Buying Green Power
Makes Good Business Sense

Connecticut Clean Energy Fund
Rhode Island Renewable Energy Collaborative

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Executive Summary

This Briefing Paper states the case for why it makes good business sense for Rhode Island and Connecticut companies to purchase green power --- electricity from renewable sources of energy that are less likely to pollute the environment.

We begin by noting why a growing number of businesses have chosen green power over the past five years. In addition to helping to achieve a cleaner environment, businesses receive a significant amount of goodwill from their use of renewable energy. A number of businesses purchase green power to reflect their philosophy of corporate stewardship or to carry out their commitment to good corporate citizenship. Still others seek to offset emissions from their manufacturing operations. Others find reliability advantages in having at least a portion of their power come from renewable energy.

Almost all businesses are able to benefit from one key advantage of green power --- they are able to enhance their images by purchasing renewable energy and publicizing it to their audiences. These audiences include their customers, their employees, and their shareholders. Whether to reinforce their existing images or to carve out a competitive edge, businesses can receive significant public relations benefits by selecting green power.

This Briefing Paper outlines how green power is defined and then provides detailed case studies of well-known businesses that have purchased green power from suppliers. We also include case studies of New England businesses that have put in renewable energy installations on-site. In addition, we provide summaries of interviews with green power suppliers that are either offering or considering offering green power to businesses in Connecticut and Rhode Island.

We also address barriers to purchasing green power, and how businesses can overcome them. We conclude with qualitative and quantitative evidence of the public relations and image benefits of purchasing green power, using case studies to highlight these benefits.

I. Introduction

An exciting trend has begun taking place throughout the country. More and more businesses have come to recognize that it makes good business sense to obtain all or a portion of their electricity from renewable sources of energy that are less likely to pollute the environment. While helping to accomplish an important societal goal, businesses also achieve significant good will with their customers and gain recognizable marketing advantages from buying green power.

Just recently, 11 major companies that consume 7% of the industrial energy used in the United States announced that they will buy 1000 megawatts of new green energy capacity over the next 10 years. These businesses include DuPont, General Motors, IBM, Interface, Johnson & Johnson, Kinko's, and Pitney Bowes.

In Connecticut and Rhode Island, laws have recently been enacted that allow customers to choose from whom they buy their electricity. As a result, customers may now choose both from whom they purchase their electricity as well as the energy sources from which their electricity is derived. They also may install their own generation facilities on-site. While many Rhode Island and Connecticut customers have thus far opted to have their regulated utilities continue to supply them with their electricity, in the future there will likely be more and more incentive to shop around for electricity. As this happens, businesses will be offered additional opportunities to purchase at least a portion of their electricity from renewable energy sources. Already, green power is beginning to be offered in Connecticut.

This Briefing Paper is aimed at stating the case for why it makes good sense for businesses to purchase green power. Many commercial and industrial customers may choose to buy green power out of a concern for the environment or a sense of corporate stewardship. Others, however, may be motivated more by the good will and marketing benefits that they can achieve by "buying green." This Briefing Paper will explore all of the different reasons why businesses might choose to buy green power.

Providing case studies of actual businesses in the region and throughout the United States that obtain all or a portion of their power from less-polluting generating sources – and noting the significant publicity and marketing benefits that many have obtained as a result---this Briefing Paper will seek to show why it makes good business sense for Rhode Island and Connecticut commercial and industrial customers to procure some or all of their electricity from renewable sources.

II. Why are Businesses Buying Green Power?

Increasingly, businesses are playing a larger and larger role in purchasing green power. According to the organizers of Green-e, a group that certifies renewable energy products, 38% of the demand for these renewable electricity products has come from non-residential customers. Because of their heavy use of electricity ("load"), business purchases of green power represent a relatively large percentage of the renewable energy being sold.

Every business has its own set of reasons for buying green power. In some companies, the decision to buy green energy comes from the owner, the CEO, or another individual in a position of authority who has strong motivations for buying green power that set the course for the whole company. In other businesses, on the other hand, the decision reflects a collaborative process that may involve representatives of a number of different departments, including the procurement office, the environmental liaison, the finance department, and significantly, the marketing department.

Certain reasons seem especially strong:

Environmental reasons

A business may be motivated by important environmental reasons for buying green power. Green energy comes from renewable sources that tend not to pollute and have far less impact on the environment than energy from fossil fuels such as oil or coal.

Electricity produced from oil or coal generating plants produce significant greenhouse gases (e.g., carbon dioxide) that contribute to global warming. Electricity produced from natural gas emits only half the amount of greenhouse gases as electricity from oil or coal, but nonetheless still produces some emissions. While nuclear energy does not produce greenhouse gases, its waste threatens the environment and the possibility of a radiation release poses a risk to public health and the environment.

Solar and wind energy, on the other hand, create no emissions and pose virtually no risk to the environment. By purchasing power from a renewable energy source, a business is able to make a significant contribution to the environment. Just as a corporate recycling effort reflects a company's commitment to the environment, the purchase of green energy can be an indication of this same corporate concern for the world in which a company does business.

Taking actions that benefit the environment are not necessarily inconsistent with corporate bottom lines. Many environmental practices turn out to be efficiency measures that not only benefit the environment but also help improve the balance sheet. Reducing the use of hazardous materials used to produce products, for instance, means a reduction in costly hazardous waste disposal charges. Recycling water used for manufacturing processes means a reduction in water and sewer charges.

In fact, a recent report of the Assabet Group concludes that a company's superior environmental performance may indicate increased shareholder value.[1] According to Ralph Earle III, Assabet's Managing Director, "companies that effectively embrace the environment as a source of competitive advantage are being rewarded in the marketplace."

Corporate stewardship

Many businesses view their purchases of green power as merely the continuation of corporate policies that encourage actions that reduce the impact of corporate activity on the environment.

In a number of instances, the owners or executives of companies feel a sense of responsibility as corporate good citizens to carry out such practices. In the same way that they might donate used computers to the schools or make charitable contributions to the community, they view their sensitivity to the environment as being part of being both local and global good citizens.

While doing so might engender good will or even favorable publicity, a number of businesses claim that these other benefits are secondary to their corporate stewardship motivations. Deciding to purchase green power is not a unique type of decision for these companies, but merely a continuation of other pro-environment policies that reflect the companies' overall environmental sensitivity.

In some cases, manufacturing processes or other activities inevitably produce some environmental impact that cannot be avoided. To mitigate the harm that these activities may be causing, a company may seek to find ways in which it can make a positive contribution to the environment in order to offset whatever negative impact its manufacturing processes might cause.

The New Belgium Brewing Company of Colorado, for example, was concerned about the carbon dioxide emissions that its brewery processes were producing. While unable to eliminate these emissions, it resolved to perform other actions beneficial to the environment that would offset the environmental harm from its carbon dioxide emissions.

Purchasing all of its electricity from a renewable source of electricity --- wind generation – enabled New Belgium to more than offset these emissions (and much less expensively than alternative offsetting approaches). New Belgium's commitment to wind energy meant the installation of a new wind turbine that would not otherwise have been installed, and the displacement of 908 tons of coal a year that if burned to produce electricity would have contributed 4 million pounds of carbon dioxide into the atmosphere. By committing to this wind turbine, New Belgium displaced four times the amount of carbon dioxide emissions that its brewery operations create. Importantly, New Belgium can now

[1] "The Emerging Relationship Between Environmental Performance and Shareholder Wealth," The Assabet Group, Concord, MA, December, 2000.

advertise itself as "the first wind-powered brewery in the United States" and is considering coming out with a special release beer that builds on the wind power theme. One media article called New Belgium's product "carbon-free beer".

Image enhancement

Public opinion surveys have consistently shown that people have a more favorable opinion toward and are more likely to buy the products or services of companies that show a concern for the environment. Whether companies perform these activities specifically in order to enhance their reputations or whether this is simply a fortunate by-product of their efforts, environmentally-sensitive activities nonetheless improve companies' public images.

Many companies' purchases of green power are part of overall positioning strategies aimed at having customers view their companies as entities that care about the environment. In some cases, the products these companies sell may have environmental attributes that companies are marketing (e.g., electric cars or cars with higher fuel efficiency). By seeing that companies' corporate behavior is respectful of the environment, customers may be more willing to trust these companies' claims that their products are positive for the environment.

In other instances, on the other hand, a company's product line may have nothing to do with the environment, but green power purchases may nonetheless help the company distinguish itself from the competition. A local pizza shop in a college town, for instance, might differentiate itself from other shops by being able to display in its windows or on its countertops decals prominently identifying the store as participating in a supplier's green power program. Its image is enhanced by being able to identify with a pro-environment initiative.

Marketing benefits

In order for companies to enhance their images through green power purchases, the world needs to know about such admirable behavior. Many green power suppliers are pleased to provide such third-party recognition to customers buying green power. This marketing assistance might come in the form of a press release lauding the company's action, a newspaper ad congratulating the company, or in labels (which the company can use in its own advertising) or decals that identify the company as participating in a green power program. By having some other entity speak positively about its green power purchase, a company is able to achieve enhanced credibility for its action.

But even if such supplier support is not available, a company can achieve significant marketing benefits by touting its green power purchases itself. Newspapers and the broadcast media are generally eager to write about companies' purchases of green power, particularly now where such purchases are still identified as innovative and purchasers are seen as leaders. Companies may also find it useful to let its customers know through product inserts or labels that they are supporting the environment by making green power

purchases. In addition, a company may find it useful to inform its shareholders of its pro-environment green power purchases, either in its annual report or in a special environmental annual report that some larger companies are beginning to produce.

Climate change or other program participation

With growing concern about climate change and global warming issues, companies may in the future face pressure or find themselves under the spotlight regarding the steps they are taking to reduce their carbon dioxide emissions. Offsetting these emissions through the purchase of green energy is one way in which companies may respond to this issue, either unilaterally or through participation in some form of credit-trading program.

Reliability

An important benefit which companies receive when they obtain their power from renewable sources is increased reliability. In general, renewable energy sources tend to be reliable producers of electricity. They are not subject to OPEC oil shortages or foreign price increases, natural gas supply concerns, nuclear power plant maintenance shutdowns, or other such factors.

Companies installing their own renewable systems to produce electricity achieve even greater reliability benefits. Even if there is a problem with the overall transmission grid, their own renewable systems can continue to provide them with electricity. Even if there are significant price spikes in the wholesale market, their own renewable systems can help cushion the cost of receiving electricity.

Economic benefits from Federal and state incentives

A number of states offer tax incentives or other programs to encourage companies to use green energy.

As will be discussed later in this Briefing Paper, subject to further approval from the Public Utility Commission, the Rhode Island Renewable Energy Collaborative plans to offer funding to certain green power suppliers that can be used to offer signing bonuses to customers, to help reduce the per kilowatthour cost of green power to customers, or for more customized approaches for large customers. The Collaborative also offers financial incentives for companies to install on-site solar or wind facilities.

Connecticut offers a local-option property tax exemption for installation of renewable equipment. In addition, its Connecticut Clean Energy Fund invests in renewable energy projects and promotes initiatives to encourage the use of green power.

