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Made with Renewable Energy: How and Why Companies are Labeling Consumer Products

Deborah Baker Brannan, Jenny Heeter, and Lori Bird

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List of Acronyms and Abbreviations

BD	Becton, Dickinson and Company
CRL	carbon reduction label
DOE	U.S. Department of Energy
EERE	Energy Efficiency and Renewable Energy
EPA	U.S. Environmental Protection Agency
FTC	Federal Trade Commission
GWh	gigawatt-hour
kW	kilowatt
kWh	kilowatt-hour
NREL	National Renewable Energy Laboratory
QR	quick response
REC	renewable energy certificate
USDA	U.S. Department of Agriculture

Executive Summary

Green marketing—a marketing strategy highlighting the environmental attributes of a product—dates back to the 1970s but began to flourish in the early 1990s. More recently, a number of companies using renewable energy in the manufacture of products have begun to communicate renewable energy use directly on product packaging, relying either on a logo or some combination of text and imagery. This report discusses the experience of companies that communicate to consumers that products are "made with renewable energy." Corporate commitments to using renewable energy, and communicating that commitment on product packaging and through other means, could play an important role in educating consumers about the availability and feasibility of using renewable energy as an alternative energy source.

Researchers identified nearly 50 companies that communicate renewable energy use on product packaging. Representatives from 20 companies were interviewed and asked to discuss their experiences marketing products produced with renewable energy. Companies take a variety of approaches to communicating to consumers that their products are made with renewable energy. Some companies are labeling on-product, while others are using their websites, social media, and other promotions. On-product labeling can include use of a logo or use of imagery and statements, such as a picture of a wind turbine and note that the product is made with renewable energy.

Why are companies promoting the use of renewable energy on products? The primary motivation identified was to communicate to the consumer about the company's commitment to renewable energy and, in doing so, enhance the image of the brand. Other motivations included differentiating a product, targeting environmentally conscious consumers, and to a lesser degree, following an existing industry trend and earning a price premium.

What challenges do companies face when making on-product claims about renewable energy? One of the primary challenges identified was the limited and competing uses of physical space on a product ("product real estate"). Other challenges included determining the appropriate language and content to include and knowing whether consumers will recognize and understand renewable energy messages. Costs associated with modifying packaging, costs of certification and program requirements for use of a third-party logo, and international product marketing were identified as minor challenges.

The future growth rate of this new market for labeling products with renewable energy claims remains to be seen. While some lessons can be learned from how eco-products have been marketed historically, products that are made with renewable energy are unique in that they are identical to the comparable conventional product in quality and performance; only the energy used to manufacture the product is different.

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1 Introduction

Green marketing—a marketing strategy highlighting the environmental attributes of a product, often through the use of labels or logos—dates back to the 1970s. It did not proliferate until the 1990s (Rex and Baumann 2007), however, when extensive market research identified a rapidly growing group of consumers with a heightened concern for the environment. Consumers expressed not only a preference for green products but also a willingness to pay a premium for such products (Peattie and Crane 2005). The response was a surge in green marketing that lasted through the early 1990s. By the mid-1990s, however, the green marketing rush had waned. The market for green products had remained relatively weak due to the apparent gap between environmental concern and sales suggested by consumer surveys to actual sales achieved (Rex and Baumann 2007; Peattie and Crane 2005).

Although green products remain a niche market, more than 80% of consumers continue to express interest in protecting the environment, even though those levels have declined slightly in recent years (Natural Marketing Institute 2011). As such, companies continue to pursue new ways of communicating their actions to protect the environment to consumers. Providing information on the type of energy used to produce a product—specifically whether it is made with renewable energy—is an emerging strategy. Survey data suggest that consumers view renewable energy favorably and prefer products made with renewable energy sources. Surveys conducted by the Natural Marketing Institute, for example, found that 80% of consumers in 2010 indicated that they care about the use of renewable energy (Natural Marketing Institute 2011). Additionally, a recent poll conducted by Vestas and TNS Gallup found that 65% of consumers worldwide prefer products that are made with wind energy (Vestas and TNS Gallup 2011).

A number of companies using renewable energy in the manufacture of products communicate this directly on product packaging, relying either on a logo or on some combination of text and imagery (e.g., wind turbines). Other companies have refrained from using on-product messaging and rely on other types of marketing collateral to communicate their use of renewable energy, typically via their websites. In general, communicating the renewable energy content of products differs from some earlier green marketing efforts that often focused on modifications made to the products themselves. One reason the adoption of green products has been limited is because green products often do not compete with comparable conventional products on important dimensions, such as price, quality, or performance (Gallastegui 2002). Products that use less material or recycled material, for example, could be viewed as inferior or less effective. In contrast, the use of renewable energy in the manufacture of a product has no impact on the quality of the product itself. Therefore, previous experience with green marketing might not be entirely transferable to this new strategy of communicating the renewable energy used in manufacturing a product.

This report discusses the experience of companies that communicate to consumers that products are "made with renewable energy." Representatives from 20 companies were interviewed and asked to discuss their experiences marketing products produced using renewable energy. Interview participants were asked to discuss motivations for making on-product claims and to describe their primary challenges in labeling products with renewable energy use. The small number of interviews would not have provided robust quantitative data; therefore, interviews focused on gathering qualitative responses. The first half of this report provides an overview of

the type of companies that have labeled products or advertised them as being made with renewable energy. It also highlights the avenues companies use to describe their use of renewable energy. What follows is a discussion of the motivations for making on-product claims about the use of renewable energy and the challenges in doing so, based on insights learned through the interview process.

2 Experience Offering Products Made with Renewable Energy

The environmental attributes of a product increasingly factor into the consumer's purchasing decision—including the type of energy used to manufacture the product. A recent global consumer survey revealed that 65% of consumers worldwide would prefer a product made with wind energy (Vestas and TNS Gallup 2011). Companies have begun offering products that are made with renewable energy. Highlighting the energy source used to make the product allows a company to differentiate its product, communicate its environmental activities and sustainability ethic, and enhance the image of the brand. For the renewable energy industry, corporate interest in promoting the use of renewable energy in the manufacture of products helps educate consumers about the benefits of renewable energy and demonstrate that it is an option for electricity generation.

Although there is no comprehensive database identifying all companies in the United States that advertise that their products are made with renewable energy, researchers identified nearly 50 companies that do so. Thirty-eight companies are members of the Green-e Marketplace[1] and at least nine companies make independent claims of using renewable energy: Aveda, Boulder Canyon Chips, Drew's (salad dressing), Kettle Brand (potato chips), Lundberg Family Farms, New Belgium Brewing, Kraft, SC Johnson, and WhiteWave Foods. Appendix A provides a sample of these companies, which range in size from small companies to large multinational corporations and cover a wide spectrum of industries. Some companies are in the business-to-business sector and others are in the business-to-consumer sector.

