

**Promoting Renewable Energy in a Market Environment:
A Community-Based Approach for Aggregating Green Demand**

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Land and Water Fund of the Rockies/U.S. Department of Energy Report
Boulder, Colorado

May 1997

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PREFACE

This report is the result of a partnership between the Land and Water Fund of the Rockies (LAW Fund) and the Community Office for Resource Efficiency (CORE). It introduces, describes, and justifies a new community-based approach for selling clean power we have developed in Colorado. We believe this grassroots approach can play an important role in commercializing renewable resource technologies in an increasingly competitive electric utility industry.

The LAW Fund's Energy Project, created in January of 1991, promotes sustainable energy policies in the Intermountain West. Based in Boulder, Colorado, the LAW Fund has an interdisciplinary staff of attorneys, economists, policy analysts, marketers, and outreach coordinators who work together to encourage clean energy investments in Arizona, Colorado, Nevada, New Mexico, Utah, and Wyoming.

The Community Office for Resource Efficiency is a non-profit energy office funded by a unique coalition of three local governments and three utilities. Based in Aspen, Colorado, CORE's mission is to promote energy efficiency and renewable energy in western Colorado. CORE was established due to the efforts of a grassroots advocacy group interested in resource efficiency issues.

This report was researched and written by Rudd Mayer, Eric Blank, and John Nielsen at the Land and Water Fund of the Rockies and Randy Udall at the Community Office for Resource Efficiency.

Funding for this report was provided by the U.S. Department of Energy (DOE), the Denver Regional Support Office, and the Advanced IRP Research Program. In our view, the work undertaken to produce this report was critical in leading to the offering of a wind energy product by several utilities in Colorado. Throughout this project we have greatly appreciated the counsel, flexibility, and patience of Cathy Ghandehari, the Contracting Officer's Technical Representative.

Many others played essential roles in developing the Colorado green pricing programs, providing advice, and reviewing draft versions of this report. We would especially like to thank Jeff Ackermann, Tom Bath, Dave Church, Steve Dayney, Bill Early, Barbara Farhar, Bob Gardner, Jan Hamrin, Ed Holt, Ron Larson, Ron Lehr, David Moskovitz, Marc Roper, Rich Shannon, Steve Smiley, Ken Snyder, Blair Swezey, Steve VanderMeer, and Jim Welch.

The views expressed in this report represent those of the LAW Fund and CORE, and not necessarily those of the DOE. The DOE's financial support for this project in no way represents an endorsement of the views or findings represented in this report.

INTRODUCTION AND SUMMARY

Introduction

Electric utilities in the western United States expect to need 10,000 MW of new generating capacity by 2005 — enough capacity to power four cities the size of Denver, at a cost of up to \$10 billion (WSCC, 1996). Renewable energy technologies could meet a portion of this need as they generally have no fuel costs, are environmentally benign, and would tap into the region's enormous solar and wind resource.

Integrating renewable energy into the region's resource base, however, presents challenges. Today, renewable resources are more costly than fossil-fuel-fired technologies, in part because renewables are capital-intensive, requiring hefty initial expenditures on equipment in exchange for lower operating costs over time. A second challenge is that renewable energy's environmental and risk diversification benefits are public goods and tend to be undervalued by electricity producers, utility regulators, legislators, and consumers.

During the 1980s, Integrated Resource Planning (IRP) was developed to quantify these benefits and internalize them into the decisionmaking of utilities and regulators. Although IRP has led to increased investment in renewable energy, it was designed for an industry of vertically integrated monopoly utilities. Today, however, the industry is moving toward a competitive structure that will eventually allow retail customers to choose their own energy supplier. As a result, key resource acquisitions — having significant environmental consequences — will increasingly be based on the decisions of millions of individual customers, rather than on the resource plans developed by utilities and regulators. In other words, decision making power over key resource acquisitions, decisions with enormous economic and environmental consequences, is shifting from utility boardrooms to family living rooms.

As this shift occurs, new mechanisms will be needed to internalize the environmental, risk diversification, and other benefits of renewable resources into key acquisition decisions. A number of tools — including System Benefits Charges (SBC) and Renewable Portfolio Standards (RPS) — are now being developed to internalize these benefits and to help commercialize these technologies. In our view, these policy initiatives are essential. Indeed, the authors of this report have spent considerable time promoting solar portfolio standards and system benefit charges throughout the Rocky Mountain and Desert Southwest states.

In addition to these regulatory and legislative initiatives, a complementary opportunity exists for further increasing the use of renewable energy. This opportunity involves encouraging residential, commercial, industrial, and other customers to voluntarily pay a little more on their electric bills to purchase clean, renewable energy. Selling renewable energy on its merits would require customers to take personal and corporate responsibility for the environmental and economic

consequences of their energy-use decisions. As customer dollars flow toward clean energy providers, investment funds will follow.

The utility business, however, is fundamentally different from other American industries. For nearly a century, customers have been required to purchase their power from a single supplier. As a result, customers have no experience choosing an electric provider. They are also woefully ill-informed about the economic and environmental consequences of their energy-use decisions. Moreover, since the industry is dominated by large companies operating within a monopoly service territory, there are no clean energy providers with experience marketing a renewable energy product.

As we move toward a utility industry where customers can choose their own provider, it is thus critical to understand how energy suppliers can provide clean power choices to well-informed and educated customers. Information and education are essential to the functioning of any free market. Today, however, very few electricity consumers know where their power comes from or understand the environmental impacts of producing it.

How many Americans know, for example, that the average car burns its own weight in gasoline each year, producing about 12,000 pounds of carbon dioxide? How many know that a coal plant burns one pound of coal and produces two pounds of carbon dioxide for each kilowatt-hour it produces? That the price of wind and solar power has fallen dramatically since 1980? A number of groups are working to develop disclosure and clean power certification requirements that would, if they were adopted, help narrow this information gap.

Even if customers are presented with the relevant facts, however, they may not choose renewable resources in large enough quantities to commercialize these technologies and to produce significant environmental benefits. Not only must information be available, it must be presented in ways that consumers can understand. Clean power is a tremendous product, with many compelling benefits, but like any new product it must be advertised, marketed, and sold. In addition, some customers will rely on others to purchase renewable resources in the hope that they will realize the environmental and risk diversification benefits without having to pay for them. Devising ways to overcome this “free rider” problem is challenging but not impossible.

