CHAPTER 1

An Overview of Green Marketing

CHAPTER OBJECTIVES

A. Introduction to Green Marketing

B. Why study Green Marketing?

C. Groups That Need to Understand Green Marketing

A. Introduction to Green Marketing

EnXco

Our journey into green marketing begins in Lakefield, Minnesota, where negotiations have been finalized between EnXco and 140 Minnesota landowners.[1] The project has great potential to be successful on multiple fronts. The new jobs will bring new *revenue* to the economy. EnXco indicates that the wind farm will deliver 200 construction jobs and add eight to 12 full-time jobs to the local economy.

The project will also demand long-term working *relationships* between EnXco and the landowners in Minnesota. The actual energy production will consist of 134 turbines, and these devices will be leased on the landowners' property. These turbines will rest on half-acre to 1-acre plots of land that will be leased for 30 years. Provisions have also been set up to recycle the turbines at the end of the lease period.

The area will also benefit from the production of 201 megawatts of *renewable energy*, which will replace the use of fossil fuels such as coal, oil, and natural gas. Interestingly, the energy will be produced in Minnesota but it will be transmitted to Indiana.

Energy needs are increasingly being met through wind power, and it is one of the fastest growing sources of energy around the world.[2] It provides many communities with a clean, local source of electricity so residents don't have to rely upon imported fossil fuels. The United States recently passed Germany as the country producing the most wind power. The U.S. Department of Energy estimates that renewable-generated electricity will account for 15.8% of total U.S. electricity generation in 2030, and wind power will be an important part of this dynamo.[3]

Despite the potential for wind power, it now accounts for only 1% of U.S. electricity use. One problem with wind is the reality that it does not blow all the time. Consequently, there must be backup power plants ready to turn on instantly if the wind slackens. Another issue is that the wind occasionally blows the hardest in remote plains that are far from cities that need the energy. The leading states for wind power are Texas, Iowa, and California. In Texas, the wind is strongest on the mesas and high plains of West Texas, hundreds of miles from Dallas and Houston. The logistical cost of installing turbines is significant, and the cost of transmission lines to these cities is appreciable.[4]

FIG. 1-1 EnXco Turbine farm in Solano County, California

Source: *iStockphoto.com/Terrance Emerson*

In addition to the development of land-based sites for turbines, offshore wind farms are also gaining momentum. Turbine installations in the water are expensive, but the wind blows much harder off the coasts. Unlike winds on continents, which blow strongest at night, offshore breezes can be strong in the afternoon and match the time when people are using the most electricity.

The company that is bringing wind power to Lakefield, Minnesota, is EnXco. Established in 1987, EnXco is an industry leader in wind project development and a premier provider of operation and maintenance services of wind power projects throughout North America. The mission of the firm is "turning innovative ideas and long-term relationships into ethical high-value sustainable business."[5] The company's focus on renewable energy has enabled it to build an organization of renewable energy experts. The experience and expertise of these specialists enables them to generate value and deliver results to energy supply-chain partners and developers.

The story of EnXco developing renewable energy is one example of green marketing. In today's economy, each of us has the opportunity to engage in green marketing. When we recycle aluminum cans, we are engaging in one form of green marketing. Similarly, when we buy a hybrid automobile, we are acting with a green approach to marketing. When General Electric invests in wind power, it is engaging in green marketing. When General Motors invests in researching environmentally friendly technologies for the Chinese market, it is also engaged in green marketing.

Each of these examples illustrates conditions under which people or institutions have chosen to act in a manner that is environmentally friendly. Nevertheless, we can each think of situations in which people do not engage in green marketing. Many of us have been litterbugs, and most of us have on occasion failed to purchase environmentally sound products despite their availability. Similarly, we are aware of situations in which energy companies did not act in the best interests of the environment.

It is because the challenge to green marketing is so great that it is important to study this subject. Indeed, the purpose of this book is to help individuals make informed decisions about choices that influence the environment. As we progress, however, we will find that many green decisions are more complicated than they appear. Furthermore, the decision to use an environmentally friendly approach at one stage in a supply chain has environmental implications for another level of the supply chain. For example, compact fluorescent light bulbs use 25% of the energy and last 10 times longer than conventional bulbs, but the mercury in these bulbs complicates their disposal.[6]

In order for us to understand green marketing, it is first important to have an appreciation of marketing. The American Marketing Association defines **marketing** as “the activity, set of institutions, and processes for creating, communicating, delivering, and exchanging offerings that have value for customers, clients, partners, and society at large.”[7] This definition recognizes that marketing is an organizational function and set of activities undertaken to bring about exchanges of goods, services, or ideas between people. The definition recognizes that marketing is a philosophical orientation to the practice of doing business. This philosophical orientation emphasizes the satisfaction and value that customers, clients, partners, and society realize due to marketing action.