Employee morale

A number of companies purchasing green power have found that such efforts boost employee morale. Just as consumers feel better about purchasing products from

companies that show sensitivity to the environment, workers also feel better about working for such companies. All 70 employees of New Belgium Brewing Company, for instance, voted unanimously in favor of the company's purchase of wind power.

Suppliers providing green power to companies may also agree to offer company employees green power for their homes at a reduced rate, thus enabling companies to offer an additional "perk" to their employees. Toyota employees, for instance, were offered a 10% discount if they switched to green power (initially, approximately 20% of eligible Toyota employees took advantage of this program). In California, Kinko's employees received Ben & Jerry's, Starbucks, or Blockbuster gift certificates for signing up for green power from Green Mountain Energy.

III. What is green power?

The advent of electricity industry restructuring, which allows electricity customers to choose their electricity supplier, provides numerous new opportunities. The purchase of green power is one such exciting opportunity. By purchasing green power, customers support electricity generation from energy sources like wind or solar that are environmentally preferable to traditional sources such as coal, oil, or nuclear.

The term "green power" generally refers to electricity that is derived, in whole or in part, from renewable energy sources. More than one-third of all U.S. consumers have thus far been offered the option to purchase some type of green power product, from either their regulated utility provider or in competitive markets. Consumers also have the option of installing their own green power sources, such as solar power. As competition continues to evolve in the electric power industry, more consumers will have the option of supporting green power.

In order to fully understand these opportunities, it is helpful to first gain a general understanding of electricity restructuring.

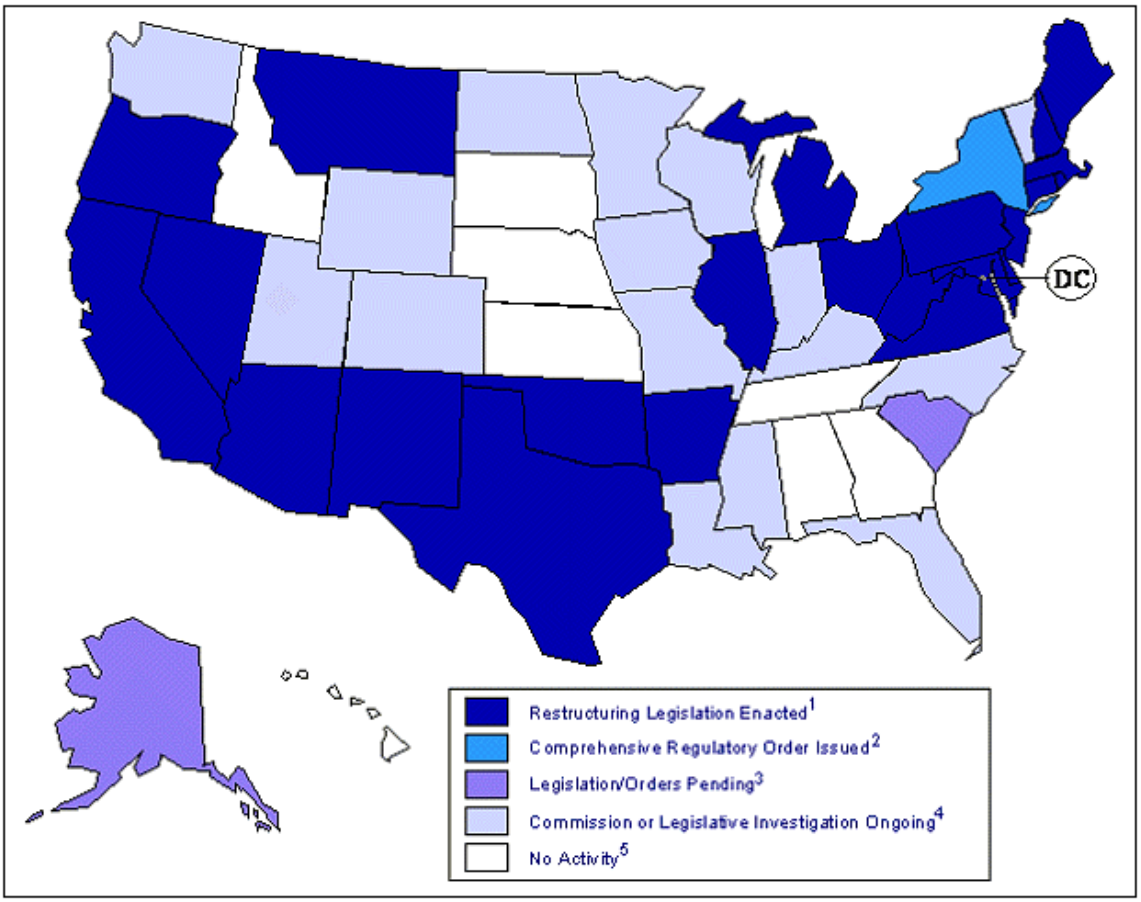
Overview of the Restructured Market

There are four key components to providing electricity:

- **Generation** --- the production of electricity;
- **Transmission** --- the transporting of electricity over high voltage wires from power plants to distribution substations;
- **Distribution** --- the transporting of electricity over lower voltage wires from distribution substations to homes and businesses;
- **Customer services** --- metering, billing, and information services related to this electricity.

In a regulated environment, the local electric utility provides customers with all of these services, and the state public utilities commission regulates prices for each component. In contrast, in the restructured or competitive market, customers are able to choose who produces their electricity (i.e. generation). They can pick between competing suppliers of generation services. Businesses can choose to remain with their existing electricity supplier, can choose to purchase electricity from a different supplier, or can explore the feasibility of on-site power generation.

As of January 2001, restructuring has been adopted in 24 states (including Connecticut and Rhode Island) and the District of Columbia. Restructuring activity is illustrated in Figure 1 below.



Connecticut

In some restructured states, such as Connecticut, electricity suppliers are required to tell consumers where their electricity is coming from. In Connecticut, disclosure of this information comes in the form of a chart, which both the existing utility and competitive suppliers must provide prospective customers. For illustrative purposes, the following is Green Mountain Energy's chart:

For period of January, 2001 to December, 2001

ENERGY SOURCE COMPARISON		
	Percent Supply	
	Green Mountain Energy[sm1]	New England System Mix [2]
Class I Renewables [3]		
- Solar	--	--
- Wind	5.5%	<1%
- Fuel Cell	--	--
- Methane Gas From Landfills	--	<1%
- Biomass[3]	--	<1%
Class II Renewables [3]	44.5	

- Trash-to-Energy	--	<1%
- Biomass[3]	(see footnote 4)	<1%
- Hydropower[3]	(see footnote 4)	7.1%
Non-Renewables	50%	
- Coal	--	18.7%
- Natural Gas	(see footnote 5)	10.1%
- Nuclear	--	16.0%
- Oil	--	21.9%
- Other	--	25.6%
TOTAL	**100%**	**100%**

AIR EMISSIONS COMPARISON

	Pounds of emissions per Megawatt-hour of electric generation	
	Green Mountain Energy[sm 6]	**New England System Mix [7]**
Sulfur Dioxide (SO2)[8]	<1	5.67
Nitrogen Oxides (NOx)[9]	1	2.5
Carbon Dioxide (CO2)[10]	500	1,310.2

[1]These figures reflect the power that we have contracted to provide. Actual figures may vary according to resource availability. We will annually report to you the actual resource mix of the electricity you purchased during the preceding year.
[2]1997 U.S. EPA E-GRID database - New England Power Pool generation resource mix.
[3]As defined within the State of Connecticut Public Act 98-28, Renewable Portfolio Standards.
[4]Class II Renewables will come from hydropower sources and may include biomass sources; all Class II Renewables will meet the Green-e renewable definition.
[5]Non-Renewables will come from natural gas sources and/or hydropower sources.
[6]Emissions rates for Green Mountain Energy[sm] are estimated based on typical emission rates from natural gas sources with which we may contract, and assumes a maximum 50% natural gas mix in the product.
[7]1997 U.S. EPA E-GRID database - New England Power Pool emissions profile.
[9]Nitrogen oxides are formed during high-temperature combustion of fuels. The gas contributes to smog.
[10]Carbon dioxide is formed during the combustion of carbon-based fossil fuels. The gas is considered a greenhouse gas that may contribute to global climate change.

Following passage of legislation in 1998, electricity competition in Connecticut became available to all customers last year. Existing utilities were required to reduce customers' bills by 10% (not counting adjustments for increases in the price of fuel). Suppliers were invited to offer competitive alternatives, and the state agreed to provide funding to encourage renewable energy. Ultimately, all electricity suppliers will be required to obtain at least 5.5% of their power from renewable energy sources, whether they offer a specific green power product or not.

For additional information, see Connecticut's restructuring web site at http://www.dpuc-electric-choice.com/.

Rhode Island

Following passage of legislation in 1996, Rhode Island became the first state in the country to begin allowing competition in the sale of electricity, first for industrial customers in 1997 and then for all customers in 1998.

Thus far, there has been very little competition in Rhode Island because regulated utilities have been required to offer standard offer electricity at a price that has been below the wholesale price of electricity, thereby making it difficult for suppliers to enter the market. Over time, however, as this price begins to rise and exceeds the wholesale price of electricity, a competitive marketplace will be created and suppliers will likely begin offering competitive alternatives. Green power may be among the first products offered by suppliers.

For additional information, see Rhode Island's restructuring web site at http://www.ripuc.org/ELECTRIC/Electric.htm.

Renewable Energy in the Restructured Market

The evolution of competitive markets for electricity has led to significant growth in the development of renewable energy. Recent research by the National Renewable Energy Laboratory has found that approximately 54 MW of new renewables capacity has recently been built to supply newly competitive markets in New England, California, Pennsylvania, and New York, with considerably more renewable power being planned.

As of July 2000, green power was being competitively marketed to retail customers in five states: Connecticut, California, Maine, New Jersey, and Pennsylvania. [2] Green power is also being sold competitively in wholesale power markets in Illinois and New York.

The green power market is just getting underway in Connecticut and Rhode Island. But as electricity restructuring progresses and markets become more robust, green power markets can be expected to grow.

Types of Green Power Products

Green power products typically provide customers with electricity that is "greener," or more environmentally friendly, than the overall system mix of electricity. Laws that define exactly what constitutes green power typically vary by state. The majority of the new renewable capacity that is being developed for competitive green power markets is wind energy, but as indicated in the chart below, solar energy, landfill gas, and

[2] A number of suppliers in California ---whether offering green power or traditional electricity --- have recently sent many of their customers back to their local utility's generic electric service because of the severe price spikes and power shortages that the state has recently experienced regarding electricity. One of the largest suppliers – Green Mountain Energy – has stated that once California rewrites its rules to allow for more robust competition, it hopes to again offer green power in that state (it still is continuing to offer green power to customers in Pennsylvania, New Jersey, and Connecticut).

geothermal energy also make up a portion of existing renewable energy capacity for green power programs.[3]

New Renewables Capacity from Green Power Marketing

Source	kW in place	%	kW planned	%
Wind	81,200	92.1%	82,130	99.9%
Photovoltaics	368	0.4%	87	0.1%
Landfill Gas	1,600	1.8%	0	0.0%
Geothermal	5,000	5.7%	0	0.0%
Total	88,168	100.0%	82,217	100.0%

Green power is sold in a variety of forms. In Maine, one electricity supplier is offering a 100% green power option. And in Connecticut, the Connecticut Energy Cooperative was the first supplier in New England to offer a green power product certified by Green-e.[4] Both products are comprised of power generated from biomass, small hydro, and wind resources and are priced at a premium of about 1¢/kWh above the price of traditional power (the "premium"). Meanwhile, at a January, 2001 press conference attended by the Mayor of Hartford as well as others, Green Mountain Energy announced a Green-e certified green power product that will cost approximately 6 cents per kilowatt-hour. It will consist of wind, hydropower, natural gas and possibly biomass sources.