The extent to which companies market the use of renewable energy in the manufacturing of products varies considerably. Some companies use renewable energy and make claims on one product, and others label a single line or multiple product lines. Of SC Johnson's Ziploc product line, for example, only the Ziploc Evolve carries a statement that the product is "made with wind energy." Other companies advertise their use of renewable energy more broadly and apply it to an entire product line. Cascades Tissue Group's North River brand, for example—which includes toilet paper, hand towels, and other tissue products—all carry the Green-e logo. The oldest and most well-known third-party certified renewable energy logo in the United States is the Green-e logo. Companies using 100% renewable energy for their manufacturing facilities, as well as a minimum amount for their entire company, are eligible to use the Green-e Marketplace logo, though not all companies choose to do so.[2] Fifty-one organizations participated in the Green-e Marketplace program at some point in 2010, with 500 products achieving certification and carrying the Green-e logo (Center for Resource Solutions 2010). For more information on Green-e, refer to Text Box 1. Additionally, some companies use labels or other means to

[1] Members of the Green-e Marketplace include companies in industries such as food and beverage, health and beauty, printing and packaging, manufacturing, media and communications, Internet and hosting, home and office, art, life science, events, and non-profit. http://www.green-e.org/base/pl_products?dd_74=1&test=y. Accessed January 9, 2012.

[2] Renewable energy can be from onsite generation or through the purchase of Green-e Energy certified renewable energy certificates (RECs). The minimum renewable energy use for the company is based on a sliding scale depending on the company's annual electricity use. See http://www.green-e.org/getcert_bus_howto.shtml for more information.

advertise that all of their products are made using renewable energy. For example, all Intelligent Nutrients health and beauty products carry the Green-e logo.

Companies in both business-to-business and business-to-consumer sectors have communicated their use of renewable energy on specific product lines or through a broader corporate branding initiative. Companies in the business-to-business sector have a tendency to use renewable energy labeling for a specific product or product line. For example, Cascades Tissue Group advertises its use of renewable energy as part of its marketing strategy for the North River brand of tissue products, which is sold exclusively to commercial and industrial customers. Some companies, however, are taking a corporate branding approach. For example, BD (Becton, Dickinson and Company, a medical technology company) has incorporated the use of logos to convey its use of renewable energy into its corporate brand and anticipates extensive use of a renewable energy product logo in the years ahead.

The majority of products made with renewable energy are designed to appeal to the environmentally conscious consumer, such that being "made with renewable energy" simply adds to the image of the product, product line, or corporate brand. The Ziploc Evolve plastic bag, for example, uses 25% less plastic than comparable products, in addition to being manufactured partially using wind energy. Among food products, "natural" food products are more likely to be labeled as being made with renewable energy. WhiteWave Foods, for example, advertises its involvement with renewable energy on Silk and Horizon Organics products but does not include on-product messaging on its International Delight products—which are not "natural" food products—even though International Delight products also are made using renewable energy. The International Delight website does include information about renewable energy use.

Some products and companies have neither a natural connection to the environmental consumer or the ability to easily integrate onsite renewable generation facilities. For example, BD purchases 100% of its electricity for one of its manufacturing facilities through a utility green power program and expects to label products, such as hypodermic needles, in the near future.

Some companies do not sell any products and instead provide services, including services that do not have a natural connection to the environmental consumer. HostPapa offers Internet hosting services, for example, and iMoveGreen and iStoreGreen provide moving and storage services. These companies tend to use renewable energy to brand themselves as being committed to renewable energy and environmental sustainability and, as a result, appeal to the environmentally conscious consumer.

3 Communicating the Use of Renewable Energy

Companies take a variety of approaches for communicating to consumers that their products are made with renewable energy. The traditional method to highlight the use of renewable energy in the manufacturing of a product is to show the information directly on the product or product packaging. "Packaging is a real and tangible way to engage consumers," said Julie Berling, director of brand advocacy for GNP Company. GNP Company sells premium chicken products and, according to Bering, on-product messaging is important because "It's really the first introduction consumers have with our brand, and if they like what they see, they're more likely to try it" (Berling 2011).

On-product messaging has its challenges, however. The limited real estate available on product packaging can make it difficult to incorporate renewable energy logos, imagery, or information on the package. Aside from logistical complications, on-product messaging faces other challenges. For one, on-product messaging might not be effective. "People are busy, and may not be paying attention" (Berling 2011). Consumers also might be hesitant to trust on-product messaging due to a growing concern over "green washing." For these reasons, some companies have avoided on-product messaging altogether. The beauty product company Aveda, for example, uses some on-product messaging but also advertises its commitment to renewable energy through outlets including its website (Figure 1), Facebook, salons, and stores.

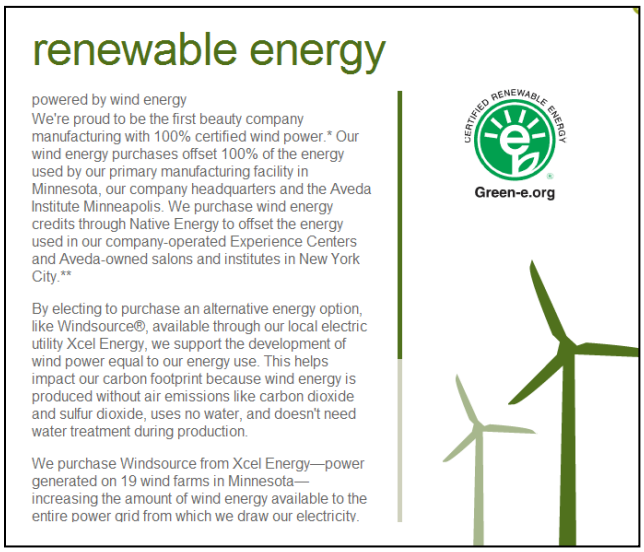

Figure 1. Aveda's website content on renewable energy

Source: Aveda Corporation

3.1 On-Product Messaging

There are two classes of on-product messaging: (1) imagery and statements and (2) logos. In the first category, companies have opted to use imagery (primarily of wind turbines), which generally is accompanied by a statement describing the company's involvement with renewable energy. Strathmore Artists Windpower Watercolor paper features a wind turbine on the cover of

the package as well as a description of the company's renewable energy use on the inside cover (Figure 2).

Companies vary in the amount of information that accompanies imagery on products. Some companies include a one-sentence statement and others include entire paragraphs. Kettle Brand, for example, uses the statement "And they're backed by a commitment to sustainability like wind power, solar power, green building, and biodiesel," which is accompanied by an image of the sun. Conversely, WhiteWave Food's Silk soymilk uses most of the side panel on the carton and includes images of wind turbines and a paragraph describing the company's involvement with renewable energy.