Given the increasing importance of customer choice as a vehicle for promoting renewable energy, a number of critical marketing issues must be resolved: Can a for-profit supplier cost-effectively market renewable energy? Can customers be convinced to take responsibility for the environmental consequences of their energy use? Is it possible to market renewables in large enough quantities to realize significant environmental benefits? What is the appropriate role for the government to play? The environmental community? Other non-profits?

This report is intended to begin to answer these questions. It first reviews the green marketing literature to learn how other, non-energy green products have been marketed. It next analyzes pre-existing utility efforts to provide a clean energy product — generally in the form of

utility green pricing programs, which encourage customers to pay a little more to purchase clean energy. Based on this review, we introduce a new community-based approach for marketing clean, renewable energy. Finally, we describe our Colorado green pricing case study, now underway, in which the LAW Fund and CORE, working with Colorado utilities, attempt to test this new community-based approach.

Green Marketing Outside the Energy Sector

To understand how to influence the decisions of electricity users in favor of clean energy, the LAW Fund and CORE examined the green marketing strategies used by national brand companies and their advertising agencies. Some of the lessons learned by these companies are applicable to for-profit entities trying to market a clean energy product.

Our review strongly suggests that there is a large market for green products, perhaps as much as 70% of all consumers. Although geographic location, gender, income, education, and organizational affiliation are sometimes relevant, there appears to be no single uniform trait or characteristic that easily identifies consumers who are likely to purchase green products. Neither is there a single green product that appeals to everyone. Indeed, green purchasing behavior often varies, depending on the product, message, and environmental issue.

Most green consumers want to purchase well-defined products that have a clear role in solving environmental problems. For consumers to feel good about the purchase, they want to know that their actions are having a real impact. At the same time, consumers also tend to seek green products that are convenient, that are relatively inexpensive, and that perform as well or better than the alternative.

Green marketing consists of satisfying these consumer demands. To be successful, the green marketer must be credible and its environmental claims must be real. Alliances with environmental groups and other entities — particularly those working to solve the environmental problem at issue — can enhance credibility. Empowering individual consumers with a sense that they are making a difference is an important element of a successful marketing strategy. Upbeat and positive messages that educate consumers are the best way to create this sense of empowerment.

Utility Efforts to Market Clean Power

Like many national brand companies, electric utilities and other energy providers have begun to offer green products. To date, a handful of utilities have developed “green pricing” programs that provide customers with the voluntary option of paying somewhat more on their electric bills to purchase clean energy. In addition, several states have run small retail choice pilot programs that allow customers to choose their own supplier and two of these offered green products.

Generally, the clean power has been produced by wind turbines or solar power. These renewable resources are environmentally superior to traditional fossil fuel, hydroelectric, and nuclear alternatives. Since wind and solar often cost somewhat more than these conventional technologies, green pricing programs have been structured so that participating customers pay the incremental cost difference between the conventional and renewable technology.

Utility Green Pricing Programs

Reviewing the experience of clean energy providers confirms that many customers will purchase clean power. As a rule, however, investor-owned utilities have had greater difficulty designing successful green pricing programs than municipal utilities. Municipals have garnered higher levels of participation and have brought on line more renewable energy. Table ES-1 below summarizes the relative participation rates, and the amount of renewable energy acquired, for the green pricing programs reviewed in this report. Some of these programs are newer than others and the products offered differ. Not all programs were marketed to the entire customer base. Nevertheless, Table ES-1 illustrates our finding that some programs bring more renewable energy on line and achieve more widespread customer participation than others.

Table ES-1

Participation Rates and Amount of Renewable Energy Brought On Line by Utility Green Pricing Programs					
	Customer Base	Participating Green Customers	Participation Rate	Renewable Energy Brought On Line kW	Notes
Investor Owned Utilities					
Niagara Mohawk	1,400,000	145	0.01%	0	Program abandoned
Wisconsin Electric	800,000	6,200	0.78%	0	Existing biomass and hydro facilities
PSCO RET	1,100,000	12,000	1.09%	13	Solar PV
Detroit Edison	1,800,000	195	0.01%	28	Solar PV
Northern States Power	1,400,000	17	0.00%	34	Solar PV
Wisconsin Pubic Service	368,000	2,600	0.71%	36	Solar PV
Publicly Owned Utilities					
SMUD	480,000	350	0.07%	1,200	Solar PV
Traverse City Light & Power	8,000	250	3.13%	600	Wind
Fort Collins Municipal Utility	44,000	700	1.59%	1,500	Wind

Lessons Learned

Our analysis suggests that there are at least three primary reasons — relevant to marketing a clean energy product in a retail choice environment — that help explain why green pricing programs developed by investor-owned utilities have generally been less successful. These key elements are:

the nature of the product offered, the nature of the message and the messenger and the ability to create a sense of community ownership of the clean power program.

NATURE OF THE PRODUCT

The municipal utilities we studied — in Traverse City, Michigan; Sacramento, California; and Ft. Collins, Colorado — offered their customers a well-defined product that had clear environmental benefits. Traverse City installed a 600-kilowatt wind turbine. Sacramento installed 2 to 4-kilowatt solar panels on customers' roofs, while Ft. Collins is installing two 750-kilowatt wind turbines. The environmental benefits were clear and tangible to customers at the time the program was being marketed.

In contrast, investor-owned utilities — including Detroit Edison, Niagara Mohawk, Public Service Company of Colorado, Wisconsin Electric Power Company, and Wisconsin Public Service — offered products that were not well defined or whose environmental benefits were limited or non-existent. For example, several investor-owned utilities set up renewable energy trust funds to solicit contributions. However, it was not clear at the time customers were being asked to contribute to the program how the collected money would be spent. Likewise, Wisconsin Electric Power Company asked customers to pay more to purchase renewable energy from existing power plants located outside the state and in Canada.

CREDIBILITY OF THE MESSENGER AND THE MESSAGE

Another distinguishing characteristic of programs that worked and those that did not was the credibility of the clean energy provider. The non-profit municipal utilities seemed to have significantly more credibility than the for-profit utilities. Our review of media coverage of each green pricing program showed that the environmental community, other non-profit groups, and the media responded much more favorably to programs advanced by municipal utilities (see Attachment A for a summary of the media coverage of these utility programs.)

In addition to the credibility of the messenger, the municipals also were able to deliver a clearer message. As a general matter, these utilities seemed less concerned that selling a clean energy product would suggest to customers that their conventional power was “dirty.” Our review of marketing materials suggests that the municipals were more assertive about the environmental benefits of purchasing renewable energy. In contrast, the IOUs relied on a fuzzy message that did not clearly identify the benefits of paying more for clean power (see Attachment B for selected utility marketing materials).