The table below shows green power product offerings, prices, and the resource composition of products in Connecticut, Maine, New Jersey, and Pennsylvania offered as of August, 2000[5]:

State	Company	Product Name	Premium (Cents/ kwh)	Monthly Fee	Resource Mix	Green-e Certified
CT	CT Energy Coop	EcoWatt	1.00	Initial $30	100% renewables	Yes
ME	Energy Atlantic	PureGreen Energy	1.00		100% renewables	

[3] Bird, L. and B. Swezey. December 2000.
[4] Green-e is an independent organization that certifies electricity as "green" if it meets certain pre-determined criteria. For more information about green-e, see www.green-e.org.
[5] Swezey, B. and L. Bird. Green power Marketing in the United States: A Status Report. Fifth Edition. National Renewable Energy Laboratory. August 2000.

NJ	Conectiv	Nature's Power 50 Nature's Power 100	-0.01 0.79		25% small hydro, 25% biomass 50% small hydro, 50% biomass	Yes Yes
	GreenMountain	EcoSmart Enviro Blend	-0.05 0.85	$3.95/m $3.95/m	1% new renewables, 99% nat. gas/hydro 45% small hydro/landfill gas, 5% new	Yes
PA	Electric America	100% Hydro	-0.85		100% large hydro	
	Energy Cooperative of Pennsylvania	Eco Choice100	0.00	$5/year	100% renewable, biomass and geothermal; 5% new	Yes
	GreenMountain	EcoSmart Enviro Blend Nature's Choice	-0.13 0.81 1.44	$3.95 $3.95 $3.95	1% new renewables, 99% nat. gas/hydro 45% small hydro/landfill gas, 5% new 95% small hydro/landfill gas, 5% new	Yes Yes
	Mack Services Group	100% Renewabl	-0.28		100% renewable; 5% new	Yes
	Power Direct	Clear Choice	0.35		Retires emissions credits	

Installation of On-Site Green Power Generation

As an alternative to purchasing power from a supplier, a number of businesses are evaluating the feasibility of making their own power (on-site power generation). On-site power generation, also known as distributed generation, has a number of unique advantages. A business can use the power it needs and then sell its excess power to the local utility, through a process called "net metering" in which the business can basically "run the meter backwards". Having on-site power generation capability also gives businesses back-up power in case the main power grid goes down or becomes too expensive. It thereby provides increase reliability for a business.

A number of New England businesses have installed on-site green power generation. Case studies of such examples can be found later in this report.

Green Certificates

One additional way to support green power in some areas of the country is through the purchase of "green certificates", also known as "green tags". These pieces of paper are somewhat like stock certificates, except that they reflect ownership of the environmental

characteristics of electricity. Their use allows for electricity and its environmental attributes to be bought and sold separately.

In some markets, green power certificates may simply reflect the premium that the customer is willing to pay for a supplier's green power. The customer simply pays a price premium for the green power attribute, or certificate, and then does nothing further with the certificate.

In other markets, however, the certificate may have additional trading value. If a state has a renewable portfolio standard requiring all suppliers to provide a minimum amount of renewable energy, or emissions performance standards that prohibit suppliers from releasing more than a maximum amount of certain emissions into the atmosphere when they generate power, purchasing green power certificates from consumers or businesses with on-site green power generation may be a way that suppliers can fulfill their obligations under these laws. Development of a robust certificate market could significantly impact the economics of on-site renewable generation by increasing the total value of the renewable attribute produced.

Renewable certificates have been offered on some power exchanges. In addition, some renewable generators have begun selling green power certificates directly to customers. For instance, PG&E National Energy Group is building an 11.5 MW wind farm in Madison County, New York. PG&E announced that it will sell Pure Wind™ certificates (the equivalent to green power certificates) directly to interested customers. Pure Wind™ certificates correspond to the environmental attributes associated with equivalent amounts of wind-generated electricity delivered to the New York Power Pool. PG&E National Energy Group set the certificates at a price of $40 for one megawatt hour.

The sale of green certificates provides an easy, quantifiable, and verifiable way for retail customers, including businesses, to purchase renewable energy. Increased use of certificates will help advance green power markets, and in doing so, will provide expanded opportunities for businesses seeking innovative ways to participate in and profit from that expansion.

IV. Business Purchases or Use of Green Power

Market Research on Willingness to Pay for Green Power

Market research indicates that there is a large potential market for green power, both among residential and commercial customers. Although "complex and difficult to assess because of its diversity and the fragmented nature of small business", the Electric Power Research Institute (EPRI) concludes that "…there is a market, potentially a very significant market, for green energy among small- and medium-sized businesses."[6] Research indicates that the general public has a favorable view of renewable energy – an important finding for businesses that may be trying to appeal to the general public by purchasing green power.

A recent review of utility market research into willingness to pay for renewable electricity drew the following conclusions[7]:

- Customers favor renewable electricity despite knowing little about it. Percentages of customers who are favorable increase even more, however, when customers are educated about options. Solar and wind are the most favored sources of generation.
- Surveys show that 52 to 95 percent of residential customers say they are willing to pay at least a modest amount extra per month for electricity from renewable sources. Willingness to pay increases when customers are educated about energy options.
- Willingness to pay follows a predictable pattern: on average 70 percent of residential customers are willing to pay at least $5 per month more for electricity from renewable sources; 38 percent are willing to pay at least $10 per month more; and 21 percent are willing to pay at least $15 per month more.
- Limited data suggest that customers may be even more likely to pay a premium for renewable electricity when offered it in a competitive market setting rather than by the regulated utility in a non-restructured state.

Obviously, the number of customers actually signing up for green power is less than the number that indicate in a survey that they would pay more for renewable energy. Nonetheless, even if they themselves do not sign up for green power, these people would be favorably disposed to those businesses that do purchase renewable energy. Research shows that over 80% of a utility's customers have a higher opinion of their electric utility if it offers a green power product, whether they actually purchase the product or not. It therefore can be assumed that this same feeling of goodwill would be extended to businesses purchasing green power.

The latest renewable energy market research has attempted to learn more about businesses' willingness to pay for green power. A recent survey was conducted of 690

[6] Green Power Guidelines: Volume 2, Assessing Small- and Medium-Sized Business Market Segments. Electric Power Resource Institute. March 1999.
[7] Farhar, B. Willingness to Pay for Electricity from Renewable Resources: A Review of Utility Market Research. National Renewable Energy Laboratory. July 1999.

non-residential customers who might be more inclined than the average non-residential customer to purchase green power but who were not known to be buying green power. Seventy percent of respondents said they would be willing to pay 10 percent extra for green power for some portion of their electricity use. Seventeen percent of respondents indicated that they would use green power to fulfill 10 to 25 percent of their electricity needs if it were available at a 10 percent price premium.[8] These findings point to widespread interest in green power on the part of a number of businesses, and suggest the evolution of a robust commercial green power market as electricity markets evolve in restructured states like Connecticut and Rhode Island.

An Overview of Green Power Purchases by Businesses

The growth of green power offerings, both in competitive and non-competitive markets, has created an exciting opportunity for businesses to purchase green power. In regulated markets to date, more than 80 utilities have developed or have announced intentions to develop green pricing programs for their customers. Under these programs, regulated utilities offer a green power option to their customers in addition to their normal electricity offering.

Meanwhile, in restructured electricity markets where customers can choose from a variety of electricity suppliers, a number of green power offerings have become available. Green power has thus far been offered to retail customers in Connecticut, Pennsylvania, Maine, New Jersey, California, and soon in Ohio. Thus far, at least twelve different power marketers have been operating in one or more states:

- Commonwealth Energy (CA)
- Conectiv (NJ)
- Connecticut Energy Coop (CT)
- ElectricAmerica (PA)
- Energy Atlantic (ME)
- Energy Cooperative of Pennsylvania (PA)
- Go-Green.com (CA)
- Green Mountain Energy (CT, NJ, PA, CA, OH)
- Mack Services Group (PA)
- Power Direct (PA)
- PG & E Energy Services (CA)
- Utility.com (CA)

Green power is also sold competitively in wholesale power markets in Illinois and New York.

Some analysts previously thought that businesses would be too concerned about profit margins to be willing to pay more for green power or renewable energy. Increasingly,

[8] Holt, E., Wiser R., Rudd, M. and Innis, S. Understanding Non-Residential Demand for Green Power. September 2000.

however, businesses have recognized that green power purchases can help them meet corporate goals related to environmental improvement and sustainable business practices. They also can maintain or enhance their environmentally friendly public image by buying green power.

Importantly, large customers like businesses are more economical for marketers to serve than small residential customers. Therefore, businesses are playing a significant role in stimulating nascent green power markets.

For over five years businesses have been purchasing green power. A number of examples may be found from regulated utilities' green pricing programs:[9]

- Public Service Company of Colorado -- In 1997, PSCo introduced its *Windsource* program, a green pricing program that offers customers an option to purchase 100-kWh blocks of wind energy for $2.50 per month or a rate premium of 2.5¢/kWh. The wind energy for the program is supplied by a new 20-MW wind project in northeastern Colorado. The program is fully subscribed with about 15,000 residential and 350 businesses customers. Since its inception, the program has grown dramatically – in fact, the program's subscriptions have enabled the utility to add 29 new wind turbines to its generation. Part of the reason for the program's success can be traced to its aggressive corporate support; its subscribers include US West, CE & I Steel, Coors, IBM, and the cities of Boulder and Denver.

- Los Angeles Department of Water and Power -- In May 1999, LADWP launched its *Green Power for a Green LA* program, which enabled residential customers to purchase green power to supply 20% of their electricity needs (approximately 100 kWh per month) for an extra $3.00 per month (a premium of 3¢/kWh). To supply the program, the utility purchased four to five million kWh of renewable energy per month through the Automated Power Exchange. LADWP also will use 1.2 MW from a new landfill-gas project; it also has a wind energy purchase contract with Enron Power Marketing. As an additional part of the program, participating customers have been given free energy efficiency products and services to help reduce their bills and offset the increased cost of their green power. Commercial and industrial customers have also been invited to participate "by adding a minimum to their total energy bill for green resources." Thus far, the Los Angeles Dodgers, the Los Angeles International Airport, and Robinson May Department Stores have signed onto the program. The utility also recently installed solar panels on the roof of the Los Angeles Convention Center. The panels spell "LADWP".