As marketing has evolved, individuals operating in various parts of the field have adopted alternative definitions of green marketing. Consumer researchers addressing green marketing have focused on the conditions that increase the potential for consumers to act in an ecologically responsible manner,[8] and they recognize marked variety among consumer interpretations of this responsibility.

Retailers and developers of green products emphasize product offerings that are environmentally friendly.[9] Thus, products such as organic vegetables, recycled paper, and phosphate-free detergents are referred to as green products. This definition of green marketing emphasizes product offerings that are not harmful to the environment, but it does not address the production processes employed to prepare the products.

Social marketing adopts a different vantage point and defines **green marketing** as the development and marketing of products designed to minimize negative effects on the physical environment. In contrast to the retailing perspective, the social orientation recognizes the pre- and postconsumption costs to the environment. Thus, automobile manufacturers attempt to raise production efficiency while simultaneously decreasing costs associated with disassembly and reuse after consumption.[10]

If we are to address the breadth of issues associated with an environmentally based approach to marketing, then it is essential to offer a definition that incorporates the logic of each of the orientations to green marketing.

We therefore define green marketing as the study of all efforts to consume, produce, distribute, promote, package, and reclaim products in a manner that is sensitive or responsive to ecological concerns. The inclusion of “all efforts to consume” recognizes that many entities are involved in green marketing. Green marketing is not limited to government or nongovernment organizations, nor is it solely an activity undertaken by consumers. Manufacturers, wholesalers, retailers, and services firms each has opportunities to contribute to green marketing. This definition also recognizes the need to consider the production, distribution, and reclamation of products as integrated components of the marketing effort. Efficiency at one stage of this process (e.g., distribution) may offer advantages in the channel, but the goal of green efforts is to limit the total ecological influence associated with consumption. Finally, green marketing must consider the promotional efforts employed to gain consumer support of ecologically friendly products.

We define **green marketing management** as the process of planning and executing the marketing mix to facilitate consumption, production, distribution, promotion, packaging, and product reclamation in a manner that is sensitive or responsive to ecological concerns. The management of green marketing activity continues to evolve as companies incorporate new thinking about climate change throughout their organizations. Initial green marketing efforts focused on the recycling of products such as aluminum cans and photocopier toner cartridges. Over time, firms have begun to consider ways to *modify inputs* to production that limit the influence of the products on the environment. For example, Staples reduced store operating overhead through centralized controls for lighting, heating, and cooling at its 1,500 stores. Staples saved $6 million over two years by controlling this production input into its value chain.[11] As this example illustrates, development is at the core of a green marketing approach. The study of green marketing reflects an interest in becoming more aware of ecological and sustainability issues and consistently working to achieve higher levels of sustainability.

Increasingly, firms are recognizing that outputs from the production process should be viewed under scrutiny of climate change as well. Savvy management recognizes that everything coming out of a production facility is a *product*, *by-product*, or *waste*.[12] Green products are recognized nationally or internationally through certification and eco-labeling. For example, the United States Environmental Protection Agency provides *Energy Star* labels for electronics and appliances that are environmentally friendly. In the United States, personal computers account for 2% of annual electricity consumption. The EPA's new Energy Star labels require computers possessing the label to be 65% more efficient than conventional products. Adoption of these new personal computers will enable industry to save $1.2 billion over the life of the products.[13]

Firms also are viewing by-products of production in novel ways. Shell Oil is pumping carbon dioxide, a refinery by-product, into 500 Dutch greenhouses. This action reduces emissions by 325,000 tons per year and saves greenhouses from having to burn millions of cubic meters of gas needed to produce carbon dioxide.[14]

The pursuit of waste reduction is a third aspect of the production process undergoing a green transformation. Companies recognize that efforts to constrain waste influence profitability. For example, Fetzer Vineyards took an aggressive approach when it set a goal of zero waste.[15] Fetzer has a companywide waste reduction program that involves recycling of bottles, cardboard, plastic, aluminum, paper, antifreeze, waste oil, fluorescent tubes, and glass. The firm has reduced the amount of waste it sends to landfills by 96% since 1990.