COMMUNITY OWNERSHIP

Third, the municipal utilities were able to create a sense of community ownership of the clean energy effort. These utilities were able to educate and inform customers about the program in

a way that empowered them to take personal responsibility for the consequences of their energy choices. The municipals were able to successfully tap a spirit of community goodwill, local participation, and volunteerism. They were able to spark dialogue and galvanize interest. They brought to life people's unmet desire to purchase renewable energy.

By tapping community spirit, the municipal utilities were able to successfully market to a broader segment of the customer base including governmental entities, businesses and churches, while the for-profit utilities had a more limited vision. This broader focus by the municipal utilities appeared to be essential in helping to create a sense of community ownership of the utility's clean energy product.

CREATING A SENSE OF COMMUNITY OWNERSHIP

The green pricing programs that have succeeded have tapped community spirit, a sense of pride, and shared values. The marketing messages and public discourse in Traverse City and Ft. Collins emphasized the community's shared vision. The words "our community," "our town," "our environment," "our children," "our future," appear time and again in newspaper articles and letters to the editor.

Successful green pricing programs tap a wellspring of community goodwill. They are visionary by definition. They are participatory. They are grassroots. The utility must help paint this vision. We recognize that this idea of community goes against the grain for many IOUs, which are focused on competition, but we think green pricing or green marketing can only succeed when animated by a sense of generosity, compassion, and public spirit.

A Community-Based Approach to Selling Clean Power

Based on our review of the utility green pricing programs and of the green marketing experience of national brand companies, we believe that the key marketing challenge in the energy area is to develop, in partnership with utilities or other energy providers, a community-based approach to marketing clean power. In our view, a successful community-based, grassroots approach to marketing clean energy depends on creating partnerships between the energy provider, city and county governments, state and federal agencies, civic groups, social service organizations, and environmental groups. The goal is to organize non-profit and governmental entities to supplement the marketing efforts of for-profit clean energy providers in a way that lends credibility, better targets key market segments, and takes advantage of low-cost methods of outreach.

The central message that transforms clean power from a public good into a private good is personal responsibility. For decades environmentalists have berated utilities for causing pollution. Utility executives wore black hats; the rest of us were blameless. But now that clean power is available, a new opportunity beckons. For the first time ever people can exercise a choice to clean up their own pollution. The goal of this approach is to educate consumers so that they feel a sense of

responsibility for the environmental impacts associated with energy use. Every time a light switch is flipped, a hair dryer is started, or a compact disk is played, a gas- or coal-powered turbine generates both electricity and pollution. Although some people know this already, what they do not know is that they now have an affordable clean power choice. By buying wind or solar power, they can use electricity without creating pollution. For a few dollars more a month, they can mitigate their own energy impacts. For example, spending \$10 a month on wind power reduces a Colorado household's production of carbon dioxide by 10,000 pounds each year. That's like not driving 10,000 miles or planting an acre of trees.

To implement this community-based grassroots strategy, we recommend a phased organizing, outreach, and educational effort — surrounding a specific clean energy product — that is coordinated to get maximum media coverage over an extended period of time. The targets of this campaign are governmental bodies (including city, county, state, and federal entities), large and small businesses, employees of both governmental and private organizations, environmental and other community groups, non-profit institutions (such as hospitals, universities, and churches), among many others. The core challenge is to identify the most logical and cost-effective role each institution and organization can play in marketing and purchasing a clean energy product.

Although some green marketers have tried to organize one or the other of these entities, no one has tried to run a comprehensive grassroots campaign to create a sense of personal and institutional responsibility among all of the potential purchasers and promoters of a clean energy product. It is our belief that the combined impact of this broader market effort will be significant, resulting in sustained media attention, greater public awareness, and higher participation in the clean power program.

This community-based grassroots approach potentially offers a number of important benefits in terms of supplementing the efforts of a for-profit clean energy provider. First, it lends credibility in the eyes of individuals, businesses, local governments, and the media. No one entity or segment of the community is asked to bear the burden of promoting clean energy alone. Second, it allows for the cost-effective targeting of market segments that are more likely to purchase clean energy. For-profit clean energy providers — relying on paid advertisements — are not likely to be able to cost-effectively reach individual customer segments with a narrowly tailored message. In contrast, a diverse set of community groups relying largely on volunteers can more cheaply create a broad awareness of the importance of purchasing clean energy with messages targeted to specific audiences.

Third, and probably most importantly, this grassroots approach can help develop a sense of community pride and ownership in the clean energy product. In essence, it can encourage consumers to take personal and institutional responsibility for the environmental and economic impacts associated with their energy use decisions. This strategy thus creates a system of social reinforcement of the clean energy ethic — it ties clean power purchases to maintaining quality of life.

To test this new community-based approach, the LAW Fund and CORE began working with several Colorado utilities during the summer of 1996 to develop a statewide effort to market renewable energy in Colorado. We encouraged Ft. Collins Light & Power to start a wind power program, and we partnered with Holy Cross Electric Association and Public Service Company of Colorado on their joint green pricing efforts. As a result of this work, over a million customers in Colorado now have an opportunity to buy wind power. By any measure — including renewable energy acquired and total participants — Colorado will likely be home to the largest green pricing program in the world.

Already, about 700 customers have joined Ft. Collins' Wind Power Pilot Program, enough to fund two 750 kilowatt wind turbines in Wyoming. Although the actual work of signing up customers has just begun in the service territories of Holy Cross and Public Service Company, the two utilities expect to sign up 5,500 participants in the first full year of the program. Holy Cross Electric Association has sold almost a megawatt of wind power in the last six weeks, signing up more than 800 customers.

In addition to residential customers, cities, counties, large and small businesses, and a diverse range of non-profit institutions in Colorado have already committed to pay a little more on their electric bills to purchase a clean, wind energy product. The number and diversity of customers associated with these very initial results — in significant part based on a grassroots, community-based marketing approach — are so encouraging that we believe our experience in Colorado will likely have great relevance for utilities, renewable energy advocates, green marketers, utility regulators, and independent power providers as we move toward a restructured utility environment.

To successfully market clean energy and build the necessary base of public support for sustainable energy policies, all stakeholders must pull together. No one community or set of customers operating in isolation can possibly transform energy markets in favor of clean power technologies. Our actions today will determine what is possible tomorrow. A cleaner energy future beckons — now is the time to deliver (LAW Fund, 1996).