- Traverse City Light and Power -- Since 1996, the small municipal utility in Traverse City, Michigan has offered a green pricing program for its residential and small commercial customers. The program sells the output from a 600-kW wind turbine that it made possible. Residential and commercial customers pay a 1.58¢/kWh

[9] Information concerning these green pricing program examples is drawn from Swezey, B. and L. Bird. Green Power Marketing in the United States: A Status Report. Fifth Edition. National Renewable Energy Laboratory. August 2000.

premium to purchase 100% of their power from wind energy -- a 17%–25% increase in the average monthly bill. Currently, 140 residential and 20 commercial customers participate in the program, representing nearly 2.0% of the total customer base.

A number of other examples may be found of businesses that have purchased or installed green power in the restructured, or competitive, marketplace. To find out more about these purchases, we interviewed a number of companies and prepared these case studies:

TOYOTA

On Earth Day, 1998 Toyota announced its decision to purchase 100% renewable power to serve its U.S. headquarters and other non-manufacturing facilities in California. The original impetus for purchasing green power was to help Toyota move towards a sustainable way of doing business. Additionally, Jim Cooke of Toyota said, "The reason we made this decision is that we know our customers are smart. We are selling a number of advanced technologies – including hybrid gas/electric vehicles – and we wanted to set an example for our competition and challenge them to step up and take responsibility."

Toyota Motor Sales President and CEO Yoshi Ishizaka stated in 1998 that "As the fourth-largest auto company in the U.S., Toyota has a responsibility to the environment that runs beyond designing, building, and selling clean, efficient, and high quality cars and trucks. We must also reevaluate every part of our operations from recycling waste paper to purchasing renewable-resource electricity."

Cooke as well as William Reinert, Environmental Manager for Toyota, were heavily involved in the research into utilizing green power. The first step was to find the right potential energy providers. Following that, there was a need to obtain buy-in for the idea from corporate management, including the vice president and senior vice president of finance. This was of particular importance given that green power would cost a little more than Toyota's regular electricity. However, when the impact of the improvement of their environmental image and their opportunity to become more sustainable were considered, a consensus was reached that this was the right decision to make.

Toyota's non-manufacturing operations in California, including its national headquarters, an 80-acre campus, port facilities, a design facility and its regional operations have purchased green power. It is estimated that this annual usage is 40 million kWh of renewable energy, which is equal to the amount of power used annually by 6,060 average California homes. The makeup of this green power includes solar, wind and geothermal and was estimated initially to add roughly a 7-8% premium on a $1.5 to $2 million yearly electric cost. However, Toyota has been looking at putting in risk management initiatives that may help offset that premium. Beyond their own purchases of green power, Toyota arranged for a 10 percent discount on the price of green power for employees who switched at home; some twenty percent switched.

Toyota has been very pleased with its experience with green power, especially with the chance to make a measurable and quantifiable contribution. In addition, Toyota believes

that its purchase of green power has made them the only car manufacturer to "put their money where their mouth is" when it comes to responsible energy use.

Mr. Reinert asserts that the company has not made publicity about its green power an extremely high priority. However, Toyota did issue a press release to announce its decision and as part of its celebration conducted a "first pitch ceremony" on Earth Day, 1998 at Edison International Field, home of the Anaheim Angels.

KINKO'S

Kinko's Environmental Vision Statement explicitly states that it will "use energy-efficient technologies and renewable energy sources."

Kinko's began purchasing green power in 1999, and remains one of the most recognizable names to do so. So far, Kinko's has purchased green power at 90 of its branches in eight states, and continues to explore ways to expand this commitment to more stores. The decision on whether to purchase green power is up to each local store. Currently, green power purchases represent 9% of Kinko's total energy use, and Larry Rogero, Kinko's Environmental Manager who championed the project from the beginning, has indicated Kinko's hopes to expand that commitment by 2 to 5% per year. Kinko's is also a member of the Green Power Market Development Group, whose overall goal is to support the creation of 1000 MW (10% of members' total energy use) of new renewable energy sources by 2010.

In selecting green power products, Kinko's asked suppliers about price and Green-e certification (which included requiring a certain percent of the power to be from new renewable sources). Interestingly, Kinko's also considered the ability of a green power supplier to provide associated public relations programs including newspaper advertisements and in-store posters. Green Mountain Energy, which has supplied most of Kinko's green power, used the opportunity to co-brand to Kinko's employees – employees received Ben & Jerry's, Starbuck's, and Blockbuster gift certificates for signing up with Green Mountain Energy at their residences.

While Kinko's expressed overall satisfaction with its commitment and an intention to expand it, there have been setbacks. In San Diego, during recent energy price spikes, the government did not cap energy prices of customers who had switched to a competitive supplier. Kinko's had switched to a green power supplier and saw prices escalate to three to four times the capped price of standard offer customers, affecting the profit-sharing programs in their San Diego branches. However, Kinko's stated that the positive benefits of their purchases --- including the global impact from the use of green energy, the positive press surrounding their purchases, and the elevation of their corporate image --- have outweighed the isolated difficulties they have experienced. The biggest barrier it cites is the need for education about the specifics of switching to green power as well as general education about the relationship of power consumption to climate change.

PATAGONIA

Some companies, like Patagonia, use the premium involved in purchasing green power as an incentive to reduce their overall energy consumption. They use energy efficiency measures to balance the green power premium, which they admit can be significant. Patagonia was an early entrant to the green power market, having started the research process for purchasing green power in 1997 in anticipation of deregulation. Jill Zilligen, Vice President for Environmental Initiatives, says that Patagonia's core values led them to want to be a leader in the green power market.
In an effort to drive the market, and not just participate in it, Patagonia has demanded that suppliers provide them with 100% new renewable energy sources for all of their purchases. It has chosen suppliers who are also generators, rather than going through wholesalers. Patagonia purchases have involved wind power in California and Colorado and solar power in Reno, Nevada. Ms. Zilligen says that Patagonia has been very satisfied with its purchases in all three locations, and hopes to expand its purchases to include other branch locations. She recommends that after researching and deciding to purchase green power, businesses should put out an RFP for exactly what they want (i.e. 100% new renewable sources), and negotiate prices.

EPISCOPAL POWER & LIGHT

Episcopal Power & Light (E P&L) is a 501(c)(3) corporation that is part of The Regeneration Project of the Bay Area Episcopal Churches in San Francisco. The organization began as a mission of the Episcopal Environmental Network, a nationwide group of church volunteers active in environmental issues. As part of their mission, the group created a program beginning in 1997 to encourage Episcopal churches to actively address global warming by becoming buyers of electricity generated from renewable energy sources (wind, solar, and bioenergy).

The Reverend Sally Bingham, an ordained priest and Environmental Minister at Grace Cathedral on Nob Hill in San Francisco, got the project started by recruiting Bay Area churches to use 100% renewable energy sources for their electricity needs. According to Rev. Bingham, "We have a theological responsibility to be responsible stewards of the environment…We are doing it because humans are destroying the planet. If we love creation, it is our responsibility to be good stewards and stop putting this CO_2 in the air."

Episcopal Power & Light served as the catalyst to recruit churches to participate. The churches then bought renewable energy at a premium from a "green" energy provider, principally Green Mountain Energy. More than 60 churches in the Episcopal Diocese of California (Bay Area) signed on to the program to buy energy from 100% renewable sources, resulting in a dramatic 50% decrease in greenhouse gas emissions from the Bay Area Diocese.

Presently funded by foundation grants, Episcopal Power & Light now is blossoming into an interfaith organization. Interfaith Power & Light organizations have been created throughout the country. Catholics, Jews and Protestants are working together to encourage their religious institutions to buy renewable energy. In doing so, they find that they can "save money, save power and save the world," according to Steve MacAusland,

who is directing East Coast activities for the organization. The group recently promoted its renewable energy mission in England, Nepal and Australia.

Most renewable energy in the program was purchased from Green Mountain. The supplier offered churches $35 for each of their members who signed up to buy green energy for their residences. St. John's in Clayton, California received $3,000 to $4,000 from Green Mountain over the past several years by having significant participation by parishioners. The church used the money to buy energy-efficient light bulbs to reduce its energy needs.

According to Rev. Bingham, advertisements were placed in the Diocese newspaper to promote the program. The ads listed participating churches and asked, "Where is your church?" Promotion of the program also has included brochures, news conferences and articles in newspapers and magazines. Green Mountain arranged a news conference to announce that Grace Cathedral in San Francisco had joined the program. Green Mountain also produced a brochure with Episcopal Power & Light to describe the program to prospective churches and parishioners. International World Wildlife Fund featured EP&L in its international climate change campaign.

Thus far, EP&L has participated in three news conferences with Green Mountain and one news conference with LADWP (Los Angeles Department of Water & Power), which has its own green energy product. EP&L has been featured in the Wall Street Journal (Front Page, February 2000), the Chicago Tribune, the New York Times, and a variety of church publications and ecumenical magazines.

BIRKENSTOCK

Birkenstock is a well-known California-based comfort sandal company. It has a reputation for being committed to the environment, and its target sales audiences are people who are very concerned with the environment.

Several years ago, members of the Birkenstock "Green Team", a group of employees that identify environmental options for the company, brought the idea of using green power to the company's CEO, Margot Fraser. She fully supported the idea. Birkenstock began working with Green Mountain Energy, and for roughly a year, worked out the details of using green power for its corporate operations. The company ended up selecting the "Wind for the Future 2.0" option from Green Mountain, consisting of 100% renewable energy including twenty-five percent that would be developed from new wind turbines.

Birkenstock has not yet calculated the exact premium or additional monthly cost it pays for using green power, but it knows it is considerably more expensive. Ms. Fraser said that the company hoped to balance the additional cost through simultaneous improvements to its heating, ventilation, and air conditioning systems. Birkenstock has been very pleased with the results of its use of green power, and with the fact that its power use was in keeping with the company's core beliefs on the environment. It is

currently looking at ways to further expand its commitment, including the use of photovoltaic cells.

Birkenstock actively pursued publicity to announce its green power commitment. Working with Green Mountain, in July, 1999 Birkenstock organized a very successful press conference to announce that it would be the first large commercial customer for Green Mountain's program. U.S. Secretary of Energy Bill Richardson praised Birkenstock at this press conference, which received significant coverage. Other than this general publicity to the world-at-large, Birkenstock did not attempt to communicate its use of green power directly to its customers. Birkenstock did receive a very positive reaction from its employees, with whom it shared details of the program through a series of brown bag luncheons.

FETZER VINEYARDS

Fetzer Vineyards is a California-based winery with a strong commitment to environmental practices, including a focus on developing and initiating sustainable business practices. When California was deregulated in 1998, several electricity suppliers approached Fetzer. The company thought deregulation provided a perfect opportunity to initiate green power use. Eventually it put out an RFP that asked for bids for various levels of green power supply (50%, 80%, 100%). The environmental management team recommended to the President that Fetzer go all the way on green power use and chose the 100% level. The president agreed. Eventually Fetzer signed with PG&E, which eventually sold to Enron.

According to Environmental Manager Patrick Healy, Fetzer has purchased 100% green power for the 60,000 kWh of electricity used annually in its winery and visitor center operations. The electricity is produced from a variety of renewable energy sources, including hydroelectric, biomass, solar, wind and geothermal.