Rather than using imagery and statements, many companies use a renewable energy logo, similar to the USDA Organic logo or the Dolphin-Safe logo. A label or logo that is recognizable, easy to understand, and trusted is more effective at conveying information to the consumer and, as a result, contributes to market growth (Rex and Baumann 2007). Companies that rely on a logo use either an independent logo (one that is self-designed) or a third-party verified logo. Each approach has advantages and disadvantages.

Figure 2. Strathmore Artists Windpower Watercolor paper

Source: Strathmore Artists

A common concern when using any type of logo is that consumers might not recognize the logo or might not understand what it means. By using an independent logo, a company can develop something it thinks will effectively engage its consumers. Independent logos typically make use of strong imagery, incorporating a wind turbine, a green leaf, or the planet Earth. These logos generally include text such as "made with renewable energy" or "made with green energy." A

company might be inclined to use its own logo instead of paying a licensing fee to use a third-party logo. Although the vast majority of interviewed companies that use a third-party logo did not identify licensing costs as significant, a few companies did comment that because it was difficult to quantitatively identify the benefits associated with using the logo, it was a line-item in the budget that could come under scrutiny.

Third-party logos could be beneficial in that they can provide credibility to the renewable energy claim. Credibility is highly desirable by companies, as they seek to avoid potential negative publicity associated with "green washing." Laura M. Thompson, Ph.D, Director of Sustainability and Technical Marketing for Sappi Fine Paper North America, commented that third-party certifications offer additional assurances to customers. Thompson says, "At Sappi, we routinely make claims about our high levels of renewable energy usage but many of our customers also want a third-party logo attesting to this certification" (Thompson 2011). Among other companies, Santa Cruz Organics and Cascades Tissue Group both use the third-party Green-e logo on their products (see Figure 3 and Figure 4).

Figure 3. Santa Cruz Organics Green-e labeling

Source: Center for Resource Solutions

Figure 4. Cascades Tissue Group's Green-e labeling

Source: Cascades Tissue Group

Text Box 1. Green-e Marketplace Program

The Green-e program was developed in 1998 by the Center for Resource Solutions to provide transparency and accountability to the voluntary renewable energy market. Green-e Energy and Green-e Climate verify and certify renewable energy and carbon offsets, respectively. As more and more businesses turned to Green-e for third-party certification of on-site generation or the purchase of third-party certified RECs, the Center for Resource Solutions developed the Green-e Marketplace in 2004. This provides businesses with a way of communicating their commitment to renewable energy to their customers. Businesses meeting a minimum renewable energy requirement for their U.S. operations using Green-e Energy certified renewable energy may display the Green-e logo on annual reports, sustainability reports, and websites. To be permitted to display the logo directly on a product, product packaging, and product marketing materials, a company must meet the additional requirement that the product must have been manufactured using 100% renewable energy.

Since the inception of the Green-e Marketplace, the number of participating businesses and the number of products carrying the logo both have grown. In 2004, 40 companies were members of Green-e Marketplace and only 12 products carried the Green-e logo (Center for Resource Solutions 2004). By 2010, these numbers had risen to 51 companies and more than 500 products (Center for Resource Solutions 2010). These companies alone accounted for approximately 394 gigawatt-hours (GWh) of renewable electricity generation in 2010 (Center for Resource Solutions 2011).

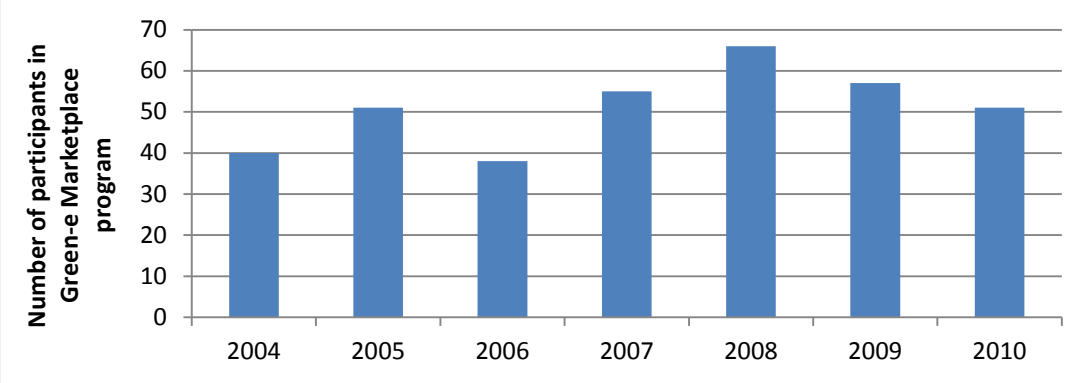

Figure 5. Number of participants in the Green-e Markeplace Program, 2004–2010

Members of Green-e Marketplace span a range of industries, including printing and packaging, food and beverage, health and beauty, and Internet data centers. In addition to the wide variety of industries making "made with renewable energy" claims, the members of Green-e Marketplace include both small and large companies. Companies such as Office Depot, SC Johnson, Intel, and Pepsi all have been members of Green-e Marketplace.

In some cases, rather than using the Green-e logo, companies have opted to use the logos of their Green-e Energy certified REC providers. GNP Company's Just BARE Chicken product line formerly carried the Renewable Choice Energy logo.

Text Box 2. GNP Company

GNP Company is a producer of premium chicken products in the Midwest. The company was founded in 1926 and has been owned and operated by three generations of the Helgeson family. It has a strong commitment to family farming and environmental sustainability. GNP Company has two premium, natural brands: Gold'n Plump and Just BARE. The Just BARE product line was launched in 2008 in response to the consumer demand for fresh chicken products made to meet higher standards of natural products that research identified. The Just BARE product line is intended to meet this consumer demand by offering a premium quality product with a commitment to environmental sustainability. In particular, the Just BARE brand only uses chickens raised on vegetarian feed and no antibiotics and strives for more sustainable packaging. In 2010, GNP Company wanted to reinforce the claims of the brand, so it conducted a life cycle assessment of the carbon content of Just BARE products and had the results of the analysis certified to the PAS 2050:2008 by the Carbon Trust and committed to reducing the carbon emissions. At the same time, it partnered with Renewable Choice Energy to match the energy used in the manufacturing process with RECs. Just BARE products currently carry the Carbon Trust's Carbon Reduction Label and promote the company's work with Renewable Choice Energy on its website and in various marketing materials.