I. GREEN MARKETING: FROM LEAN CUISINE TO HEALTHY CHOICE, THE EXPERIENCE OF NATIONAL BRAND COMPANIES

The LAW Fund and CORE began our Colorado green pricing case study by examining existing research on green marketing. We studied how national brand companies and their advertising agencies had sold green products, in the belief that some of what these companies had learned would be applicable to selling clean power.

Marketing professionals agree that environmental consumerism is a growing trend. Price, quality, and convenience are no longer the only criteria by which products are judged. Rather, some consumers are increasingly making purchasing decisions based on a product's "greenness." One can now buy "green" antifreeze, toilet paper, household cleanser, computers, furniture, shoes, clothing, appliances, homes, and food. Marketing Intelligence Service, a research firm in Naples, New York, estimates that in 1996, 12.1% of new products made environmental claims. Although greenness is often in the eye of the beholder, more and more consumers are comparison shopping with their environmental and social values in mind. As environmentalism becomes a core value for many, green marketing has become mainstream.

Since about 1990, pollsters, advertising agencies, and national companies have been studying green consumers, in the hope of answering three questions: Who are these people? What motivates their buying habits? And what advertising messages resonate with them?

The Green Consumer

In 1990, the Roper Organization was commissioned to create a demographic profile of the green consumer. This seminal survey, which segmented consumers by environmental attitude, revealed that the number of socially responsible consumers was large and growing. The typical green consumer, said Roper, was:

"... a woman who is educated, affluent, and politically liberal. She is likely to be between the ages of 30-49, have children six years old and older, and reside in a Northeast, West, or Midwest suburb ... she is motivated by a desire to protect her health and that of her children and to preserve the planet for future generations ... she is likely to be influential in the community, and is possibly an activist ..."

The study went on to identify five categories of consumers based on their participation in recycling programs and other environmental activities:

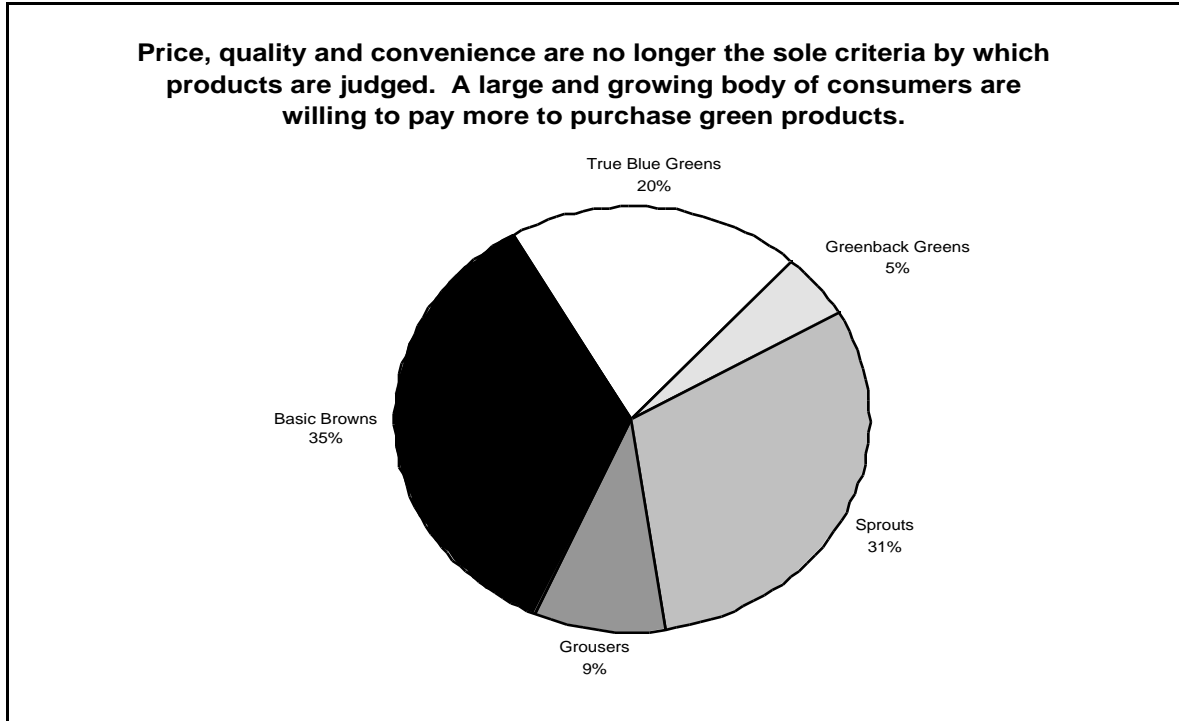
- True-Blue Greens (20%) live according to strongly held environmental beliefs. They are three times as likely to refuse to buy products from a company with a negative environmental image

and twice as likely to buy greener products. They live in the East, Midwest and West, are the oldest and wealthiest category of consumers, and are most likely to be married with children. Six out of ten are women. True-Blue Greens believe that they can personally make a difference in solving environmental problems.

- Greenback Greens (5%) support the environment, typically by giving money rather than by volunteering their time. They are distinguished by their willingness to pay substantially higher prices for green products — up to 15% more in some cases. Slightly more than half are men. Greenback Greens are the youngest and best educated consumer segment, are most likely to be employed full time, and tend to live on the West Coast.
- Sprouts (31%) are a swing group that can go either way, depending on the environmental issue. Although they are pro-environment when it comes to legislation, they are generally not willing to pay more for environmental products. They are relatively affluent and well educated, but have difficulty choosing between economic growth and a healthy environment. They do not believe that their personal actions can have a positive impact on the environment.
- Grouzers (9%) have below average education level and income. They are confused and generally uninformed about environmental issues. They think green products cost too much and that someone else should be responsible for correcting environmental problems.
- Basic Browns (35%) were the largest group. These people are disproportionately male, reside in the South and are employed in blue-collar jobs. They, too, are unwilling to spend more on green products and believe that there is not much individuals can do to make a difference.

A more recent (1996) Roper Green Gauge poll found that 10% of consumers are True-Blue Greens, 5% are Greenback Greens, 33% are Sprouts, 15% are Grouzers and 37% are Basic Browns. The poll also found that consumers' most important environmental concerns are tied to their health and the need to protect our legacy of natural resources. Together, the Roper studies suggest that 50-70 percent of all consumers may pay more for products that improve environmental quality (see Chart 1).

Chart 1



In the early 1990s, a number of other pollsters and researchers attempted to define green consumers in terms of income, education, location, and gender. Their findings suggested that affluence, educational level, and greenness are related; that women are greener than men; and that green consumers are more likely to live on the coasts than in the heartland (J. Walter Thompson, Green MarketAlert, Simmons Market Research Bureau). To explain the linkage between income and green purchasing behavior, Walter Coddington, in his 1993 book *Environmental Marketing*, argued that consumers exhibit pro-environmental behavior only after they have successfully met lower order needs, such as basic survival and personal and economic security.