Fetzer considers its experience with green power to be extremely positive. The most significant benefit to Fetzer has been the decision's impact on its employees. By doing the right thing, it believes it can impact employee retention and job satisfaction in a positive way. Its use of green power was communicated in large part through the company's "E3" team, a group of employees that focuses on issues of sustainability, economics, the environment and social equity.

The company has not communicated its use of green power directly to its customers. However, Fetzer performed a significant amount of publicity at the time of its purchase decision. Since then, the company has received public recognition for its overall environmental efforts.

SHERATON RITTENHOUSE SQUARE HOTEL

The Sheraton Rittenhouse Hotel is one of the largest users of wind power in the state of Pennsylvania today, according to owner Barry Dimson. The purchase of wind power,

representing 20,000 KWh per month --- approximately 6 to 7 percent of its energy utilization --- complements its status as an environmentally friendly establishment.

The purchase of green power was championed by Dimson and his brother, both because of their personal interest in protecting the environment as well as the value they believe an environmentally friendly reputation can bring in terms of public relations. However, according to Dimson, price can be a major barrier in purchasing green power. What it comes down to is "how much wind can you buy without taxing the bottom line." Dimson found that buying from a large energy supplier was the only economical way. After a few months of analysis, the Sheraton Rittenhouse began purchasing wind power in 400 KWh blocks from Conectiv Energy in the beginning of 2000. With competitive pricing from its supplier, the hotel was able to keep its energy costs down.

The hotel's status as an environmentally friendly hotel, with fresh air circulation and organic linens as well as green power, has fueled groups such as the EPA and the Clean Energy Council to use the venue as a site for conferences and meetings. Dimson felt that the green power purchase alone would not have increased hotel business. He also cited a favorable reputation with insurance companies as an added benefit. When asked whether he would consider purchasing a greater amount of wind power in the future, Dimson replied, "my commitment is to get as much renewable [product] …as possible."

Case Studies of Business Installations of Green Power

BJ's WHOLESALE CLUB, INC.

BJ's Wholesale Club not only buys green power, it also separately hosts green power in the form of solar panels on the roofs of its "big box" stores. For its purchases, BJ's currently buys the EnviroBlend product from Green Mountain Energy, which includes at least 5% new renewable sources. BJ's supplies 100% green power to one of its stores, which overall represents about 4% of BJ's total electricity use. BJ's began hosting green power in 1998, and began purchasing it in May of 2000 for what Terry Civic, an energy buyer for BJ's, describes as a minimal premium. B.J.'s has been very satisfied with its purchases and with its status as a host site, both in performance and in the amount of positive press coverage that its green power involvement has generated.

As a host for green power, BJ's has worked with Sun Power to provide sites for solar panels which provide the energy that Sun Power now markets under the AllEnergy brand. The idea was hatched by BJ's energy utilities manager in 1998 working with Sun Power. After extensive engineering studies proved that no building modifications would be necessary to allow for the installation of the solar panels, the idea easily won approval at the highest levels. Panels were installed in North Dartmouth, Massachusetts in December 1998, and in 1999 in Middletown, Rhode Island and at a branch in Pennsylvania. Because the location on the rooftop was all but invisible to customers at the store, B.J.'s also arranged to have some panels installed just over the entrance in order to show customers

what it was doing. In addition, informational kiosks were set up in each of the participating stores to educate customers and staff about the project.

GRAVESTAR, INC.

Gravestar is a real estate and asset management firm whose chairman, John O'Connor, has been strongly committed to solar power for years. This commitment led to Gravestar's decision to install solar panels at two of the buildings that it manages, the Greenworks, Inc. building and the Porter Square Mall in Cambridge, Massachusetts. The solar panels provide power to the common areas of the buildings, supplying about 33% of the power to the common areas of the Porter Square Mall and 4% of the power to the common areas in the Greenworks building. During the daytime, any excess power that these buildings do not need is routed to the local grid.

Paul Lyons, the mechanical engineer who directed the project for Gravestar, says that the projects have provided visibility and created local goodwill. He said that Gravestar has been pleased overall, though future development will be limited to new buildings because of the adverse economics of retrofitting older buildings to host solar panels. At the Porter Square mall, additional costs were incurred because of Gravestar's efforts to create visibility. The company built supports to lift the panels high enough over the flat roofline that mall-goers could see them.

Lyons noted that one of the primary barriers to the development of solar power distributed generation systems is the artificially low price of retail electricity, as well as the lack of real-time electricity pricing. Solar power, obviously, is generated during the daylight hours, during times of peak electricity rates. Yet utilities offer only the standard price for solar power, which reflects the average price of electricity over a 24-hour period. Since there are more off-peak than on-peak hours, the offer price is often 60% below the actual real-time value price of the energy. He recommended that any companies that decide to host solar should work with their local utilities to get a price that accurately reflects the real-time value of the power.

SOUTH COUNTY HOSPITAL HEALTH CARE SYSTEM (R.I.)

South County Hospital in Rhode Island produces its own power by fuel cell generation via solar panels on its roof. According to Brian Wallin, Vice President of Marketing and Community Affairs, the hospital produces approximately 200 KWh per day, or about one third of its daily peak load. Along with Facilities Manager Ken Sosha and two other team members, Wallin studied fuel cells and worked with the Department of Defense to create a green power program. Key to their success were grants that aided in the implementation of the new technology coupled with good relations with power suppliers and an extensive knowledge of fuel cell technology.

With grant monies and an estimated savings of $60,000 to $90,000 annually, Mr. Wallin expected a three-year return on the hospital's investment. When asked about key motivations for the switch to green power, Mr. Wallin cited the hospital's proximity to

salt marshes, its setting in a coastal venue, its desire to keep its "good neighbor" status in a residential area, as well as backup power generation's benefits of economic efficiencies and necessary redundancies.

Mr. Wallin felt that combining energy efficiency with green power is also an important component. In order to lessen the costs of the fuel cell, South County Hospital utilizes HVAC temperature controls, motion-activated switches, and energy-efficient lighting. It also uses the power generated byproduct of steam to heat its water supply. Mr. Wallin stressed good communication with the energy supplier, a grasp of the economics involved and clear expectations as keys to success in purchasing green power. South County Hospital is in the midst of a $24 million addition to its facility. Although its fuel cell was down for a period of time while the hospital waited for a new part, it has since been repaired and is now back up and running.

Suppliers' Perspectives on Business Purchases of Green Power

GREEN MOUNTAIN ENERGY

Green Mountain Energy is one of the most well-known green power marketers in the country today. In January, it announced it would begin selling green power in Connecticut. It has also sold Green-e certified renewable energy electricity products, primarily consisting of wind and hydropower, in Pennsylvania, New Jersey, and California. It just recently began operating in Ohio. While Green Mountain primarily sells to residential customers and some small businesses, it now has a licensing agreement with BP Amoco that allows it to provide service to bigger customers, like Toyota.

Tom Rawls, Green Mountain's Chief Environmental Officer, noted several benefits for businesses that purchase green power, including marketing and public relations benefits, boosts in employee morale and commitment building, and consistency in meeting corporate visions for firms that have expressed a commitment to the environment. Challenges to marketing green power to businesses primarily come down to price. Where the standard offer price for electricity is lower than the actual cost for producing the electricity, green power products are at a disadvantage because there is no price incentive for customers to switch products.

For the residential market, Rawls felt that Connecticut's educated and relatively wealthy population represents a good potential market for green power products; for businesses that are more sensitive to price, however, the challenge is greater. In Rhode Island, Rawls felt that the most significant barrier facing a potential green power supplier is the relatively small size of the market. He noted the significant costs that can be incurred in becoming a licensed retailer in a state; with Rhode Island's smaller population base it may take a longer time to recoup the upfront costs.

Rawls noted that it will be difficult for retail green power products to compete with large-quantity electricity deals that some businesses have already structured with the utilities.

He suggested that businesses interested in green power might consider going about their purchases incrementally, buying green power at the headquarters building to start, for instance, rather than at the energy-intensive manufacturing plants. Or businesses could begin by offering a green power promotion to their employees, in which they reimburse employees for the additional costs of having green power in their homes.

Rawls also recommended that state renewable energy funds work with environmental groups to ensure that they play an appropriate role in encouraging businesses to buy green power. To date, he felt that many businesses have been afraid of purchasing green power because environmental groups have been quick to criticize those businesses for "green washing" or for not doing "enough", and they are fearful of re-opening the subject. He believed that environmental groups needed to play a more constructive role in congratulating and recognizing businesses for what businesses *are* doing, regardless of whether their commitments are deep and regardless of the motives behind them.

CONNECTICUT ENERGY COOPERATIVE

The Connecticut Energy Cooperative (CEC) is a member-owned and controlled licensed electric aggregator that is increasingly marketing its EcoWatt green power product to small and large businesses in Connecticut. Bob Maddox, Vice President of Marketing at CEC, looked forward to an increasing number of business customers beginning in 2001, and anticipated that a few businesses that buy power in substantially larger units than residential customers could represent a significant portion of CEC's customer load.

In addition to the global environmental benefits of green power, Maddox identified marketing and in-house benefits such as increased employee morale and employee retention to businesses that purchase green power. He acknowledged, however, that many of the benefits are intangible and not easily reflected on the "bottom line." The cost premium and small business owners' lack of understanding about deregulation and the environmental impact of power production have been the greatest barriers so far to successfully marketing green power to business customers.

Maddox hoped that state renewable funds will support the marketing of green power to businesses by assisting in the generation of media exposure for those that buy it. In addition, he suggested that state renewable funds could provide significant financial support to marketing green power to businesses either by subsidizing the price premium or by giving green power business purchasers preference in receiving funding from other state programs.

ATLANTIC RENEWABLE ENERGY CORPORATION

Atlantic Renewable Energy Corporation is a wholesale supplier of wind energy in the Atlantic region. Its sales are concentrated in the states of West Virginia, Pennsylvania, New York and more recently Iowa. It does not do direct marketing to the consumer.

Principal Bill Moore felt that the most important tool to evaluate the benefits and barriers of green power are case studies that can be used as examples to those considering green power purchases. He stated that businesses can utilize green power to "improve their environmental image as they position themselves in the retail market." Moore believed the marketing of green power was a chicken and egg problem; if there were no consumer interest due to unfamiliarity with the product, there would be no demand and little incentive to supply.

When asked whether Atlantic Renewable would consider supplying green power in the states of Rhode Island and Connecticut, he said it has considered selling in Connecticut due to its base of disposable incomes and its containing a number of nuclear power facilities, which would tend to increase demand for green power. Mr. Moore also stated that he felt that regulatory values associated with green power purchases, as well as the utilization of renewable funds, would both help to leverage green power marketability and to reduce the overall costs of purchasing green power.

SUN POWER

Sun Power Electric, a division of the non-profit Conservation Services Group (CSG), was formed in 1998 as the first all-solar utility in the country. Through unique partnerships with big-box stores, including BJ's Wholesale Club, Sun Power is using the roofs of these large stores as host sites for photovoltaic (PV) arrays.