Each of these aforementioned activities represents a form of green marketing employed at various points in the supply chain. Increasingly, however, organizations recognize the interdependencies operating throughout an economy. Efforts to control costs and enhance productivity at one stage cannot occur at the expense of other stages.

The United Nations is an organization that has led the way in this recognition of the multiple interdependencies among nature, economy, and society. In December

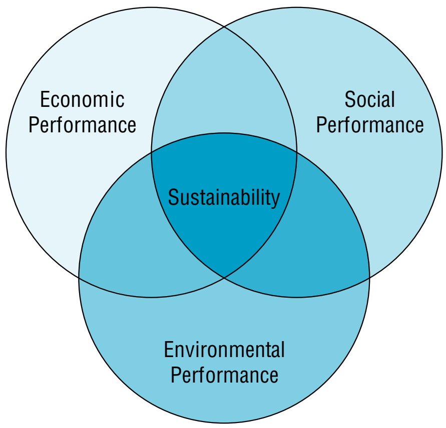
1983, the United Nations commissioned research on development and the environment. The 1987 report summarizing this research defined **sustainability** as development that "meets the needs of the present without compromising the ability of future generations to meet their own needs."[16] Importantly, this edict recognizes that there are at any time limits on the ability of the biosphere to absorb human activity. There are also limits imposed by the state of technology and social organizations, but both of these factors can be managed and improved to foster economic growth.

Since the publication of this report by the United Nations, industry practice has embraced the notion that sustainability derives from focusing on the **triple bottom line**.[17] Figure 1-2 outlines the pursuit of sustainability. The sustainable organization must generate acceptable levels of economic performance, or it will not survive. It must also nurture social performance in its interaction with customers, suppliers, consumers, and other interest groups. Survival is also contingent on the firm's ability to achieve acceptable levels of environmental performance throughout the supply cycle from raw material procurement to postconsumption disposal. Figure 1-2 illustrates that these alternative bottom lines are not always compatible. For example, the firm can raise its short-term financial performance by ignoring the costs of waste produced in its manufacturing facilities. The sustainable organization, however, simultaneously works toward achieving heightened performance in the economic, social, and environmental realms.

EnXco and its operations in Minnesota illustrate a developing effort to achieve sustainability through triple bottom line performance. EnXco and the landowners benefit financially from the wind farm, and they must develop and maintain working relationships to ensure financial performance. As they nurture these financially rewarding relationships, they are also contributing markedly to the environment by using renewable sources of energy.

Sustainability initiatives are being developed to address a host of situations in which efforts are focused on current development without repercussions for future generations. The agricultural, manufacturing, and retailing sectors offer different examples of sustainability. In the agricultural sector, Costa Rica is making progress

FIG. 1-2
Sustainability and the Triple Bottom Line



Source: *Craig R. Carter and Dale S. Rogers, "A Framework of Sustainable Supply Chain Management: Moving Toward New Theory,"* International Journal of Physical Distribution & Logistics Management *38 (5, 2008): 360–387. Copyright 2008 by EMERALD GROUP PUBLISHING LIMITED. Reproduced with permission of EMERALD GROUP PUBLISHING LIMITED in the format Textbook via Copyright Clearance Center.*

toward production of sustainable bananas. Small-scale producers grow bananas without heavy agrochemical inputs. These locally controlled agricultural systems are supportive of local people, economies, and cultures.[18] In the manufacturing sector, the U.S. Department of Energy's Office of Industrial Technologies and the Aluminum Association have formed a partnership to improve technology competitiveness through collaborative planning and research. This private–public partnership seeks to make the industry profitable and ecologically sustainable. In the retail sector, Wal-mart has publicly committed to reducing packaging in its global supply chain by 5% by 2013.[19] As part of its effort to gain logistical sustainability, the firm developed a packaging scorecard to monitor supplier performance.

Together, these examples from a broad range of industries underscore the common interest in establishing green marketing initiatives. Firms may be hesitant to recognize the long-term merits of green marketing, but they cannot deny the short-run financial incentives established by regulators, trading partners, and consumers.

B. Why study Green Marketing?

Green marketing has positive influences on multiple participants in the economy. The *environment*, *developing economies*, *consumers*, *corporate strategy*, *the product*, *production processes*, and *supply chain* benefit from green marketing. Consider first the environmental benefits from green marketing.