Figure 6. Carbon Trust's Carbon Reduction Label on Just BARE's packaging

In addition to the on-product messaging, the Just BARE brand actively promoted its involvement with renewable energy through other means. A promotion called "Learn to Earn," for example, enabled consumers to answer questions on sustainability on the company's website. If a customer answered one question correctly, they earned a coupon. The company used on-pack stickers and Facebook to promote the "Learn to Earn" campaign, and also has used blogs in its effort to engage and educate consumers.

Just BARE cited both product differentiation and brand enhancement as the primary motivations for using the renewable energy logo. The biggest challenge associated with on-product labeling is the limited and competing uses of product packaging real estate. Julie Berling commented that having on-product messaging is critical, "If we can't show it on the package, it won't motivate a purchase." There are many competing uses of product packaging, however, and not just for marketing. As a producer of fresh chicken products, GNP Company's brands are required to include safe handling instructions on the package.

As an emerging marketing tool, new logos are continuously entering the marketplace. Recently, the non-profit organization WindMade published the first global renewable energy label for companies using wind power in their operations. Windmade's lead sponsor and founding partner is Vestas.[3] Businesses that want to use the WindMade label must procure a minimum of 25% of their power demand from wind power. Procurements are verified by a third-party. Businesses can use two different types of labels, one that focuses on the wind power used and one that mentions the use of other renewable technologies (Figure 7). WindMade is currently developing a standard for labeling products, which is scheduled to be launched in the summer of 2012.

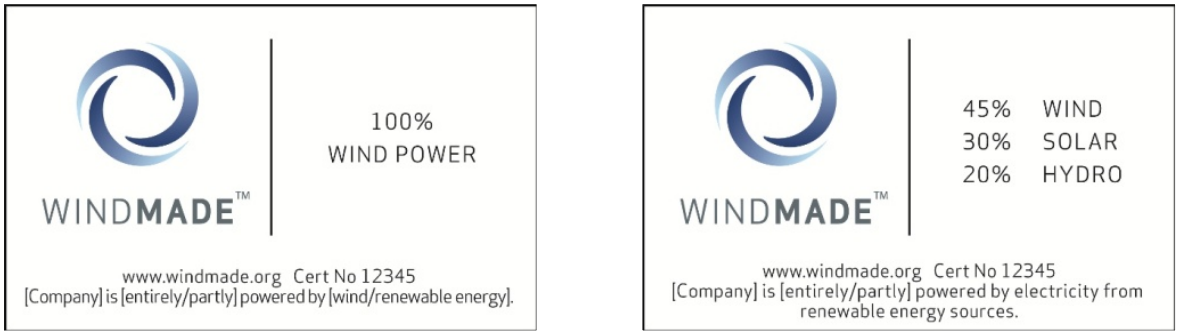

Figure 7. WindMade's sample logos for business use

Source: WindMade

Some of the companies interviewed highlighted that a multi-attribute label could address concerns regarding limited packing real estate and could simplify the certification process on the company end. A multi-attribute label could address multiple environmental attributes—not just the use of renewable energy. There has been some preliminary discussion of multi-attribute eco-labeling; however, many challenges would face such a development, including how the standards would be set, which attributes to include, and how the FTC would treat such a label.

3.2 Websites, Social Media, and Other Promotions

Regardless of whether a company uses on-product messaging, it typically relies on its website as an additional means of communication. Websites have minimal constraints, so companies may include detailed descriptions of their involvement with renewable energy. In conventional marketing efforts, product labels and logos are just one technique in the marketers' toolbox (Rex and Baumann 2007). To effectively market a product and spur market growth, a variety of marketing strategies should be adopted (e.g., advertisements, publicity, and sales promotions).[4] Companies often describe their onsite generation facilities, green power purchases, and REC purchases through these means. Interestingly, some service-based companies also communicate their use of renewable energy through websites. Such companies do not have a product per se, however, and rely exclusively on their websites and other venues to communicate their

[3] Other founding partners include The Global Wind Energy Council, WWF, UN Global Compact, The LEGO Group, PwC, and Bloomberg.

[4] Companies also promote renewable energy use to their employees, for example, through banners. BD has used the Green-e logo on parking lot banners and on cookies for a company party.

involvement with renewable energy. Internet-hosting company HostPapa, for example, has branded itself as a "green" hosting company.

In addition to websites, some companies are using more modern marketing techniques such as quick response (QR) codes and social networks like Facebook. Strathmore Artists Paper, for example, uses QR codes so consumers wanting to learn more about how renewable energy is used to manufacture the product can scan the QR code and be directed to a website. The rise of social media has prompted companies to also advertise products through social networks like Facebook. Aveda, for example, has created a Facebook page devoted specifically to the company's renewable energy purchases.

Companies also are using promotions specifically focused on renewable energy as a way to engage and educate consumers. The GNP Company, for example, launched a "Learn to Earn" promotion (see Text Box 2) in early 2011. Since the launch, it has been one of the most visited sections of the company's website. Whitewave, owner of the Silk, Horizon, and International Delight brands of dairy products, developed the "Green Caps" program, in which Whitewave makes a financial donation to the Bonneville Environmental Foundation or Farm Aid for each consumer who purchases a Silk product with a green cap and registers the cap online. Deanna Bratter of Whitewave commented on the effectiveness of promotions in reaching new consumers:

> We have different types of consumers for our Silk products. The consumers we are currently trying to engage are people who are interested in natural and organic but have never tried soymilk, or they aren't really sure of the benefits of organic. A promotion specifically targeted around green energy is a good way to educate them and help drive their purchase decisions (Bratter 2011).

Approximately 300,000 green caps were donated through the Green Caps program to either Bonneville Environmental Foundation or Farm Aid.

Companies using renewable energy are increasingly communicating with consumers in a variety of ways so that consumers can access the information when they want to and in the manner they prefer. "It is critically important to have a multi-pronged approach because people consume media in very different ways" (Berling 2011). Much uncertainty remains, however, regarding whether consumers will be receptive to this type of strategy and how far-reaching it could be. At this point, it is unclear whether products made with renewable energy will appeal only to a niche consumer segment or instead have a broader appeal.

3.3 Carbon Labels for Consumer Products

Carbon labels are increasingly being used to reflect a product's carbon emissions, which can include a renewable energy component. Although broader than renewable energy labels, constituting a different type of claim, companies using carbon labels may use renewable energy to reduce the carbon footprint of products. The past decade has witnessed a growing interest in carbon product labeling worldwide and examples can be found in the United Kingdom, the United States, Canada, Switzerland, Japan, South Korea, and Thailand, among others.