Sun Power currently has generating plants operating in Massachusetts, Rhode Island, and Pennsylvania. Jennifer Wylde, Manager of Energy Services, says that as a non-profit, Sun Power looks to private sector partnerships both as a way to secure host sites and for support in marketing the installations, although Sun Power provides ideas for media events and model press releases for their partners. In addition to supporting their host partners with media campaigns and promotional events, Sun Power, through CSG, is able to offer energy conservation and efficiency services.

The electricity generated from the solar plants is sold into the wholesale power market and marketed in New England through AllEnergy, which CSG also owns, as a green power product known as ReGen or in Pennsylvania as an attribute-based green power product through Green Mountain Energy. The host sites also receive the avoided electricity benefit of the power produced from those locations.

Though there are economic barriers to overcome for any supplier who makes the first investment to offer green power in a state, Sun Power sees great potential in Rhode Island for the ReGen product produced by its existing plant because the Rhode Island population is highly educated with a large population of concerned environmentalists. Further, being based in New England, Sun Power is committed to creating local consumer demand that will increase the amount of solar power entering the power grid, encourage local PV manufacturers, and support the New England PV industry.

V. Policies and Programs That Encourage Businesses to Purchase Green Power

A number of programs and policies exist to help encourage Connecticut and Rhode Island businesses to purchase green power products or implement onsite generation of renewable energy. These include the two states' renewable energy funds, disclosure and certification initiatives, and certain grant and incentive programs.

Renewable Energy Funds

Connecticut and Rhode Island both have renewable energy funds that are supported by a small charge to all electricity customers. This small charge adds up to millions of dollars that each fund can use to support renewable energy by providing capital, incentives, and grants for renewable energy projects and by sponsoring programs to promote renewable energy, such as customer education. This report, in fact, was made possible from support provided by the two states' funds.

Connecticut Clean Energy Fund

The Connecticut Clean Energy Fund (CEF) is a fund dedicated to promoting the use of clean power in Connecticut. Managed by Connecticut Innovations, Inc., the Fund invests in projects that produce or build consumer demand for clean power and in companies that market clean energy products or services. Capitalization is expected to be approximately $15 million in 2000 and to grow to approximately $120 million in 2005.

Rhode Island Renewable Energy Collaborative

The Rhode Island Renewable Energy Collaborative is supporting several programs with $4.5 million in 2001. These programs include the following:

- Retailer/ Customer Incentives
- Renewable Supply Open RFP
- PV and Small Wind Support
- Customer Education, Aggregation, and Marketing
- Project Development

The two funds are eager to be of assistance to businesses interested in purchasing green power. They may be reached at:

Connecticut Clean Energy Fund
999 West Street
Rocky Hill, CT 06067
Phone: (860) 563-0015
http://www.ctcleanenergy.com

Rhode Island Renewable Energy Collaborative

Al Contente
Rhode Island PUC
89 Jefferson Blvd.
Warwick, RI 02888-1046
Phone: (401) 941-4500
Email: al.contente@ripuc.org

Support for the Retail Green Power Market

Certification and disclosure mechanisms help businesses make informed electricity purchases, enabling them to distinguish among different products and to better understand the environmental impacts of their electricity usage. They also lend credibility to the green power market, enabling businesses to have confidence that their money is supporting renewable energy.

Green power certification programs like Green-e assist electricity customers in identifying products that include significant amounts of renewable energy. Disclosure regulations – like those found in Connecticut -- typically require retail electricity suppliers to inform customers and state government about the type of fuel mix (coal, natural gas, wind, hydro, solar, etc.) and associated emissions (nitrogen oxides, sulfur oxides, carbon dioxide, etc.) associated with their electricity products.

Green-e

Neither Connecticut nor Rhode Island has developed certification standards that define what is green power. However, non-governmental organizations have developed programs to certify green power products. For instance, the Green-e certification program, founded in California by the Center for Resource Solutions, certifies green power products that contain a minimum of 50 percent of eligible renewable resources. A certain percentage must be from new renewables.

In New England, eligible renewable resources include: wind, solar, geothermal, small hydroelectric (less than 30 MW), and biomass (including landfill gas). In addition, the non-renewable, fossil portion (if any) of an eligible product must have air emissions (SO_2, NO_x, and CO_2) equal to or lower than the average emissions of the regional electricity wholesale market. For additional information, go to http://www.green-e.org.

Power Scorecard

For businesses that wish to see a more detailed assessment of the environmental impact of their electricity purchases, the Pace Energy Project has developed the Power Scorecard as a tool to evaluate, rather than define, different electricity products. The Power Scorecard is an interactive web-based tool for consumers that grades electricity products based on the different types of generation resources and their associated environmental impacts, as well as the percentage of electricity obtained from new renewable resources. For additional information, go to http://www.powerscorecard.org/scorecard.cfm.

Rhode Island Incentives

Subject to PUC approval, in Rhode Island incentives will be offered to help reduce the costs of purchasing green power for businesses. Rhode Island Renewable Energy Collaborative programs will financially support the purchase of green power:

- **Green Power Customer Rebate** --- Through its Green Power Customer Rebate program, green power suppliers will receive a subsidy of $125 per new customer (for the first 5,000) and $75 per customer (for the next 15,000) as long as each customer is purchasing a Green-e certified product or if the product includes at least 10% new renewable energy.

- **Large Customer Purchase Incentive RFP** --- The Collaborative will be issuing a Large Customer Purchase Incentive RFP to encourage businesses to propose incentives that would encourage them to purchase green power. Businesses might suggest an expanded customer rebate, an employee matching program, or another form of financial leverage.

For more information, please see the Collaborative contact listed above.

Support for On-site Renewable Energy Development

There are a number of federal and state grants and incentives to help reduce the costs of businesses interested in developing on-site renewable energy distributed generation projects. These include:

- **Federal Renewable Energy Production Tax Credit**

The Federal Renewable Energy Production Tax Credit (PTC) allows for businesses to take a tax credit for every kilowatt hour (kWh) of electricity they generate from qualifying renewable energy sources during a 10-year period. The PTC was set at 1.5¢ per kWh and is adjusted annually for inflation. As of November 1999, the adjusted rate was 1.7¢ per kWh.

The PTC applies to wind generating facilities, closed loop biomass facilities, and facilities using poultry waste to produce electricity. To qualify, these facilities must be brought on line before January 1, 2002. For further information, go to the IRS' http://www.irs.ustreas.gov or call (800) 829-3676.

- **Federal 10 Percent Business Investment Tax Credit**

The Federal 10 Percent Business Investment Tax Credit enables businesses to take a 10 percent tax credit for purchases of solar and geothermal renewable energy systems. The credit is limited to $25,000 plus 25 percent of the total tax remaining in one year. For further information, go to the IRS' http://www.irs.ustreas.gov or call (800) 829-3676.

- **Modified Accelerated Cost Recovery System (MACRS)**

The Federal Modified Accelerated Cost Recovery System (MACRS) allows for businesses to recover investments in solar, wind, and geothermal equipment by using an accelerated depreciation schedule that depreciates qualifying renewable energy equipment over a 5-year schedule, instead of over a standard 20-year period. For further information, go to the IRS' http://www.irs.ustreas.gov or call (800) 829-3676.

- **U.S. DOE Solicitation for Financial Assistance Applications [Solid State Energy Conversions Alliance (SECA)]**

The SECA financial assistance program provides cost sharing to qualifying projects that seek to develop 3 kW to 10 kW solid-oxide fuel cells. For more information, go to http://www.fetc.doe.gov/business/solicit/2000pdf/40854/40854.pdf.

- **U.S. DOE FY01 Broad-Based Solicitation Involving Research, Development, and Demonstration to Support Renewable Energy and Energy Efficiency**

This program, from U.S. DOE's Office of Energy Efficiency and Renewable Energy (EERE), provides matching funds for basic and applied research, cooperative demonstrations, and related activities concerning renewable energy and energy efficiency. For more information, refer to Sol# DE-PS36-01GO90000 and go to http://www.golden.doe.gov/businessopportunities.html under "Solicitations". Any questions must be submitted in writing to: Ruth E. Adams, US Department of Energy, Golden Field Office, 1617 Cole Boulevard, Golden, CO 80401-3393. Fax: (303) 275-4788; Email: ruth_adams@nrel.gov.

- **Connecticut Property Tax Exemption (Local Option)**

Connecticut allows municipalities the option of offering a property tax exemption for certain renewable energy systems involving active solar water heat, active solar space heat, photovoltaics, wind, or hydro. For more information, contact Kevin Guernier at the Connecticut Office of Policy and Management at (860) 418-6297 or at kevin.guernier@po.state.ct.us

- **Rhode Island Renewable Supply Open RFP**

The Rhode Island Collaborative's Renewable Supply Open RFP provides funds to encourage the development of behind-the-meter renewable energy projects, including fuel cell, landfill gas, wind power and biomass-powered microturbine projects. Approximately $1.5 million will be available through the open RFP in 2001. For more information, please see the Rhode Island Collaborative's contact listed above.

- **Rhode Island PV and Small Wind Support**

The Rhode Island Collaborative's PV and Small Wind Support program provides a buydown to customers of pre-qualified vendors to support the installation of photovoltaic and small wind power projects. The buydown for 2001 for PV is $3 per watt or 50 percent of the installed cost (whichever is less), and for small wind is $1.50 per watt or 50 percent of the installed cost (whichever is less). For more information on this incentive program, please see the Collaborative contact listed above.

- **Rhode Island Income Tax Credit for Hydroelectric Power**

Rhode Island statutes provide an income tax credit of up to $50,000 for the installation costs of 15 MW or smaller hydroelectric power production facilities. For more information, go to the Rhode Island Division of Taxation at http://www.tax.state.ri.us, call (401) 222-2950, or e-mail pmcvay@tax.state.ri.us. Rhode Island statutes also provide a property tax exemption for certain hydroelectric equipment.

VI. Barriers to Purchasing Green Power---and How Businesses Can Overcome Them

As has been noted in this Report, a large number of businesses throughout the United States have made the commitment to purchase green power and have successfully carried out this decision. Whether through a green pricing program of their local electric company, a green power option offered by a competitive green power supplier in the competitive marketplace, or through their own on-site installations, these businesses have been able to enjoy the benefits of green power.

Certain barriers have at least temporarily deterred some businesses from pursuing green power. Fortunately, however, most of these barriers can be readily surmounted. This section analyzes some of these hurdles and offers solutions for how to overcome them.

A lack of awareness

Most companies are busy producing products or services and therefore may not even know about the possibility of purchasing green power and the resultant benefits that can be achieved. In Rhode Island and Connecticut, news about green power is just starting to be disseminated. This Report is an attempt to help get the word out to Connecticut and Rhode Island businesses. It is hoped that the discussion in this Report and its attached Bibliography will be of assistance to businesses interested in considering green power.

In addition, the Connecticut Clean Energy Fund and the Rhode Island Renewable Energy Collaborative are both significant resources for businesses in their respective states. Both organizations stand ready to be of assistance. The Connecticut Clean Energy Fund may be reached by calling 860-563-0015, and the Rhode Island Renewable Energy Collaborative may be contacted at (401) 941-4500.