Environmental Benefits The obvious benefactor of green marketing is the environment. Chapter 3 of this book characterizes current conditions and trends in climate change, air, water, and soil conservation. Green marketing can have an influence on climate change in several substantial ways. Fossil fuel consumption is a major source of greenhouse gases associated with climate change. Two leading sources of climate change are the burning of coal for electricity and the burning of gasoline for automobile transportation. Green marketing initiatives focused on product development strategies reduce the need to rely on these forms of energy. For example, new appliances are designed with fuel efficiencies that markedly reduce energy consumption.

It is important to recognize that the consumer must incorporate concern for the environment with multiple other considerations. For example, potential consumers of the new Chevrolet Volt must reconcile the zero-fossil fuel consumption with the price differential for this car versus less expensive cars that produce more carbon dioxide. Green marketing initiatives contribute to the environment by incorporating green marketing strategies into superior value propositions for consumers.

Green marketing reduces *air pollution* in multiple ways. For example, New York Mayor Bloomberg has called for the complete replacement of taxis with hybrid cars by 2012. These hybrids will reduce New York City carbon dioxide emissions by 215,000 tons while doubling cab gas mileage. This efficiency means fewer emissions and lower air pollution. Similarly, agricultural run-off of fertilizer is a significant source of *water pollution*, but farming methods that eliminate inorganic fertilization reduce the amount of excess nutrients contaminating groundwater.[20] Soil pollution is a rising concern due in part to contaminants discarded in personal technological components. The need for remediation of pollution without removing soil is an increasingly important issue in industry.[21]

A related consequence of environmental change is the number of *endangered species*. Today there are more than 16,000 animal and plant species on endangered lists.[22] Their numbers increase every year due to deforestation, development, and climate change. Efforts to develop and consume environmentally friendly products, however, offer the potential to reduce the number of species on the endangered list.

Developing Economies The term *developing economies* refers to nations that have a relatively low gross domestic product (GDP) per capita. The low income, underdeveloped assets, and economic vulnerability endemic to these economies results in high dependence on the agricultural sector. Inhabitants in these markets, however, face increased exposure to drought, intense storms, floods, and environmental stress that limits the ability to enhance quality of life. Research performed by the United Nations indicates that inhabitants of these countries are much more likely to be affected by natural disasters than inhabitants in high-income countries.[23] Climate change limits agricultural productivity, increases water stress, raises sea levels, negatively transforms ecosystems, and thwarts human health. These factors do not operate in isolation; interactively, they contribute to hunger and poverty in developing markets. Green marketing and production stand to reduce climate change and consequently limit hunger and poverty.

As these developing economies progress, there will be increasing pressure on urban areas. More than half of world's population currently lives in urban areas, and the number is expected to increase over the next few decades. For example, current estimates forecast that nearly 300 million people will migrate to Chinese cities over the next 20 years.[24] Since the consumption of resources is a global issue, the extent to which consumers and industries adopt green marketing practices influences the global environment. Marketing of green technologies enables firms operating in these countries to leapfrog antiquated operations with efficient and environmentally friendly designs. For example, Cuba is upgrading analog telecommunications products with wireless phone systems and fiber-optic technologies.[25] New green technologies enable such economies to bypass antiquated technologies previously employed in mature-market economies.

Consumer Benefits Consumers benefit in several important ways through green marketing. These benefits often influence consumer decision making, and consumers will vary in the extent to which they value these benefits. Initially, consumers benefit from the knowledge that they are doing their part to reduce climate change. These consumers are likely to favor corporate efforts to reduce pollution over efforts to raise corporate profitability.[26] A nascent industry is developing that enables consumers to offset adverse effects of their action. For example, Terrapass enables consumers to purchase carbon offsets for their auto, air, or home emissions.[27]

Consumers also value the opportunity to be associated with environmentally friendly products and organizations.[28] For instance, the Body Shop's retail ambience prompts customers to associate their consumption with an environmentally friendly organization.[29]

Although green product initiatives may independently convince some consumers to buy, evidence suggests that ecologically based products alone will not be substantial drivers of sales. Consumers want ecologically friendly products without sacrificing other valuable features. Current marketing efforts, however, enable some firms to offer green products that provide initial product savings, lower energy costs, and access to new technologies.[30] For example, the LCD monitors marketed by Dell offer substantial savings over the CRT monitors currently being phased out of the product line. These new monitors are less expensive and employ the more recent computer display technology. The LCD monitors are also more energy efficient over time. Although green products in every industry will not enjoy the technological benefits similar to those for PC monitors, ecological benefits of products will augment or complement other product features valued by consumers.