Although renewable energy labeling often can be done in-house and potentially can be verified by a third-party, labeling the carbon content of products depends on third-party systems to account for the carbon content. Perhaps the most recognized carbon label is the Carbon Trust's carbon reduction label (CRL) or the "black footprint" label, prominent in the United Kingdom and other European markets and just emerging in U.S. markets. As more businesses began to measure and reduce their emissions, the Carbon Trust developed a product label for companies to use to effectively communicate their actions. To use the label, companies must undergo a life cycle analysis to determine the carbon footprint of the product and must make a commitment to reduce their carbon emissions reduction. The "black footprint" takes on two forms, a label or a logo. The CRL indicates that the product life cycle GHG emissions have been calculated and undergone third-party certification, and the parent company is committed to reducing the life cycle GHG emissions of the product. Inclusion of the product carbon footprint number is optional. Figure 8 shows the CRL label used by Tesco on its orange juice products.

Figure 8. Tesco's Carbon Trust labeling

Source: Carbon-label.com

To date, the Carbon Trust has certified approximately 27,000 product carbon footprints worldwide. In the United Kingdom alone, the carbon footprint reduction label appeared on products with a retail value of approximately £2 billion ($3.2 billion) in 2010 (Carbon Trust 2010).

The CRL primarily is a content-based label, but it includes a performance aspect. Namely, companies using the label make a commitment to reduce the life cycle carbon emissions of their product, and only those companies that achieve carbon reductions may continue to use the label. Renewable energy is one way of reducing carbon emissions and meeting reduction goals. The Carbon Trust has worked with approximately 25 companies in the United States, and one-fifth of those companies have considered renewable energy as a means of reducing carbon emissions.

Another type of carbon label focuses on a product achieving carbon neutrality. The Carbonfund.org Carbonfree label can be used on products that achieve carbon neutrality. The life-cycle carbon emissions of the product are measured and then offset using carbon offsets (Figure 9). In the United States, Carbonfund.org is a third-party certifier of carbon offsets, deriving offsets from a combination of renewable energy, energy efficiency, and forestry projects. Current renewable energy projects include wind projects in India and China, a small hydro project in India, and dairy methane and landfill methane projects in the United States.

Figure 9. Carbonfund.org's Carbonfree label

Source: Carbonfund.org

In 2007, Carbonfund.org began a labeling program for companies that receive a life cycle assessment, agree to reduce carbon emissions, and offset the carbon footprint of the product. Although the majority of companies allow Carbonfund.org to choose which projects to invest in, of the companies that specify projects, 40% choose renewable energy projects. The Carbonfund.org carbon-neutral label states that the product is "certified carbon free" and companies have the option of including the amount of carbon that was offset. Currently, about 100 products carry this logo, including products made by Motorola, Domino Sugar, and LG Electronics.

4 Motivations for Promoting Products as Made with Renewable Energy

There are several reasons why a company would choose to invest in or purchase renewable energy. These include reducing or stabilizing energy costs, complying with existing environmental regulations (or as a risk-mitigation strategy against future regulation), and building strong relationships with various stakeholders (Hanson 2005). But why do these companies promote their use of renewable energy on products? Based on interviews with 20 companies, this section of the report identifies some of the motivations. Interview participants were asked to rank each motivation on a five-point scale and comment on any additional motivation not listed; due to the small number of interview participants, results are presented in qualitative form.

4.1 Communicate to the Consumer and Enhance the Image of the Brand

The primary motivation for developing products made with renewable energy is to directly and effectively communicate to the consumer about the company's commitment to renewable energy and, in doing so, enhance the image of the brand. This motivation was particularly important for companies in the business-to-consumer sector, which use renewable energy marketing because it aligns with the corporate brand or product-line image. Great River Organic Milling, for example, commented that its company always has been committed to sustainability and that renewable energy marketing was just an extension of its philosophy (see Text Box 3). Chuck Bennett of Aveda stated that the intention is "not to enhance sales specifically but rather to reinforce the overall environmental commitment of the brand" (Bennett 2011).

Text Box 3. Great River Organic Milling

Great River Organic Milling is a small company with just seven employees. The company always has been committed to environmental sustainability and, in 2009, began purchasing RECs to enhance the image of its brand and confirm its corporate philosophy. Rick Halverson, owner of Great River Organic Milling, commented that the ability to purchase RECs was critical in the ability to support the development of renewable energy, "Had REC programs not been available it would have been impossible to justify on-site renewable generation given the size of the company" (Halverson 2011).

Great River Organic Milling became a Green-e Marketplace member in 2009, and the RECs it purchases are Green-e Energy certified. Membership in the Marketplace program enabled Great River Organic Milling to begin using the Green-e logo on all of its products. Great River Organic Milling certainly falls into the category of companies using renewable energy marketing as a corporate branding strategy and, in fact, identified brand enhancement as the primary motivation for using the on-product logo. The biggest challenges associated with using the on-product logo faced by Great River Organic Milling are the costs associated with revising packaging and satisfying the guidelines for using the Green-e logo.

4.2 Product Differentiation

Product differentiation proved to be another important motivation for marketing products as "made with renewable energy." Highlighting the energy source used to manufacture the product

allows for a point of differentiation. This was particularly important for companies in the business-to-consumer sector that placed claims on one product. As noted previously, these products typically appeal to the environmentally conscious audience, so being made with renewable energy is an additional dimension differentiating the product.

Product differentiation also was cited as an important motivation for some companies in the business-to-business sector. It is important to note that most companies in this situation do not use on-product messaging. Sales are finalized before the customer even receives the product, and it might not make sense to include an on-product message. Many large purchasers, such as Intel, do not use on-product messaging because the product is not an "external product." These companies tend to market their commitment to renewable energy through avenues such as marketing collateral materials, presentations, and events. Interestingly, one business-to-business company we interviewed did use an on-product message. Cascades Tissue Group sells towel and tissue products to the commercial marketplace and includes the Green-e logo because it reminds customers of the environmental attributes of the product.

4.3 Targeting Environmentally Conscious Consumers

When asked whether the motivation for marketing products as "made with renewable energy" was to target the environmentally conscious consumer, companies' responses were quite mixed. Some companies stated this was a strong motivation and others said it was not. Companies using renewable energy to market a particular product were more likely to respond that they were trying to target the "green" consumer. Companies that use renewable energy as part of a branding strategy, however, alluded to the fact that their brands already target the "green" consumer; therefore, using a renewable energy marketing message does not attract consumers and instead simply confirms a company's commitment to sustainability.

4.4 Following an Existing Industry Trend

Most companies interviewed stated that they were not motivated by an existing industry trend, instead stating that they were the trendsetters. Given the relatively limited amount of renewable energy marketing, it does seem to be the case that most companies doing this actually are trendsetters, at least in narrowly defined markets. For example, the GNP Company's Just BARE product line is the first fresh chicken product line to carry a "made with renewable energy" label; however, there is experience with communicating the use of renewable energy in the food industry more broadly.