A lack of opportunities

Many businesses are unaware of green power options because they have not yet been offered opportunities to purchase this type of power. For almost a hundred years, electricity was a heavily regulated commodity whose rates were set by the government. Electricity came in only one variety --- whatever was being offered by the local distribution company --- and there was no choice involved. But recently, both Connecticut and Rhode Island made significant changes in their laws and passed legislation that allowed competition with regard to the retail purchase of electricity. Customers that wished to continue receiving power from their local utility could continue to do so. But those who wanted to obtain power from other sources --- including renewable sources --- could now be offered that option.

Initially, suppliers were slow to enter Rhode Island and Connecticut to sell their own brands of electricity. Many found it hard to compete against the “standard offer” rate offered by the local utility and set by the state under its market rules. Many focused their attention on other, larger states. The good news now, however, is that at least two

suppliers have begun offering green power in Connecticut. Meanwhile, Rhode Island is seriously considering an incentive package that may lure green power suppliers to offer their products in that state. So businesses may soon find a number of opportunities to purchase green power.

Businesses do not have to wait for suppliers to offer them green power, however. They can put in their own renewable energy installations at their sites and begin receiving green power. If they have any excess power, they can sell it back to the local utility. Examples of such installations in New England have earlier been provided in this report.

A hurdle faced in some states has involved the rates that customers must pay for electricity if they decide to go back to their regulated utility's "standard offer" after having switched to a competitive supplier (whether a green power supplier or another type of supplier). In Connecticut, this has not been an issue since purchasers may go back to the regular standard offer and pay the same rates as those who had never switched to a competitive supplier. In Rhode Island, however, those businesses that wish to go back to a regulated utility after having switched to a competitive supplier (whether green or not) must pay a different category of rates --- known as the "Provider of Last Resort (POLR)" Rates --- which currently are higher than the standard offer rates they would otherwise have been charged had they not switched to a competitive supplier. There is a possibility that this may change, however; a number of large commercial users currently subject to POLR rates, organized under the Energy Council of Rhode Island, are urging the state to allow them to pay standard offer rates rather than POLR rates.

The economics of purchasing green power

As has been noted earlier, green power sometimes costs more than other forms of electricity. Although the price has come down considerably due to impressive advances in technology, the cost of solar cells continues to be relatively high and therefore the cost of solar energy, for example, may be more expensive. On the other hand, the cost of generating wind power has been reduced dramatically over the years, so that now wind power in many regions is close to being competitive to traditional fuel sources.

The price differential for purchasing green power is often not large. It may represent a 10 to 15 percent premium over electricity from traditional sources. In order to keep the costs down, suppliers often mix a certain minimum percentage of energy from renewable fuel sources with energy from other forms of cleaner fuels --- such as natural gas --- to produce a product that is better for the environment yet still affordable.

Suppliers will often offer businesses the option of purchasing just a portion of their electricity from renewable fuel sources --- and the rest from an unspecified regional mix of fuel sources used to produce the electricity sold in the wholesale marketplace. This is another way in which businesses can make a commitment to the environment while still keeping their costs down.

Businesses may also be able to benefit from state or Federal financial incentives

that will help lower their green power costs. For example, as discussed earlier, the Rhode Island Renewable Energy Collaborative hopes to help subsidize certain green power costs

Even if green power costs a little bit more at retail than electricity from traditional fuel sources, businesses may still find the purchase of green power to be a prudent financial expenditure. They may achieve increased levels of reliability that financially are well worth investing in. Or they may find green power investments to be a relatively inexpensive means of offsetting carbon dioxide emissions or participating in credit trading programs.

Perhaps even more significantly, businesses may also find that the purchase of green power gives them image enhancement and marketing benefits that are worth far more than the slight premium they may have to pay for green power. As noted earlier, any added cost for green power may be a small price to pay for maintaining or creating a corporate image that reflects a concern for the environment. Businesses may achieve considerable goodwill --- and differentiate themselves from their competition --- by being able to inform existing and prospective customers that their electricity purchases are from renewable energy sources. The marketing benefits when translated to dollar values may far exceed whatever slight additional premium businesses may have to spend.

Just as a business may build goodwill with its customers by purchasing green power, it also may boost its goodwill with its employees by buying green power. Employee morale and employee retention may both benefited by a company's purchase of renewable energy.

Corporate decision-making processes

Corporate decision-making processes need to be understood when a business is considering the purchase of green power. The procurement or finance department of a company may traditionally be responsible for purchasing energy. It may base its energy decisions on price alone unless it receives word from another department about other factors that are important. Therefore, it is crucial for a company's marketing department or corporate management to become involved in order to ensure that the marketing and image enhancement benefits of purchasing green power are brought to the attention of those who are purchasing energy.

In some companies a founder or a strong CEO may feel a strong personal sense of corporate stewardship and may unilaterally direct the purchase of renewable energy. Even if this is not the case in a company, the corporate decision-making process should not be seen as an insurmountable hurdle, since even in companies as large as Toyota issues have been able to be resolved satisfactorily in order to enable these companies to make their green power purchases on a timely basis.

VII. Proving the Public Relations Case for Business Purchases of Green Power

One of the key benefits for businesses that purchase green power is the opportunity to publicize their purchases to their customers and their shareholders. This kind of publicity can enhance a business's image and perhaps even increase sales. As part of this report we undertook an examination of the kind of publicity that certain businesses, including many featured in our case studies, have received as a result of their purchases of green power.

The primary avenue for analyzing this publicity was through one-on-one interviews with company representatives. For almost all companies, we were able to interview either the person responsible for the purchase of green power or for generating publicity about the organization. None of the companies interviewed had performed its own formal evaluation or analysis, such as surveys or focus groups, of the public relations impacts of their green power purchases. However, through the interview process, which provided many interesting anecdotal examples, and through a review of pertinent materials, we have been able to analyze many of the qualitative and quantitative benefits companies received.

Each individual company representative pointed to specific qualitative public relations benefits of the company's green power purchase. Qualitative benefits would include instances of increased awareness or improved perception of a company by a key audience which might be existing or potential customers, shareholders, or employees.

The primary quantitative method for measuring the public relations benefits for companies was achieved through an audit of the publicity or press coverage that certain green power purchasers received as a result of their purchases.[10]

What follows is an overview of the public relations impacts of the following green power purchasers: Birkenstock, Fetzer Vineyards, Toyota Motor Sales, Episcopal Power & Light, Patagonia, New Belgium Brewery, and Kinko's. Each overview includes a review of media placements that resulted from their green power purchases as well as an evaluation of their established quantitative benefits.

[10] Copies of the known print coverage were obtained and reviewed. Articles were evaluated to determine whether the reader, upon reading the article, would likely have a favorable opinion of the company based on the information contained in the article. Articles determined to be positive were then measured to determine the actual reach of this article. To do this, the circulation of the publications was first obtained. Then, because publications are most likely to be read by others in addition to the individual purchaser, this number was then multiplied by standard industry factors designed to more accurately gauge readership. For general news outlets such as daily newspapers, the accepted industry standard is to multiply circulation by a factor of 2.5. For magazines, including industry trade publications, the circulation is multiplied by a factor of 4. This reflects the fact that magazines tend to have a longer "shelf life" and typically are passed to other individuals after the subscribers read them.

BIRKENSTOCK

Publicity Overview

In July of 1999, footwear manufacturer Birkenstock made public its intention to purchase green power for its U.S. corporate headquarters and distribution center in Marin County, California and its premier retail store in San Francisco.

In coordination with its energy provider, Green Mountain Energy, the company held a high-profile press conference to announce that it would be the first large commercial customer for Green Mountain's program. The press conference was held in July 1999, and included the participation of U.S. Secretary of Energy Bill Richardson, who lauded Birkenstock for its commitment. Birkenstock received significant coverage on this press conference, including coverage in regional newspapers and radio stations, on-line business news sources, and environmental and energy trade publications.

Birkenstock successfully achieved significant media coverage of its decision to use green power. Coverage appeared in newspapers in the home region of Birkenstock, allowing for an increased perception of Birkenstock as a good "local neighbor". In addition, coverage appeared in several prominent energy and environmental publications and online news sources, such as California Energy Markets, Energy.com, and the Environmental News Service. Much of this coverage reached an audience with a natural interest in and support for green power measures, all of whom might also be potential customers of Birkenstock. The print coverage alone of this announcement appeared in publications with a total circulation of 128,885 and an equivalent readership of 322,222.

Media Coverage Summary

Outlet	Circulation	Equivalent Readership
Marin Independent Journal	40,850	102,125
Tri-Valley Herald	33,535	83,838
Norton Advance	8,500	21,250
Pacific Sun	46,000	115,000
KCBS FM, LA	NA	
California Energy Markets	NA	
Energy.com	NA	
Yahoo Finance	NA	
Green Power Network	NA	
Environmental News Service	NA	
Retail Services Report	NA	
Eren Network News	NA	

Total Circulation: *128,885*
Total Equivalent Readership: *322,222*

Overall Public Relations and Image Benefits
Birkenstock is a company that is well known for its commitment to the environment; its target sales audience is very concerned about environmental issues. The company's purchase of green power represents a business decision in keeping with its core beliefs, and enables it to display to its audience that its environmental commitment is earnest. As such, the company's purchase of green power has served to further enhance its corporate image. Birkenstock also points to the positive reaction of its employees as another significant benefit from the firm's green power purchase.

FETZER VINEYARDS

Publicity Results
In September of 1999, Fetzer worked with PG&E Energy Services to promote its decision to become the world's first wine producer to purchase a 100% renewable source energy mix. The company's press release announcing its intent to purchase green power was picked up in several industry trade publications immediately after the announcement. Since that time, the company's green power use has been featured in food and beverage related publications such as Food Engineering and Vegetarian Times, and has also been featured in broader stories on green power use that appeared in Denver's Rocky Mountain News and The Business Journal. Fetzer's commitment to green power appeared in publications with a combined circulation of 832,581 and a total equivalent readership of 2,832,357.

Media Coverage Summary

Outlet	Circulation	Equivalent Readership
Denver Rocky Mountain News	331,978	829,945
Business Ethics Magazine	14,000	56,000
E Magazine	70,000	280,000
Retail Services Report	NA	
Food Engineering and Ingredients	NA	
Food Engineering	48,706	194,824
Vegetarian Times	367,897	1,471,588
The Business Journal	NA	
Megawatt Daily	NA	

Total Circulation: *832,581*
Total Equivalent Readership: *2,832,357*

Overall Public Relations and Image Benefits
In addition to general news articles and features on its green power use, Fetzer has also garnered significant publicity through awards and commendations on its overall environmental commitment. The company's use of green power contributed greatly to its

receipt of the annual Business Ethics award from Business Ethics Magazine. In addition, Fetzer was a recipient of the "Climate Wise" Partnership Award from the US Environmental Protection Agency.

Fetzer considers its experience with green power to be extremely positive. It believes the most significant benefit for the company has been the impact on its employees. By doing the right thing, Fetzer believes it can impact employee retention and job satisfaction in a positive way.