Strategic Benefits Managers of corporate strategy realize multiple benefits from a green approach to marketing. Companies that incorporate ecological consciousness into their mission statements and strategy enhance their images among consumers, employees, investors, insurers, and the general public. As previously outlined, some *consumers* have strong affinities toward green products, and approaching the market with an ecological focus enhances image of the brand among these consumers.

Corporate initiatives that emphasize a green orientation to markets have several implications for the *workforce*.[31] First, potential employees may decide whether to interview with a firm based on the company's environmental image. When British Petroleum (BP) launched a new campaign labeled Beyond Petroleum, the company initially received substantial criticism based on the small percentage of revenues derived from industries other than gas and oil. Over time, however, BP was highly successful in establishing its position as an environmentally conscious firm. One notable outcome of this positioning is BP's recognition that attracting potential engineers to the firm is no longer a problem for the company.

The image further influences employee action after hiring. General Electric, for instance, engages employees to come up with novel solutions for the environment. The solutions include energy-efficient appliances, compact fluorescent lighting, and wind turbine power. Genzyme, a biotechnology firm, recently moved into a state-of-the-art green building complete with all-glass facades, 18 gardens, and conversational seating areas. After the firm moved into the facility, employees reported higher levels of job satisfaction. Moreover, employees reported that their increased sense of pride about Genzyme's commitment to the environment was their number one reason behind the new sense of productivity. Thus, enhanced corporate image augments recruiting, employee engagement in the firm's activities, and productivity.

Green marketing also has implications for *financial markets*. As fuel costs rise and greenhouse gas emissions escalate, investors are flocking to companies that can help alleviate these problems.[32] Investors are attracted to specialized green funds that feature portfolios of stocks from environmentally conscious firms. Alternatively, some market participants are investing in firms engaged in the development of alternative forms of energy.

Green marketing strategies enable firms to chart continued improvement in environmental performance. *Fortune* magazine is partnering with London-based AccountAbility and CSR Network to rank the 100 largest global corporations by the quality of their commitment to social and environmental goals.[33] Firm scores are based on the number of controversies involving the company, progress toward limiting carbon outputs, and stakeholder involvement. Firms that take an aggressive approach toward green marketing and follow-up on this effort can illustrate continuous improvement in environmental performance.

Corporate efforts to chart environmental performance enable companies to gain understanding of how the firm affects the environment as well as how the environment affects the firm.[34] Risk associated with finance, strategy, and operations are all affected by the firm's efforts to constrain its influence on the environment. Copious tracking of ecological performance provides the opportunity to manage the business risk stemming from environmental problems.

Although firms are generally not required to report assessment of green marketing activity, public reporting of these efforts offers three advantages.[35] First, these reports make companies more disciplined about reporting, which thereby reduces environmental risk. Second, this reporting puts all business practices under scrutiny and therefore helps identify cost savings and new business opportunities. Finally, public reporting of green marketing efforts clarifies corporate activity so that stakeholders begin to view the firm as a partner on the road to sustainable development. Consumers, employees, stockholders, insurers, and the general public become better informed about the environmental efforts of the firm when the firm reports green marketing efforts.

Green marketing also provides a strategic avenue that enables firms to develop alliances with interest groups outside the organization. Green marketing firms establish alliances with government, local communities, nongovernment organizations (NGOs), industry experts, and competitors.[36] DuPont has established an alliance with the Canadian government under which the firm agrees to collaborate with stakeholders, build sustainable communities, eliminate waste, and develop cleaner technologies.[37] The Canadian government is taking measures to recognize companies that demonstrate high levels of performance and adherence to compliance requirements. In addition, the government provides incentives to advance corporate social responsibility and seeks to streamline legislative requirements for innovations. Similarly, Swedish-based Lundin Mining is working with local communities in the Congo to increase local capacity and improve living conditions for the communities.[38] The drilling of 10 new freshwater wells is one aspect of Lundin's commitment to local communities. The actions taken at the federal level by DuPont and the local level by Lundin provide the opportunity for both firms to develop sustainable manufacturing in the markets they serve.