It is important to note that there does seem to be a trend in some of these broadly defined industries. Specifically, several companies in both the paper industry and the food industry have used a renewable energy marketing strategy. In the paper industry, advertising the renewable energy content of products has been adopted by companies in the business-to-business sector selling fine paper (e.g., Sappi Paper and New Leaf Paper) or tissue and toilet paper (e.g., Cascades Tissue Group), as well as by companies in the business-to-consumer sector selling greeting cards (e.g., Marian Heath Greeting Cards) and art paper (e.g., Strathmore Artists Paper). In the food industry, a wide variety of products convey their use of renewable energy, such as chips (e.g., Boulder Canyon Chips), milk (e.g., Whitewave's Silk), cream cheese (e.g., Kraft's Philadelphia Cream Cheese), juice (e.g., Santa Cruz Organics), coffee (e.g., Buywell Coffee),

flour (e.g., Great River Organic Milling), rice (e.g., Carolina Plantation Rice), chicken (e.g., GNP Company's Just BARE), and even fresh pasta (e.g., Valley Fine Foods' Pasta Prima).

4.5 Price Premium

A potential motivation for advertising the use of renewable energy in the manufacture of products is to earn a price premium. Research on price premiums reveals an average premium of 10% for sustainable products (Trudel 2011). Furthermore, a recent global consumer survey revealed that 50% of consumers worldwide are willing to pay a premium for products made with renewable energy (Vestas and TNS Gallup 2011). All of the companies interviewed, however, indicated that products marketed as "made with renewable energy" did not earn a price premium. In the tissue industry, Steve Ott of Cascade Tissue Group stated, "It is such a competitive market that there is no real opportunity to earn a price premium" (Ott 2011).

Some products made with renewable energy are premium-quality products and, as a result, earn a price premium. The fine paper industry, for example, produces a higher quality product that costs more to produce and thus earns a price premium. Renewable energy use is one technique for further differentiating these types of products.

Even if the price of products made with renewable energy remains the same, it is possible that companies are able to achieve a reduction in energy costs as a result of investing in onsite renewable energy projects or purchasing through a long-term, fixed, renewable-electricity contract. As a result, their profit margins could increase. Sappi Paper commented that its profit margins did increase for one grade of paper, even though the motivation for developing the onsite renewable energy project and associated paper product was to consistently serve customers and instill customer loyalty rather than increase profit margins (Thompson 2011).

5 Challenges with Product Labeling and Claims

Although purchasing renewable energy to make on-product claims is a relatively new practice, early adopters have learned some lessons. One reason that some companies have chosen to suspend making renewable energy claims on products is because they find the effort is ineffective for the target consumer audience or that a return on investment cannot be documented. Some companies indicated that they are considering suspending their renewable energy labeling efforts due to sagging consumer demand and the inability to quantify the effect of the marketing strategy, particularly in the face of difficult economic conditions. This section explores the challenges associated with communicating the use of renewable energy on products.

Numerous challenges were identified through the interviews conducted for the present research. Similarly to the methodology for assessing motivations, interview participants were asked to rank each challenge on a five-point scale and comment on any additional motivation not listed; due to the small number of interview participants, results are presented in qualitative form. Underlying many conversations was the fundamental challenge of the uncertain response to renewable energy labeling. As with most marketing strategies, it is extremely difficult—if not impossible—to quantitatively identify whether marketing products as "made with renewable energy" is effective at increasing sales, primarily because additional product changes typically are made concurrently.[5] The inability to determine the return on the investment suggests that companies claiming that they use renewable energy on products either are fully committed to it for reasons that extend beyond the potential boost in sales (e.g., corporate image) or are experimenting with the strategy and, depending on sales, ultimately could keep or abandon it.

5.1 Limited and Competing Uses of Product Real Estate

One of the primary challenges associated with making an on-product renewable energy marketing claim is the limited and competing uses of product real estate. Product packaging is carefully designed by marketing professionals to communicate a specific message about the product and the company in the space available. Including too many competing messages can inundate and confuse the consumer, potentially diluting the brand and affecting sales. As a result, companies are careful in choosing which messages to include so that each message resonates with the consumer in a positive way.

Intelligent Nutrients, for example, sells health and beauty products and has products as small as lip balm. Other products have more product real estate, such as Strathmore Artists Paper sketch pads. Strathmore devotes the inside of the sketch pad cover to a conversation on renewable energy (see Figure 2).

Aside from the physical constraint of product packaging, the real estate available to describe renewable energy use can be limited by including messages that are required by law. These legal requirements vary by industry. For example, food and household products are required to provide nutritional information, but health and beauty products do not have such requirements.

[5] Additionally, new products tend to experience a spike in sales regardless of the type of messaging used on the product.

SC Johnson, for example, is required to include warning messages on its household products, leaving little room for a renewable energy logo.

Given the limited space, marketers must choose which message to include, ensuring that it resonates with the consumer. "The number one issue from a marketing perspective is consumer relevance. Is it meaningful to the consumer?" (Lawson 2011). Although many companies think that an on-product renewable energy message will resonate with their target audience, others focus on alternative messages more relevant to their consumers. Whitewave's Horizon Organic milk product line, for example, currently only includes renewable energy on-product messaging on its single-serve products. Whitewave states, "It's more a matter of consumer focus at the moment. Currently the package focuses more on the family farmer story and the 'know where your food comes from' movement. It was a marketing decision and not an intentional decision to leave wind out" (Bratter 2011).

5.2 Language and Content

Companies that choose not to use a third-party logo face a greater challenge in determining what content to include when making on-product claims about the use of renewable energy. These companies tend to use some combination of imagery and text. It can be challenging to determine what content to include that will resonate with the consumer in a positive way.

Many companies interviewed commented that imagery is an important component of their marketing strategies. "Walking down the aisle, you have a split second to catch the consumer's attention. [Imagery is] the best way to grab them and tell the story quickly" (Bozek 2011). The imagery used most often in renewable energy marketing claims includes wind turbines, the sun, the planet Earth, and a leaf.

Determining what language to use when including text can be considerably more challenging than selecting imagery, particularly if a company is using RECs. The language surrounding RECs has evolved over time and marketers should take care to change marketing messages as the language evolves to reduce the risk of deceiving consumers. See Text Box 4 for a discussion of how New Belgium Brewing has addressed these issues. Generally, companies have expressed that it can be challenging to determine what language will be relevant to consumers, as "a lot of people just don't get what it means to be offset by renewable energy. There are definitely a lot of challenges in labeling and writing it in a way where it becomes relevant to someone" (Bratter 2011).