However, James A. Roberts, a professor of marketing at Baylor University, cautions that because environmental concern and social consciousness have increased in recent years, the size and profile of the green market may have changed dramatically since earlier in the decade. Roberts believes that the green consumer of the late 1990s may not fit the tidy categories of the 1990 Roper study (Roberts, 1996). If he is right, and environmentalism has become a “majoritarian” concern, it may not be as easy to distinguish green consumers based solely on their income and education levels.

According to Roberts, Coddington's approach falters as the awareness of the health effects of pollution increases. Today, says Roberts, even consumers struggling to meet lower order needs are willing to purchase some green products. Indeed, recent research indicates that gender, education, income level, and age are related, but only slightly, to the likelihood of green purchasing behavior. This new model suggests that clean energy, with its slightly higher cost, may appeal to wider range of consumers than once thought.

Other recent surveys suggest that different kinds of green products appeal to different sorts of consumers. For instance, some people are willing to buy recycled paper, while others are drawn to non-toxic products. People who patronize companies like Patagonia or Ben & Jerry's, which donate a share of their profits to charity, may differ from people who boycott companies with weapons contracts.

Organizational affiliation may also suggest green purchasing tendencies. Market simulations conducted by Insight Research, a Boulder, Colorado firm, reveal that membership in, or prior contributions to, environmental organizations may be the most accurate predictor of consumers' willingness to purchase clean power (Byrnes, 1995).

What Motivates Green Consumers?

Conventional marketing wisdom has always stressed "know your customer." By understanding the subtle variables that drive green consumers, clean power providers may be able to convince more people to buy their product. Green consumers are often motivated by four needs: the need for information, the need for control, the need to make a difference, and the need to maintain a lifestyle (Ottman, 1993). All four profoundly affect the way clean power should be marketed and advertised.

Proctor & Gamble's research has shown that green consumers strongly desire information on green products. Consumers want to know what the product is, where it came from, and what environmental benefits it offers. As consumers begin to understand life-cycle impacts, they want to know how and where a product was manufactured and whether and how it can be recycled. According to the 1990 Roper survey, most green consumers get their information from television, radio, newspapers, and magazines.

Because many people believe that both their own health and that of the Earth are threatened, they are buying green products to prevent environmental damage and to protect their health. People want to know that products are environmentally safe. The sheer range of green buzzwords — *organic, natural, non-toxic, recyclable, CFC-free, ozone-safe, biodegradable, pesticide-free* — indicates that consumers are giving increasing weight to product attributes, even those they are unable to see or to feel. People who thirty years ago might have applauded products that had been chemically enhanced, sanitized, or pasteurized, now prefer products touted as "natural" or "healthy" or "safe."

Green consumers want to limit their own environmental impacts. They do not like buying products that will harm the Earth or make them feel guilty. Since they often have imperfect information, many prefer to buy from companies they believe are trustworthy. A brand name provides an added layer of assurance that this product is not harmful. Corporations must reciprocate this trust, acting on their customers' concerns. For example, McDonald's discontinued the use of polystyrene "clamshell" hamburger containers in 1991. The company's president said, "Our consumers just don't feel good about it...so we're changing" (Holuska, 1990).

Green consumers want their actions to make a difference. They may also want to temper the guilt they feel, as consumers, for contributing to environmental problems. Empirical data demonstrates that green consumers are "voting with their dollars," selecting fewer harmful products in favor of more benign alternatives. Consumers also seem increasingly willing to patronize companies that donate part of their profits to environmental groups and other worthwhile charities. Reputation matters, as a recent utility industry experiment demonstrated in Massachusetts. Working Assets, a telephone provider identified with socially responsible causes, signed up 16 percent of all customers in the state's retail choice pilot program — even though its "green power" was little different than the cheaper energy from other competitors (Swezey, 1996).

Most green consumers enjoy their current lifestyle. They want to purchase products and services that offer environmental benefits, but do not require them to change their habits or consumption patterns. Ideally, helping the environment should be easy and convenient. Green consumers want environmental protection built-in, institutionalized. As Paul Hawken has written in *The Ecology of Commerce*, "We must design a system where doing good is like falling off a log, where the natural everyday acts of work and life accumulate into a better world as a matter of course." This suggests an opportunity for clean energy because it is an affordable, easy to buy, environmentally sound alternative to the existing energy mix.

Although green consumers want to have more information, want to have control, want to make a difference, and want to maintain their current lifestyle — they are not interested in making tradeoffs. In other words, they also judge green products by price, performance, convenience, and availability, the conventional buying criteria.

A 1992 Roper survey found that consumers will pay a significant premium — up to 15% — for products that offer a perceived health, environment, or quality of life benefit. Earl Taylor of Cambridge Reports/Research International, says, "Because value resides in a consumer's perceptions, the perceived costs of a product or service are not limited to its dollar price, just as perceived benefits are not limited to its direct, tangible features" (Taylor, 1994). Consumers are now paying significant premiums for organically grown baby food, natural soft drinks, and unbleached coffee filters. Over time, higher prices should be less of a problem for some green products because of economies of scale and declining costs. At this point, however, some green

products are at a competitive disadvantage. On the other hand, price premiums can tap into the belief that if a product is more expensive it must be better.

However they are priced, green products must perform as well as the alternative. Only the most committed environmentalist will buy a poorly performing green product twice. Because the abysmal performance of some early green products discouraged consumers, the misconception remains that some green products are too expensive and may not work. Similarly, green products should be as convenient as conventional alternatives. A concentrated laundry soap that must first be mixed with water may be unappealing to even the greenest consumer.

Selling Green Products

Green products can be sold in many ways. But the marketing strategy employed by most national brand companies has had three elements: product positioning, strategic alliances, and advertising and public relations.

To position a product as green, a marketer must first communicate the nature and scope of the environmental problem and then discuss how the product contributes to the solution. For example, someone marketing clean power might identify air pollution, fossil fuel depletion, acid rain, and climate change as problems that wind or solar power can help mitigate.

Often, the environmental benefits of a green product may be more uplifting and inspiring than the product's utilitarian function. An example is a biodegradable soap that can help Mom or Dad protect a river's water quality while he or she cleans the dinner dishes. A well-presented green product should empower and satisfy the customer, thus engendering brand loyalty. Some utilities have started green pricing programs with this aim in mind. For example, the Sacramento Municipal Utility District has reaped a publicity windfall with its PV Pioneers program. Customers who are proud of SMUD's pioneering efforts to promote renewable energy will be less likely to leave the utility when retail choice begins.