NGOs are self-governing and private not-for-profit organizations designed to improve the quality of life for disadvantaged people.[39] Although business firms' interactions with these entities have historically been contentious, recent activity with NGOs indicates opportunities to forge strong working relationships. The action of McDonald's illustrates how corporations can work with NGOs. McDonald's collaborated with the Environmental Defense Fund to phase out clamshell boxes because the manufacturing process used ozone-destroying chlorofluorocarbons (CFCs).[40] Importantly, these efforts frame perceptions of a firm's action and enable firms to establish ongoing commitments to the environment. The McDonalds–Environmental Defense Fund alliance resulted in the restaurateur purchasing more than $1 billion in recycled materials between 1990 and 1995—five years before schedule.

The McDonald's case underscores two additional strategic benefits of green marketing. Efforts to engage in environmentally conscious activity enable firms to improve their competitive positions and redefine markets. The competitive position changes in the market due to consumer observation and recognition of green marketing activity such as the recycling efforts of McDonald's. In addition, some segments of the investment community avoid investing in corporations associated with environmental damage.[41] Thus, reputations in consumer and financial markets benefit from green marketing activity.

Green marketing also enables companies to redefine markets. General Electric has committed to the need for cleaner, more efficient sources of energy, reduced emissions, and abundant sources of clean water. This commitment resonates throughout GE's product line and enables channel partners to refine markets. Boeing, a purchaser of GE's GEnx jet engines, markets its commercial aircraft as being quieter and more fuel-efficient and producing fewer emissions than its chief competitor, Airbus.[42]

Product Benefits In this section, we distinguish product from process benefits. Product benefits refer to components introduced into production outputs or services designed to benefit the consumer, whereas process benefits refer to tools, devices, and knowledge in throughput technology designed to facilitate manufacturing and logistics.[43] For example, a hybrid engine is a product innovation, whereas a just-in-time inventory system is a process innovation.

It is critical to recognize that the incorporation of product benefits must reflect genuine value for the relevant consuming public.[44] Thus, green products must improve environmental quality and customer satisfaction, as few markets will solely value enhancements to product quality. For example, Westinghouse developed an energy-efficient refrigerator in 1994 that was 30% more efficient than U.S. Department of Energy standards. Despite receiving a $30 million government award for consumer rebates, the elimination of CFC in the coolant system did not offset the $100–$150 premium associated with the new product.[45]

Green products have greater likelihood of succeeding, however, when environmental benefits augment consumer value assessments. Most value assessments—regardless of whether the product is green—center on price, quality, and performance. Green attributes rarely stand on their own and must complement other benefits to increase consumer value and ultimately consumption.[46] Rechargeable batteries offer convenience benefits that make them more attractive than their single-use counterparts. The reduced landfill benefit augments the convenience benefit to consumers. Although the initial price of rechargeable batteries exceeds the cost of the disposable units, many consumers understand the complete value offered by the multiple-use batteries.

The battery example underscores another benefit to green marketing, and that benefit lies in considering the value of the product throughout its life rather than the absolute initial cost. Auto purchasers that consider the relative lifetime operating costs of a hybrid versus internal combustion engine note marked disparities across brands. To the average driver that logs 15,000 miles per year and spends $2.87 per gallon of gas, it takes more than nine years to break even with the Honda Accord Hybrid compared with a similar gasoline-powered Accord. By contrast, driving the same mileage and assuming gasoline costs $4 a gallon, the Lexus GS450h four-door sedan hybrid breaks even immediately with the similar gasoline-powered Lexus GS430.[47] Increased fuel prices, longer driving distances, and reduced cost disparities with models using conventional engines are likely taken into consideration when the buyer evaluates the lifetime cost of the hybrid auto.

Greener products in many instances enable manufacturers to differentiate their products while also enabling consumers to take advantage of the latest technological developments. The Mini Cooper D, for instance, is distinguished from other products in its class by the amazing fuel efficiency of 60 mpg.[48] The fuel performance of this auto complements the styling and performance features that attract consumers to the Cooper.

In addition, green marketing prompts manufacturers to reassess the product packaging. Packaging protects products during shipping, enhances product desirability, and offers convenience in product handling. Marketers are pursuing ways to achieve these goals with less use of plastics and other petrochemical products. Procter & Gamble, for example, has removed the outside carton for its Sure and Secret deodorants. Elimination of this packaging decreases the amount of solid waste produced by consumers.[49] An important factor related to packaging is the cost of disposal of the product after consumption. In the personal computer market, Dell has developed a program that enables customers to recycle any PC through Dell. The company collects the item at no cost to the consumer and then reuses it through its charity partners such as Goodwill Industries, Inc., or recycles it through its network of electronics recyclers.[50]

Production Process Benefits Production processes focus on organizational efforts to produce the highest-quality products at the lowest possible cost. Process benefits accrue for handling of products, by-products, and waste. The materials costs associated with sustainable manufacturing techniques can be reduced in a number of ways. Mercer Color, for example, began using vegetable-based inks in 1990. Over time, the firm experienced a 25% reduction in ink costs as well as a more than 50% reduction in press washing costs.[51] Material costs can also be reduced via just-in-time (JIT) inventory procedures.[52] JIT enables companies to carry optimal levels of inventory that save space and energy.