Updates to the Federal Trade Commission's (FTC's) *Guide for the Use of Environmental Marketing Claims,* commonly known as the "Green Guides," address renewable energy and carbon marketing claims for the first time and should provide some clarification on the type of language to be used when making a claim about the use of renewable energy. These guides originally were developed in 1992 to address concerns regarding corporate "green washing," or making misleading environmental claims about products. The final Green Guides revisions are expected to be released in 2012, and the degree to which the final guides will differ from the proposed guidance is unclear.

The Green Guides address a variety of issues related to labeling products as being made with renewable energy. The proposed guidance first addresses the type and partial use of renewable energy. It states that marketers should specify the mix and source of renewable energy and, if renewable energy was only used in part of the manufacturing process, clarify which components the claim applies to.

The proposed guidance also calls for companies to clarify whether the renewable energy claim applies to the product, the packaging, or particular components of the product or packaging. For example, if a company prints an annual report and makes an unqualified renewable energy claim on the report (e.g., "made with renewable energy"), it might be unclear whether it is the company that is using renewable energy or the paper manufacturer. Refer to Text Box 5 for information on how Green-e is addressing this issue. Due to this potential confusion, the proposed revisions state that unqualified renewable energy claims, such as "made with renewable energy" should be used only when "all, or virtually all, of the significant manufacturing processes used to make the product" rely on renewable generation or RECs, otherwise the claim must be qualified (FTC 2010).

Text Box 4. New Belgium Brewing

In the late 1990s, New Belgium Brewing signed a 10-year contract with its municipal utility to pay a premium for 100% of kilowatt-hours consumed. The commitment helped to support the utility's purchase of wind-derived electricity from Wyoming. Thrilled to have connected to electricity from wind, New Belgium marketed itself as "100% Wind-Powered." As demand for renewable power increased, however, the municipal utility started purchasing wind and non-wind RECs to supplement the wind power. A member of the community (and ex-employee of New Belgium Brewing) brought this to the attention of the media, accusing New Belgium Brewery of green washing.

Katie Wallace of New Belgium comments, "It was never our intention to mislead but we had not kept up with the language as the portfolio changed (Wallace 2011)." New Belgium changed the language on its packaging, eliminating the percentage amount and marketing the product as "Wind Powered, Employee Owned." As New Belgium began investing in its own on-site generation facilities, including solar photovoltaics and bio-gas, it dropped the term "wind" altogether. New Belgium's current marketing message is "Alternatively Empowered" reflecting both the fact that it relies on alternative energy sources and that the company is employee-owned and operated.

The FTC proposed guidance addresses whether companies can make renewable energy claims when using RECs. Specifically, companies can make renewable energy claims when using RECs and the claim does not have to qualify that RECs are underlying the claim. According to the FTC, "there is no reason to believe that this fact would be material to the consumer" (FTC 2010). The FTC's proposed guidance further specifies that only the owners of the RECs should make renewable energy claims. This is important for companies that have an onsite renewable energy facility but sell the RECs associated with the generation of the system to another party, as they no longer can make renewable energy claims about the system.

Finally, the FTC proposed guidance cautions against the use of unqualified certifications or seals. For example, companies creating their own seal should use "clear and prominent qualifying language to alert the consumers that it created the certifying program" (FTC 2010).

The FTC cites a number of examples of how seals have been used deceptively, including one advertiser's creation and use of a "Consumer Protective Institute" seal. The seal created the false impression that an independent and disinterested organization had approved the product.

5.3 Consumer Recognition and Understanding

Another challenge is whether consumers will recognize and understand the renewable energy message. There is some evidence that consumer recognition of the Green-e logo is increasing. The *Conscious Consumer Report* released by BBMG in 2009 indicates that 21% of consumers recognize the Green-e logo (Cook 2009). This is the fifth greatest recognition rate of conscious consumer logos, behind the recyclable logo, ENERGY STAR® logo, and the USDA Organic logo.[6]

Broader research on whether consumers recognize or understand various statements or logos, however, is limited. Even the FTC in its review of the Green Guides commented that more research in this area is needed. In the consumer perception research that the FTC conducted, there was a fair amount of consumer confusion regarding what it means for a product to be "made with renewable energy." Respondents indicated, for example, that a "made with renewable energy" claim suggested that the product also was made with renewable materials (28%) or recycled materials (21%) (FTC 2010).

For some companies, consumer understanding could be less of a concern. Rick Halverson of Great River Organic Milling, for example, commented that the company uses renewable energy because it believes in it, and that if consumers do not recognize or understand the Green-e logo on a product it is not a major concern (Halverson 2011). Companies with less concern centered on consumer understanding tend to be the ones using renewable energy labeling to confirm a commitment to sustainability.

Text Box 5. Green-e re:print Program

The proposed revisions to the FTC's Green Guides specify that marketers should clarify whether renewable energy claims apply to the product, the packaging, or a particular component of the product or packaging because it could be unclear to the consumer what the renewable energy claim refers to. For example, if a greeting card carries the statement "made with renewable energy," it is unclear whether renewable energy powered the offices where the content of the greeting card was developed, the facility that manufactured the paper, the facility that printed the card, or all three. In response to this confusion, Green-e has developed the re:print program specifically for paper and printing companies. This program allows companies working with a Green-e certified printer and using Green-e certified paper to use the Green-e logo on printed materials. The logo specifies that the paper is manufactured and printed using renewable energy (Center for Resource Solutions 2010).

Beyond consumer recognition and understanding is the basic challenge of whether the message will resonate with consumers and influence purchase decisions. Consumer survey research exists revealing that consumers prefer products made with renewable energy (Vestas and TNS Gallup 2011); it is unclear, however, whether this will translate into an actual increase in sales. Eco-products historically have suffered from inaction by consumers, even though surveys indicate a

[6] The Smart Choices logo also ranked higher than the Green-e logo; however, the Smart Choices Program was terminated in 2010.

willingness to act (Rex and Baumann 2007). It is unclear whether products made with renewable energy see a similar gap between consumer preference and sales increases.

5.4 Product Packaging Costs

The costs associated with changing product packaging were cited as a relatively minor challenge. Companies tend to strategically time when to include the renewable energy messaging when a new product or product line is launched, when other essential changes to the product packaging were required, or when product-packaging contracts were being renewed. As a result, the additional cost of the renewable energy marketing message was minimal. Whenever a change is made to a product package, however, costs are involved. The process becomes increasingly more complex and costly as more products carry a message of being made with renewable energy.

Product packaging costs were identified as a greater challenge for companies in the business-to-business sector who have multiple layers of product packaging. Cascades Tissue Group, for example, noted that the costs associated with modifying both the inner and outer packages presented a considerable challenge. The medical technology company BD also brought up the challenge of products that contain multiple packaging layers, commenting that the different layers of packaging reach different audiences. For BD, labeling the outer package communicates with their business customer and labeling the inner package communicates with the end-user. If BD wants to communicate with both target audiences, product packaging labeling becomes a significantly greater challenge. Although BD currently does not use on-product messaging, it expects to begin labeling outer packaging in 2012 and to expand to inner packaging over time.