Savvy advertising agencies tailor environmental communications to the demographics and psychographics of the market. Surveys show that lower income consumers react to messages about threats to the health of their neighborhoods or threats to fishing, boating, hunting, and other recreational uses of the environment. Conversely, upscale buyers may react positively to a general conservation message. When targeting affluent customers, who are more likely to be informed about the environment, a product's environmental attributes should be featured as the unique selling point. In a mass market, a product's utilitarian qualities should be emphasized first and its environmental attributes second. An educational message may be needed to buttress a mass market product's environmental claims.

The environmental reputation of a company must be taken into account in positioning a green product. This poses a particular challenge for electric utilities, which are often blamed for air

pollution. In general, specific pledges are more credible than vague statements of good will. Utility X, for example, “pledges to reduce its carbon dioxide emissions by 20% by the year 2010” rather than “utility X cares about the environment.”

Corporate trust can also be projected by messages that encourage consumers to act ethically and responsibly. For example, a utility might ask its customers to take responsibility for the adverse environmental impacts of their household energy use. Such a message shifts the blame from the utility smokestack, where the power is produced, to the home outlet, where it is consumed. Green pricing appeals to some utilities because it “switches the tables” on consumers in the air pollution debate. No longer is it as easy to scapegoat the utility for “producing all that pollution.”

Strategic alliances with stakeholders and/or marketing partnerships are often essential elements of a green marketing strategy. Stakeholders — in the case of clean power they might include environmentalists, consumers, children, and the media — can add value to a product, amplify its appeal, and enhance the corporate image. Stakeholder support increases audience reach, while offering credibility and endorsement value.

Since environmental groups are strong proponents of renewable energy, a utility wishing to offer clean power can benefit from forming constructive alliances with this constituency. Today, more than 16 million people worldwide belong to an environmental group. This is a huge potential market for clean power. If a utility’s clean power program gains the endorsement of environmental leaders, it is more likely to be well received by other customers. However, researchers note that some customers might be less inclined to buy clean power if it were endorsed by the Sierra Club or other controversial group. This caveat aside, we believe that in general a utility will benefit from partnering with environmental groups to promote clean power.

Consumers are also stakeholders in the sense that an informed public will actively support environmentally sound products and manufacturing processes. Marketers need to assess how knowledgeable consumers are about the environmental issues that affect their industry and products. They can then craft messages that will position their product as a means of solving these environmental issues. Dow Chemical, for instance, has aired commercials that show how plastics can be recycled like glass or aluminum. Their ads featured a naturalist who explains how the fiberfill insulation in his vest was made from recycled plastics. Since consumers know very little about energy in general, and electricity in particular, we believe that an educational campaign is a critical element of selling clean power.

Children play an even more promising role as stakeholders because of their enormous influence on their parents’ purchasing behavior. A national survey by Infocus Environmental, a Princeton, New Jersey firm, discovered that one in three parents have changed their buying habits because of what their children have taught them about the environment. There is no question that children are a strong grassroots force for social change. Teenagers were among the most active boycotters of StarKist tuna and McDonald’s, forcing the Heinz Corporation to switch to

dolphin-free tuna and McDonald's to eliminate styrofoam hamburger containers. School children already "adopt" whales and acres of rain forest. How long before they are buying power from a wind turbine or photovoltaic array?

Positive relations with the media are also key. Although the media is quick to point out the environmental harm that certain products cause, there is also an opportunity for power marketers to have their clean power products publicized for free.

Advertising is most effective when the green product has attributes that are readily apparent; the environmental benefits are tangible and can be clearly described; and there is an overarching corporate commitment to environmental progress. To successfully sell their products, green marketers must empower the consumer, stress a positive message, and educate. First, though, they must overcome the daunting hurdle of consumer skepticism.

While consumers (and the media) are skeptical of all advertising claims, in recent years green products have drawn particularly intense scrutiny. The reasons are myriad. Conflicting information from, say, Rush Limbaugh and *Newsweek*, about an issue like global warming can leave the public confused about the seriousness of such problems.

Second, many consumers believe that for-profit corporations are not trustworthy sources of information. In 1991, for example, two-thirds of Americans agreed that businesses often exaggerate the environmental benefits of their products. Third, there have been several highly publicized examples of greenwash — "biodegradable" garbage bags, disposable diapers and juice boxes — that have fostered an attitude that all green marketing claims may be partially or wholly false.

The burden of proof is now on marketers to convince consumers that their claims are legitimate. Cambridge Reports/Research International has determined that the kind of company customers think their electric utility is (the utility's "brand identity") will be inferred from many different sources. Direct contact with the utility staff is less important than what customers see and hear about it in the media. Because brand identity is the key to earning customer loyalty, it is imperative that advertising language be carefully drafted to avoid misconceptions.

A corollary theme is the necessity for utilities to prove their environmental credentials by extending the greening process to their operations as a whole. The Swedish utility Vattenfall voluntarily publishes an exhaustive report on its environmental performance. But most American utilities hide behind a corporate veil. Since a green power product can easily draw charges of tokenism, a corporate-wide environmental ethic, starting with a commitment from the CEO, may be needed to reassure consumers that the company is taking its environmental responsibilities seriously.

Once consumer skepticism has been assuaged, product advertising must be simple, clear, believable, and compelling. Ad space is limited, and the message must be carefully crafted.

Suggesting that the product will improve both the quality of people's lives and the environment is desirable. For example, Working Assets' advertising promises that "Working Assets lets you make a world of difference." The company's goal is to make it easy for people to make a difference by acting in the privacy of their homes, doing things they already do.

The empowerment theme also informs certain "authority metaphors" that have proven effective in green advertising. A 1991 J. Walter Thompson study found that three authority metaphors are widely used: Mother Nature, Science, and Ordinary People. The study concluded that there is growing resistance to Mother Nature and Science — possibly because many ads use imagery and emotion to substitute for objective authority. This study suggests that purely emotional advertising may have less of an impact as consumers become more sophisticated about environmental issues. Ordinary People messages that relate to consumer experience and action are becoming the rule. When Mother Nature is used, the image should relate to the backyard rather than global concerns. Likewise, Science should relate to the household rather than the laboratory (Coddington, 1993).