By-product considerations also serve as incentives to engage in green production. The coal industry has developed procedures that modify the output of steam from power plants. This by-product is then is sent to a colocated ethanol plant. The result of this by-product modification is reduced greenhouse gas emissions along with decreases in mercury and nitrous oxide emissions. Fuel costs are lowered, and the plant earns revenue from hydrochloric acid sales and from sales of low-pressure steam to the ethanol plant.[53]

Advancements in the pharmaceutical industry illustrate efforts to limit waste. Chemists at Brock University have designed waste modification strategies that enable companies to process formerly hazardous waste into benign chemicals that can be disposed of in sewer systems.[54] This team has also transformed pharmaceutical by-products into analgesics, anesthetics, and antitumor drugs that treat cancer, infection, and diabetes.

Supply-chain Benefits Green marketing influences relationships among the firms that make up the channel from raw material mining to consumption. Green strategies that seek to eliminate waste in the supply chain result in firms analyzing truck loading and route planning in the delivery process.[55] Routing that seeks to eliminate fuel costs can maximize truck capacity utilization and improve customer service.

Increasingly, partners in the supply chain seek the ability to trace products throughout the supply chain. European Union law refers to traceability as "the ability to trace and follow food feed, or food-producing animal or substance intended to be or expected to be incorporated into food or feed, through all stages of production, processing and distribution."[56] Companies that adopt sustainable or green strategies for the production and distribution of food products provide a level of insurance of product quality. The ability to trace components throughout the distribution process is not limited to food, as the automotive and computing industries have also adopted forms of traceability.

C. Groups That Need to Understand Green Marketing

Green marketing is increasingly an important issue for most entities involved in marketing whether they are buyers, sellers, or regulators of an industry.[57] Consider how the following market participants can benefit from understanding green markets:

Consumers. Consumers that understand green marketing have the opportunity to reduce their personal influences on the environment. A growing number of consumers are particularly interested in ways to eliminate their negative influence on the environment, and green marketing efforts are focused on this activity. Furthermore, consumers often reap ancillary financial benefits from product offerings that are designed to be environmentally friendly. For example, the consumer that purchases a hybrid automobile has a heightened confidence that her means of transportation offers a smaller influence on the environment relative to alternative vehicles. Also, hybrid engines are twice as efficient as their conventional counterparts and get 30% to 60% better gas mileage.[58]

Governments. Federal, state, and local governments benefit in a number of ways due to green marketing. Just as consumers sometimes can lower expenditure costs and limit influences on the environment, governments similarly benefit from green procurement programs. For example, the city of Amsterdam uses cold lake water to air condition homes for more than 700,000 inhabitants. The program saves nearly $300,000 a year in electricity costs and uses just one-tenth of the power of a conventional cooling system.[59] In addition, governments that understand the market potential and limits of green marketing initiatives are in better positions to develop regulation strategies that serve the needs of society and industry.

Companies with established environmental reputations. Companies that have been singled out as standard bearers for green marketing expect significant scrutiny and publicity from environmentally questionable activity. For example, the Body Shop has a stellar record as a green-oriented firm, but it can anticipate substantial criticism if it fails to keep this orientation in all markets it serves. By contrast, companies such as Exxon that have been singled out for nefarious acts against the environment must address green marketing issues if they seek to change their reputations.

Companies highly dependent on scarce human capital. *Services* refers to intangible activities that organizations provide to consumers. In the United States, services account for more than 84% of the employment in the economy.[60] The intangible services are provided through human capital, and firms that operate in this sector of the economy must increasingly incorporate green marketing into their product offerings. In Las Vegas, for example, dentists are providing services to hotel and casino employees via mobile vans situated near the entertainment district.[61] The proximity of these facilities reduces fuel emissions by eliminating the need for employees to travel to the dentist. Consumer dental hygiene and worker productivity benefit from this eco-conscious service design.