5.5 Cost of Certification and Program Requirements

When using a third-party certification program, the cost of certification and program requirements was identified as a minor challenge. As Donald Bozek of Strathmore Artists Paper put it, this is just a cost of doing business (Bozek 2011). One company did identify the certification costs to be a considerable challenge because of the way the certification program was structured. The program required a fee that was based on the company's total revenue even though the company only was using the logo on one product line. This company thought that that the certification fee was not aligned with the use of the logo; as a result, the certification costs were viewed as a barrier.

5.6 Products Marketed Internationally

For companies serving international markets there are additional challenges to renewable energy marketing. Perhaps the most basic challenge is satisfying varying definitions of what renewable energy is, as well as guidelines on the types of renewable energy marketing claims that can be made. A second challenge relates to consumer recognition, understanding, and relevance. A logo that is recognized by a consumer in the United States, for example, might be unrecognized in other markets.

A more practical challenge when selling a product in multiple markets is that the consumers likely speak different languages. Any renewable energy marketing messages using text might display text in many languages, further reducing already limited product real estate. Strathmore Artists Paper, for example, serves both Canadian and U.S. markets and, therefore, includes messages in English, Spanish, and French.

6 Conclusion

Marketers have highlighted a variety of environmental attributes of products for several decades, but specifying the type of energy used to manufacture a product is a trend that has only emerged in the past decade. In the United States, the number of companies marketing products as "made with renewable energy" has increased substantially in the past several years, although the market remains small. In 2011, researchers identified about 50 companies that use renewable energy labeling on products. Through interviews with 20 companies with experience labeling products as "made with renewable energy," we have found the following: (1) the companies range in size, (2) some companies are in the business-to-business sector and many others are in the business-to-consumer sector, (3) companies span a wide array of industries, and (4) companies vary in terms of the scope of their labeling efforts, with some labeling a specific product and others labeling a product line or all company product lines.

Motivations for labeling products differ. Some companies are motivated by the ability to differentiate a product through using a "made with renewable energy" message, appealing to the environmentally conscious consumer. Other companies reported that the primary motivations were to confirm an already existing commitment to sustainability or to enhance the image of a brand. None of the companies interviewed attempted to earn a price premium on the product because of the use of renewable energy in its manufacture.

Methods of communicating the use of renewable energy vary. Some organizations have relied on logos or imagery to convey the use of renewable energy in the manufacture of a product and others have included text on the product packing. Others have complemented this by providing information on websites about their renewable energy purchases and the associated benefits, and some have used social media and other promotions to convey their use of renewable energy.

There are numerous challenges associated with communicating the use of renewable energy directly on products, including the limited real estate available on product packaging and determining the appropriate content to include. Another challenge is the difficulty in assessing how effective "made with renewable energy" claims are in increasing product sales. Further, there often is uncertainty as to whether the customer recognizes the logo used and understands the information being conveyed. Lessons from earlier green-marketing experience indicate that a label or logo that is recognizable, easy to understand, and trusted is more effective at conveying information to the consumer—as a result, they contribute to market growth (Rex and Baumann 2007). The limited experience with renewable energy logos, however, makes it difficult to adequately gauge recognition and understanding.

A multi-attribute label is something that could address multiple environmental attributes, not just use of renewable energy. Interviewed companies highlighted that a multi-attribute label could address concerns about limited packaging real estate and simplify the certification process on the company end.

Some lessons can be learned from how eco-products have been marketed; however, products that are made with renewable energy are unique in that they are identical to the comparable conventional product in quality and performance; only the energy used to manufacture the

product is different. Given this new market, it remains to be seen the extent to which products "made with renewable energy" will be utilized and support the use of renewable energy. Corporate commitments to using renewable energy and communicating that commitment on product packaging and through other means could play an important role in educating customers about the availability and feasibility of using renewable energy as an alternative energy source.

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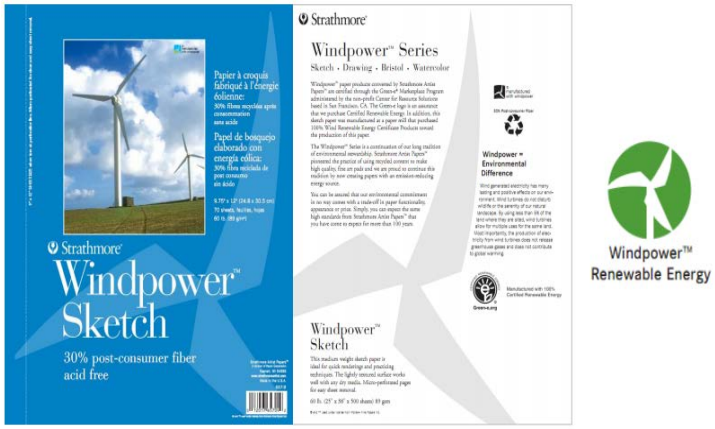
Appendix A: Sample of Labeling Efforts

Company	Industry	Type of Labeling	Image
Aveda	Health & beauty, business-to-consumer	Green-e logo on website; description of efforts on website	
Boulder Canyon Chips	Food, business-to-consumer	Independent logo on product	
Buywell Coffee	Coffee, business-to-consumer	Green-e label on product	
Cascades Tissue Group	Paper, business-to-business	Green-e logo on product	

GNP Company	Food, business-to-consumer	Carbon Trust and Renewable Choice Energy logos on product	
Great River Organic Milling	Food, business-to-consumer	Green-e label on product	
HostPapa	Internet hosting, business-to-business	Green-e, Bonneville Environmental Foundation, and Green Tags logos on website	
Intelligent Nutrients	Health & beauty, business-to-consumer	Green-e logo on product	
Kettle Brand	Food, business-to-consumer	Description of efforts on product	
Kraft (Philadelphia Cream Cheese)	Food, business-to-consumer	Independent logo on product	
New Belgium Brewery	Beer, business-to-consumer	Independent logo on product	 
New Leaf Paper	Paper, business-to-business	Independent and Green-e logos on website	

Santa Cruz Organics	Food, business-to-consumer	Green-e logo on product	
Sappi Paper	Paper, business-to-business	Description of Green-e certification on website	
SC Johnson	Household products, business-to-consumer	Statement and Independent logo	
Strathmore Artist Paper	Paper, business-to-consumer	Independent and Green-e logos on product	
WhiteWave Foods	Food, business-to-consumer	Bonneville Environmental Foundation label on product	