Ads that appeal to the consumer's self interest are the most empowering. Consumers are motivated by direct personal benefits more than by resource and energy savings. Positioning natural gas as "clean energy" did not motivate consumers as much as the chance to save money. Proctor & Gamble advertises first that Downy fabric softener refills cost "less money" and offer "so much softness." "So little waste" is their second selling point. The less personal the benefit, the harder it is to direct an individual's purchasing behavior (Frause and Colehour, 1994). This raises a red flag for clean power since many of its environmental benefits can be viewed as public goods, rather than private benefits. But the same could be said of recycled paper and a number of other products.

Green marketers also need to address the varied shades of the green market. For example, Jacquelyn Ottman in her seminal 1992 book *Green Marketing*, argues that it is important to demonstrate to committed, active "True Blue Greens" that they can make a difference and reward their leadership, commitment, and initiative. In marketing to "Greenbacks," however, sellers must demonstrate that the product's benefits are compatible with busy lifestyles. "Sprouts" can be motivated with appeals to peer pressure and the status that comes with doing the right thing. A highly successful anti-litter campaign for the state of Texas paired singer Willie Nelson, football player Randy White, and boxer George Foreman with the slogan "Don't Mess with Texas." This was much more effective than the previous "Pitch In" campaign. For "Grousers" and "Basic Browns," the least environmentally attuned consumers, advertisements must offer easy, cost-effective ways to make a contribution. These consumers must be convinced that small actions, when performed by many people, can cause significant changes.

Stay positive. Upbeat messages that stress a better future for our children are more appealing than scare tactics that may convince consumers that they are powerless in the face of impending disaster. A "sick baby" appeal — arguing that the river is dying, for example — may only enhance consumers' environmental concerns. In contrast, a "well baby" appeal emphasizes

that the environmental progress is being made. Appeals to clean a river should focus on improvements in water quality that could help the river return to its natural state.

Education can accelerate consumer acceptance of new products. For example, the Seventh Generation catalog is designed to teach consumers about environmental issues. The text highlights how the company's products can yield measurable environmental benefits. Patagonia's Spring 1996 catalog opens with an essay by Yvon Chouinard on the damage caused by conventionally-grown cotton. Patagonia will pay more to use only organically grown cotton, Chouinard says.

Public service announcements by environmental groups are another inexpensive and low profile means for educating consumers. Such announcements can spotlight an issue without the utility image dominating the presentation and possibly undercutting the credibility of the message. Likewise, indirect or reflected indications of corporate environmental concern are sometimes more effective than a hard sell.

Conclusion

Our review of the green marketing experience of national brand companies strongly suggests that there is a substantial market for clean power. Somewhere between 50-70 percent of consumers are predisposed to approve the concept of clean power. Of these, perhaps one-tenth are early adopters who might purchase clean power. Although geographic location, gender, income, education, and organizational affiliation are relevant, there appears to be no single uniform trait or characteristic that easily identifies consumers who are likely to purchase green products. Indeed, green purchasing behavior seems to vary depending on the product, the message, and the environmental issue.

Most green consumers appear to want to purchase well-defined products that have a clear role in solving environmental problems that are part of their everyday lives. For consumers to feel good about the purchase, they often want a sense that their actions are having a real impact. At the same time, consumers seek green products that are convenient, not too expensive, and perform as well as or better than the alternative.

Green marketing must satisfy these consumer demands. To be successful, the green marketer needs substantial credibility that its environmental claims are real. Alliances with environmental groups — particularly those working to solve the environmental problem at hand — can greatly enhance credibility. Empowering individual consumers with a sense that they are making a difference is critical for successful marketing. Upbeat and positive messages that educate consumers are the best way of creating this sense of empowerment.

II. UTILITY GREEN PRICING PROGRAMS

In recent years a number of electric utilities have begun green pricing programs. Typically, a utility offers its customers the choice to pay somewhat more on their utility bill to support renewable energy. Some green pricing programs collect donations to support renewable energy projects. In these programs, participants pledge monthly contributions to a renewable energy fund. Other programs sell a specific clean power product, usually wind or solar electricity. These are typically structured so that participants pay the difference in cost between the new, renewable energy and the conventional power they currently receive.

In this part of our report we examine the research that has been done to support utility green pricing programs. Then, we assess the motivations of utilities in offering green pricing programs. Next, we review and evaluate a number of utility efforts to market clean power. We conclude by identifying essential elements of successful green pricing programs, and explain why they will be important as we move toward an increasingly competitive utility industry.

Survey and Polling Data

A recent report by the Renewable Energy Policy Project summarizes public opinion polls taken from 1979 through 1992 (Farhar, 1996). Throughout that period, majorities have consistently favored the use of energy efficiency and renewable energy over conventional alternatives such as nuclear and fossil fuels. Popular support for efficiency and renewables has remained strong even though energy prices have fallen (in constant dollars) during the past 15 years.

Environmental concerns rank high in the public's evaluation of energy choices. In recent surveys, 56 to 80 percent of respondents say they would be willing to pay a premium for environmental protection or to have their electricity generated from renewable resources. Although these numbers may overstate by a factor of ten people's actual willingness to pay, the evidence suggests that the clean power market is real.

Individual utilities, polling their customers to determine their willingness to pay for renewable energy, have obtained similar results. For example, a 1992 Public Service Company of Colorado survey asked customers whether they would pay \$1 to \$4 per month to support renewable energy. Almost 82 percent said they would. In the same vein, a 1995 Sacramento Municipal Utility District poll found that 93 percent of residential customers and 71 percent of business customers would be willing to pay more for renewable energy.

Of course, as Brian Byrnes of Insight Research has pointed out, "talk is cheap." It's one thing to say you will pay, it's another to open your wallet. Nonetheless, taken as a whole, the polling and survey results indicate that the clean power market equals roughly 5% of all utility

customers. Although this is a niche market — it is a niche market with the potential to become much bigger as concerns over air pollution, fossil fuel depletion, and climate change grow.

In short, the public wants renewable energy. Utilities can either meet this desire, or, once we have retail choice, their competitors will.

A NARROW TARGET

Brian Byrnes of Insight Research, a Boulder, Colorado-based market research firm, has helped a number of utilities design green pricing programs. Byrnes believes that clean power buyers are a niche market, estimated to be about 5% of residential customers. These are the early adopters who will be the first to buy this new product. Byrnes warns advertisers that this niche is “narrow.” In other words, it’s easy for advertising messages to miss their intended target. He attributes many utilities’ failure to sign up their predicted number of customers to marketing messages that were “off the mark.”