Companies with high brand exposure. In their annual reports on the best 100 global brands, *Business Week* and Interbrands provide annual estimate of the earnings attributable to the brand.[62] As brands increase in appeal, they simultaneously increase the amount of scrutiny they incur. In contrast to reports of brands that have little brand equity, stories that indicate the activity of brands with high brand equity are likely to be viewed as more newsworthy. For example, newspaper articles critical of the processing of chickens will be of greater interest to the public when they refer to KFC rather than to any other brand in this industry. Firms with strong brand equity must address green marketing to limit the scrutiny they experience.

Companies with low market power. Companies that rely on other firms for substantial amounts of output must attend to the green marketing constraints leveled by the supplier. General Mills, one of the largest companies in the packaged grocery business, recently modified the shape of Hamburger Helper on the request of Wal-mart.[63] The retailer pointed out that the once-curly noodles in Hamburger Helper should be straight. This ecologically driven product modification reduced thousands of pounds of packaging and lowered the product's price. As buyers become more attuned to sustainability, suppliers reliant on these buyers must also increase their understanding of green marketing.

Companies operating in highly regulated industries. Government implements regulations to control the manner in which an industry operates. Industries that employ hazardous materials (e.g., the chemical industry) are subject to substantial regulations, and the increasing interest in green marketing fuels the need for industrial standards. Similarly, utilities, automobile producers, and airlines must address multiple stringent regulations. The electronics industries face increased scrutiny in the European Union due to "takeback laws" that require manufacturers to handle product disposal after consumer usage. In each of these industries, firms that take a proactive stance toward environmental regulation can implement regulations before adherence is required.[64]

Companies dependent on natural resources. Industries that are highly reliant on natural resources recognize the absolute limits in the availability of natural resources. These industries include oil, fish, and forestry. Natural production limits demand that firms understand eco-marketing activity that can conserve scarce resources.

Summary

Introduction to Green Marketing

The purpose of this chapter has been to introduce the study of green marketing. We defined green marketing as the study of all efforts to consume, produce, distribute, promote, package, and reclaim products in a manner that is sensitive or responsive to ecological concerns. We described an incremental process by firms that evolve in their efforts to pursue green marketing, and we subsequently defined sustainability as development that meets the needs of the present without compromising the ability of future generations to meet their own needs. Firms pursue sustainability via a triple bottom line perspective focused on achieving economic, relational, and ecological outcomes.

Why Study Green Marketing?

Beyond the environmental benefits that can accrue from green marketing, several sectors of the global economy benefit from green marketing. Emerging economies have potential to curb hunger and poverty by engaging in green marketing. Consumer welfare can benefit, and, similarly, corporate strategy can be enhanced by incorporating green marketing practices. Product development, production, and the supply chain all have potential to achieve higher levels of triple bottom line performance via green marketing.

Groups That Need to Understand Green Marketing

In addition to the need for consumers and government to understand green marketing, we characterized multiple types of firms that need to understand it. Companies with established environmental reputations and brand exposure need to understand the topic to retain their reputations and brand identities. Firms that are highly dependent on scarce human capital and those dependent on natural resources follow green marketing issues to ensure the productive use of these assets. Companies with low market power can develop competitive advantages, whereas companies in highly regulated industries that are proactive in green marketing initiatives can implement regulations and standards before they are required to do so.

Keywords

green marketing, 5
green marketing management, 6
marketing, 5
sustainability, 7
triple bottom line, 7

Questions

1. Is green marketing something done solely by corporations, or can anyone engage in green marketing?
2. Think about a local grocery store operating in your community. To what extent does it consume, produce, distribute, promote, package, and reclaim products in a manner that is sensitive or responsive to ecological concerns?
3. An entrepreneur claims not to focus on sustainability because attention to such matters results in poorer financial performance. How might one address such a statement?
4. Provide some examples of how consumers might act in a sustainable manner that meets the needs of the present without compromising the ability of future generations to meet their needs. How does this perspective influence how people shop, consume, and dispose of the things they buy?
5. Provide examples of companies that have acted in a sustainable manner whereby they meet the needs of the present without compromising the ability of future generations?
6. How might individuals and companies based in emerging economies benefit from the study of green marketing?
7. How does the study of corporate strategy benefit from incorporating a green marketing perspective?
8. If green marketing draws attention to the way things are consumed, then how is the study of green marketing relevant to production and supply chains?
9. Why would a company like McDonald's be concerned about green marketing?
10. Some companies have well-established reputations about their concerns for the environment. Why would such companies be concerned about green marketing issues?

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