TOYOTA

Publicity Overview

In the spring of 1998, Toyota announced its decision to purchase green power. Toyota coincided this announcement with Earth Week, and had a "first pitch ceremony" at Edison International Field, home of the Anaheim Angels. Its announcement received considerable coverage. This coverage included prominent energy trade publications such as Energy User News and Electric Light & Power as well as coverage on National Public Radio. Since that time, Toyota has been prominently mentioned in additional industry coverage of the move towards green power. These trade publication articles detailing Toyota's efforts with green power have reached an audience of 188,464 people with an equivalent readership of 753,836.

Media Coverage Summary

Outlet	Circulation	Equivalent Readership
Retail Services Report	NA	
Electric Light & Power	38,464	153,856
Energy IT	NA	
Energy User News	50,000	200,000
Power Markets Week	NA	
Retail Services Report	NA	
Utility Business	50,000	200,000
The Electricity Daily	NA	
E	NA	
Energy User News	50,000	200,000
National Public Radio	NA	

Total Circulation: *188,464*
Total Equivalent Readership: *753,836*

Overall Public Relations and Image Benefits

Toyota has been very happy with its experience with green power. The company is most pleased with the opportunity it creates to make a contribution to the environment in a way that is measurable and quantifiable. In addition, the company feels it has made Toyota the only car manufacturer to "put their money where their mouth is" when it comes to responsible energy use.

EPISCOPAL POWER & LIGHT

Publicity Overview

In the beginning, there was a nationwide group of church members active in environmental issues. Out of this mission was born Episcopal Power & Light. Designed originally to help church members put their faith into action, the not-for-profit corporation encourages Episcopal churches to actively address global warming by becoming buyers of electricity generated from renewable energy sources. In its first three years of operation, the organization signed up more than sixty Episcopal churches in the San Francisco Bay Area, resulting in a dramatic 50% decrease in greenhouse gas emissions from the Episcopal Diocese of California.

Promotion of the program has included brochures, news conferences and articles in newspapers and magazines. Renewable electricity vendor Green Mountain Energy arranged a news conference to announce that San Francisco's Grace Cathedral joined the program. Green Mountain also produced a brochure with Episcopal Power & Light to describe the program to prospective churches and individual parishioners and even sent representatives to church meetings to help promote the program. In addition, the EP&L program has been featured by the International World Wildlife Fund in its international climate change campaign.

To date, EP&L has participated in three news conferences with Green Mountain Energy and one news conference with the Los Angeles Department of Water & Power (LADWP). Episcopal Power & Light has been featured on the front page of the Wall Street Journal as well as in significant articles in the New York Times, Chicago Tribune, Los Angeles Times and numerous magazines and church publications. Print coverage of the EP&L program has reached readers in publications with a combined circulation of 6,005,269 with an equivalent readership of 15,449,671 people.

Media Coverage Summary

Outlet	Circulation	Equivalent Readership
Los Angeles Times	1,098347	2,745,867
New York Times	1,066,658	2,666,645
Wall Street Journal	1,841,188	4,602,970
San Francisco Chronicle	495,286	1,238,215
Denver Post	353,786	884,465
Chicago Tribune	664,584	1,661,460
The Amicus Journal	250,000	1,000,000
Virginia Episcopalian	29,000	116,000
Mill Valley Herald	10,500	26,250
Dubuque, IA Telegraph Herald	33,899	84,747
Portland, ME Press Herald	72,021	180,052
Bangor, ME Daily News	78,000	195,000
Yes! The Journal of Positive Futures	12,000	48,000

Total Circulation: *6,005,269*
Total Equivalent Readership: *15,449,671*

Overall Public Relations and Image Benefits
Episcopal Power & Light has received an enormous boost from publicity about the organization and its concept. The idea of putting faith into action by purchasing green power was a truly powerful story. Episcopal Power & Light is now evolving into an interfaith organization. Interfaith Power & Light organizations have been created from California to Maine. Catholics, Jews and Protestants are working together to encourage their churches and synagogues to buy renewable energy. In doing so, they find that they can "save money, save power and save the world," according to Steve MacAusland, Director of East Coast Activities for Episcopal Power & Light.

PATAGONIA

Publicity Overview
In July of 1998, Patagonia worked with Enron Energy Services to promote its commitment to using renewable energy for all of its California electricity needs and its position as the first company in California to commit to using 100 percent wind energy to power its operations. Media coverage of Patagonia's decision appeared in leading electric industry trade publications such as The Electricity Daily and Electricity Journal. The company was also featured in broader stories on what companies are doing in the area of green power. These stories appeared in the Los Angeles Times and Green@Work magazine.

General print coverage reached readers in publications with a combined circulation of 1,098,347 with an equivalent readership of 2,745,867 people.

Media Coverage Summary

Outlet	Circulation	Equivalent Readership
Los Angeles Times	1,098,347	2,745,867
Electricity Journal	NA	
The Electricity Daily	NA	
Green@Work Magazine	NA	

Total Estimated Circulation: 1,098,347
Total Equivalent Readership: 2,745,867

Overall Public Relations and Image Benefit
Patagonia has had a very positive experience with its use of green power. The company strives to be a strong environmental advocate in many ways, and its commitment to using green power fit nicely in this effort. The company described its use of green power at the beginning of a recent catalogue and even gave readers information on how they could personally switch to green energy sources. The company also sees a long-term

competitive advantage in using green power because it makes Patagonia extremely efficient in its power use.

NEW BELGIUM BREWERY

Publicity Overview
In February 1999, the New Belgium Brewing Co.of Fort Collins, Colorado announced that it would purchase 1.8 million kWs of wind power from a new 660kW wind turbine to be built near Medicine Bow, Wyoming. The company committed to pay an annual premium of $500,000 per year for ten years, a decision which added twenty to thirty cents to each barrel of beer it produced.

Carbon dioxide (CO_2) is a natural byproduct of the fermentation process required to produce beer. The company's commitment to wind power was a way to reduce its impact as a generator of CO_2, a greenhouse gas that leads to global warming. The company's green power decision led to overwhelmingly favorable media coverage. Feature stories appeared in the New York Times, Denver's Rocky Mountain News, and the Denver Post as well as in an Associated Press wire story that was published in newspapers around the country.

Print coverage reached readers in publications with a combined circulation of 2,498,492 with an equivalent readership of 6,905,352 people.

Media Coverage Summary

Outlet	Circulation	Equivalent Readership
New York Times	1,066,658	2,666,645
Rocky Mountain News	331,978	829,945
Denver Post	341,554	853,885
The Coloradoan	N/A	
Omaha World-Herald	219,891	549,728
Northern Colorado Business Report	NA	
Colorado State University	NA	
Associated Press	NA	NA
Associated Press	NA	NA
The Times Union (Albany)	98,997	247,493
Solar & Renewable Energy Outlook	NA	
Food Focus	NA	
Mother Earth News	402,414	1,609,656
Environmental News Network		
Solar Today	7,000	28,000
Energy Services Bulletin	NA	
Watts in the Wind	NA	
Energy Markets	NA	

Front Ranger	NA	
MountainFreak Magazine	30,000	120,000

Total Verified Circulation 2,498,492
Total Equivalent Readership: 6,905,352

Overall Public Relations and Image Benefit
The New Belgium Brewery Co. has had an incredibly successful experience with green power. It is proud to call itself "the first wind-powered brewery in the United States." By powering its operations with wind power, the company dramatically reduced its carbon dioxide emissions, enhanced employee morale (its 70 employees voted unanimously to reduce their bonuses and purchase wind power), and trumpeted its green power commitment in a very creative marketing campaign that featured a field of New Belgium beer bottles with wind turbines on them. One news outlet referred to New Belgium's beer as "no-carbon beer." The company may produce a special release beer that specifically promotes the wind power theme.

KINKO'S

Publicity Overview
Kinko's, the nationwide office copying center chain, announced in November 1999 that a large number of its stores were switching to green power. Some 75 stores in California and 15 stores in Pennsylvania have purchased green power. A number of stores in Colorado have also switched.

Its announcement was heralded in a number of publications including The Energy Report, Megawatt Daily, Waste News, Utility Business, and the Loveland (CO) Daily Reporter-Herald. Print coverage reached readers in publications with a combined circulation of 188,464 with an equivalent readership of 442,336 people. Recently, Kinko's was written up in Fortune Magazine as one of the top 100 employers in the country; the company's environmental awareness, including its purchase of green power, received kudos.

Media Coverage Summary

Outlet	Circulation	Equivalent Readership
Southeast Power Report	NA	
The Energy Report	NA	
Retail Services Report	NA	
Generation Week	NA	
Megawatt Daily	NA	
Waste News	40,845	163,380
Electricity Journal	NA	
Sacramento Business Journal	13,270	53,080
Public Utilities Fortnightly	6,219	25,876
Utility Business	50,000	200,000

Fortune Magazine	NA	
Loveland (CO)Reporter-Herald	NA	

Total Circulation: 188,464
Total Equivalent Readership: 442,336

Overall Public Relations and Image Benefit:
Kinko's is very happy with its green power decision. It fits nicely with the company's environmental vision statement to use energy-efficient technologies and renewable energy sources. The decision to purchase green power is up to each store, however. According to Larry Rogero, Kinko's environmental manager, "If we think about the long term, there is no choice but to choose energy efficiency and alternative energy sources." Kinko's looks to its suppliers to help create press announcements and advertising around their green power purchases.

Summary of Green Power Benefits and Results

Company	General News Coverage	Trade Industry Coverage	Positive Employee Reactions	Other
Birkenstock	✓	✓	✓	Enhanced corporate image
Fetzer	✓	✓	✓	Enhanced employee morale
Patagonia	✓	✓	NA	Greater business efficiency
New Belgium	✓	✓	✓	Dramatically offset CO_2 emissions
Kinko's	✓	✓	✓	Enviro benefits of using cleaner energy
Toyota	✓	✓	✓	Actions demonstrated substantive enviro commitment
Episcopal Power & Light	✓	✓	✓	Resulted in 50% decrease in greenhouse gas emissions of Cal. Episcopal Diocese

Additional Benefits of Green Power Purchases

Company	Increased Visibility	Positive Association with environmental issue	Increased Employee Morale	Comments
Birkenstock	✓	✓	✓	Governmental recognition of its commitment
Fetzer	✓	✓	✓	Recipient of several high profile awards for its environmental commitment
Patagonia	✓	✓	NA	Enhanced "green" positioning of company
New Belgium	✓	✓	✓	Leveraged green power commitment in its marketing efforts
Kinkos	✓	✓	✓	Aligned with corp. enviro vision
Toyota	✓	✓	✓	"Put their money where their mouth is."
Episcopal Power & Light	✓	✓	✓	Expanding into states beyond CA; becoming Interfaith Power & Light

VIII. Conclusion

Exciting opportunities await businesses that seek to purchase or install green energy. An increasing number of businesses recognize that it makes sound business sense to obtain all or part of their power from renewable sources of energy.

While being good corporate citizens, businesses can potentially achieve enhanced reliability, emission offsets, and government financial incentives from using green power. In addition, they can greatly enhance their corporate images and gain significant goodwill with their customers, their employees, and their shareholders by publicizing their green power purchases.

The opportunity to purchase green power has just become a reality in Connecticut and is soon likely to be offered in Rhode Island. Businesses that seize this opportunity early are likely to reap the benefits of considerable public recognition.