

healthier and cleaner. Green management initiatives at LGE include reducing greenhouse gas emissions throughout the product lifecycle, as well as the “Green Program Plus,” which encourages shared growth with suppliers and green firms in order to establish a future growth engine. The Chandni Aswal et al. / *International Journal for Research in Management and Pharmacy* Vol. 2, Issue 8, Sept.-Oct.-Nov. 2013 (IJRMP) ISSN: 2320-0901 28 activities are based on LGE’s fundamental principles of green and innovation, which are represented by the Chandni Aswal et al. www.rajimr.com is an online international, peer-reviewed, and indexed monthly journal. “Greenovation” by the RET Academy for International Journals of Multidisciplinary Research (RAIJMR). LG Group announced the launch of its “Green 2020” green management plan in April 2010, with the goal of focusing its strengths on sustainable management for green growth while also responding to climate change. Green 2020 is a three-pronged plan that aims to create a green workplace, expand greener products, and boost green businesses. LGE was also able to give customers the option to try out its products and have their opinions heard in the creation of future items. Through Greenovation efforts, LGE is dedicated to developing creative values that contribute to environmental conservation.

Videocon

Green Initiative Videocon contributes to green marketing as well. Shahrukh Khan unveiled the new logo in Los Angeles (USA). “Videocon’s new identity and logo are based on the brand’s consumer centric strategy and positioning to be closer to the hearts of consumers - both in terms of its values and philosophies, as well as its servicing elements,” they stated. The rebranding is aimed at youth-oriented customers with a fresh global mindset. The colour palette was designed to symbolise the Videocon Group’s ideology, with green representing the company’s environmental efforts. Videocon and Panasonic also use the IIFA awards show to market their environmentally friendly products. The IIFA award’s subject is ‘Go Green,’ and it serves as a forum for promoting energy-saving and environmentally friendly products. To save energy and release fewer dangerous substances, the Videocon Group has upgraded its R&D centres to “green” technology. To raise broad awareness among employees, the corporation also celebrates the Vanamohatsava (Annual Festival for Tree Plantation) and World Environment Day. Through social media, print media, and an advertising campaign, the company has taken the initiative to raise customer awareness about e-waste management and disposal.

Sony

Eco Innovation Sony is addressing environmental issues in a novel approach with their technologies. Sony is the latest

major brand to join O2’s initiative to eliminate unneeded mobile phone chargers from the market. Sony has joined HTC and Nokia in signing up for O2’s ‘Charger out of the box’ promotion. The campaign’s goal is to remove all chargers from new phone boxes by 2015, as they are a major source of environmental trash for the business. Sony has been named the Greenest Company for 2009 by the Environmental Graffiti website in its annual awards for its continuous dedication to environmentally friendly projects and efforts. The prize highlighted Sony’s innovative green efforts, such as the Forest Guard Eco initiative, which saw Sony engineers collaborate with a group of children to develop a wildfire prevention plan.

CONCLUSION

The availability and quality of items with eco-friendly characteristics has significantly increased in India high end appliance retail industry over the last few years as a result of globalisation and the advent of big multinational appliance manufacturers. Despite rising pressure from environmentally conscious consumers in developed countries, multinational corporations have improved their environmental effect. Appliances account for around 18 percent of global energy usage, ranging from fans to air conditioners to refrigerators, and India’s rapidly developing urban population has a growing hunger for electrical appliances. Despite this economic opportunity, Indian consumers have yet to embrace energy-efficient, environmentally friendly, and cost-effective appliances. Consumers need to be able to make educated decisions regarding the energy-saving potential of the appliances. They should also make some efforts towards the society and make people in the surrounding aware about the eco-friendly good.

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