Utility Motivations for Providing Clean Power

Since most utilities still operate in a monopoly environment, their motivations for providing clean power have been more complex than simply meeting customers’ desires. Other calculations have come into play. Although it is difficult to second guess any particular utility, it’s our belief that utility executives have supported green pricing programs with three objectives in mind:

- First, to gain marketing experience and thus to position themselves for a more competitive environment,
- Second, to enhance the corporate image,
- Third, to fend off regulatory or other pressures to “rate-base” renewable resources.

Utilities are increasingly trying to position themselves to compete in a market environment. For over fifty years, they have had the exclusive right to provide power to customers in their service territory. In the future, however, customers are likely to be able to choose their own supplier. In this new environment, utilities must find ways to profitably provide their customers with products they want. Green pricing programs give utilities a chance to test their marketing and product development skills prior to full-blown competition.

Second, many utilities own power plants that have been implicated in environmental problems including air pollution, acid rain, nuclear waste, strip mining, and global warming. Green pricing provides utilities with an inexpensive, low-risk way to enhance their corporate image.

Third, many utilities are under regulatory, legislative, or public pressure to invest in clean energy technologies. Utilities can use green pricing programs to raise money to invest in these technologies without raising rates to customers who do not wish to purchase clean power.

Given these various motivations, “success” could be defined — from a utility’s perspective — as gaining marketing experience, enhancing the corporate image, and/or fending off regulatory and other pressures. In fact, many utility programs seem designed to only add tiny dollops of renewable energy. For this reason, renewable energy advocates and utility regulators have expressed concerns that green pricing is just a smokescreen that utilities can use to avoid making a serious commitment to renewable energy. Indeed, some utility green pricing programs seem almost designed to fail.

In addition to the questions surrounding utility motivations, there are also tensions arising around advertising messages. Since today’s utilities function as monopolists within their service territories, their clean energy product competes with an existing “dirtier” mix. A successful marketing campaign must differentiate clean power from the regular kind. But many utilities are loathe to compare, say, wind or solar power with coal power. This raises concerns about the ability of utilities to develop a message that would allow them to successfully market clean energy in a deregulated world.

For purposes of this paper, we define success in terms of the percentage of customers who participated in the utility program and the relative amount of clean energy that has been acquired. We recognize that utilities have different motivations and some may not be able to market clean power the way the environmental community might prefer. Nevertheless, if a utility green pricing program can be made to work (given the concerns described above), the lessons learned should be transferable to the more competitive environment now on the horizon, in which clean energy providers and aggregators will have fewer conflicting incentives.

At least fifteen utilities have started green pricing programs to date. These programs have been developed by two different types of utilities: for-profit investor-owned utilities (IOUs) and non-profit municipal utilities. In general, the green pricing efforts of the municipal utilities have been reasonably successful, while the efforts of the investor-owned utilities have been relatively weaker.

Green Pricing Programs: Investor-Owned Utilities

The green pricing experience of six investor-owned utilities is reviewed below. By and large, these programs did not produce large participation rates, nor did they result in the acquisition of significant amounts of renewables.

Niagara Mohawk

Niagara Mohawk (NiMo) was one of the first utilities to develop a green pricing program. Based in Syracuse, New York, NiMo has 1.4 million residential customers, approximately 143,000 commercial customers, and roughly 2,200 industrial customers. It has a peak demand of approximately 6,000 megawatts.

In August 1995, NiMo launched GreenChoice. However, the ill-fated program was soon placed on hold because the utility thought it might conflict with its restructuring proposal called PowerChoice. At the time, the New York economy was struggling, electricity rates were among the highest in the nation, 25% of customers were in arrears, and NiMo shareholders had recently suffered a dividend reduction. These factors helped doom GreenChoice.

If NiMo had gone ahead, residential customers would have paid a \$6 per month premium, \$5 to purchase renewables and \$1 to support tree planting. NiMo launched GreenChoice in the summer of 1995, mailing bill inserts to 1.3 million customers at a cost of about \$25,000. In addition, two targeted mailings were sent to 39,000 customers. In the first year, only 145 customers signed up for the program, roughly two orders of magnitude below what NiMo had predicted. A number of reasons appear to explain this poor response, including the undefined renewable energy project the program is funding, the fact that a planned marketing effort was never fully implemented, the poor state of the New York economy, and the limited time the program was operational.

Wisconsin Electric Power Company

Wisconsin Electric Power Company (WEPCO) provides electricity to 800,000 customers in Wisconsin and Michigan. WEPCO's green pricing program, the Energy for Tomorrow Renewable Energy Program, began in August 1996. It provides customers with energy from a five megawatt biomass plant in Minnesota and hydropower from Canada.

When the program was announced, WEPCO was excoriated by local environmental groups because its green power program was supplied by existing out-of-state plants, did nothing to support the development of new renewable resources, and was developed with little public input. One environmental group sought an injunction to block implementation of the power purchase contracts because they did not include in-state, new renewable resources and there had been no public process. The product itself, energy from burning wood waste and existing hydropower, was also criticized.

Currently, WEPCO residential customers pay 6.6 cents per kilowatt-hour. The utility's green premium is 2 cents per kilowatt-hour. More than 80 percent of the premium goes to purchase the energy itself. A small portion is earmarked to educate and inform the public. Customers have a choice of three participation levels — 100 percent, 50 percent, and 25 percent. With a 2 cent per kilowatt hour premium, 100% participation will increase a customer's bill by roughly \$11.00 per month. The utility expected the program to operate at a loss for the first year, but anticipates this will change as more customers sign up.

The utility's goal was to attract 7,600 subscribers in the first year, and 6,200 have signed up as of the end of May, 1997. A newspaper story on a young couple that had enrolled brought an increase in subscriptions. In test mailings and focus groups, both emotional and straightforward approaches were used with about the same results. WEPCO is now conducting an extensive direct mail and telemarketing campaign to increase awareness, improve participation, and reach their year end goal by June 1997. The program will be extended to commercial customers when the utility has developed a marketing plan for them.

Bottom line: Participation in the first year of the program was slightly below expectations at .78% of utility customers, and no new renewable resources were acquired. However, the marketing of the programs is strong and the utility has formed an advisory board that includes environmental groups to ensure that the program provides clear environmental and economic benefits.

Public Service Company of Colorado

Prior to the 1997 launch of its *Windsor* program (see p. 45), Public Service Company of Colorado (PSCo) had offered its 1.1 million customers another green pricing option, with mixed results.

PSCo's Renewable Energy Alternatives Program began in October 1993, based on market research conducted in 1992. The program has subsequently gone through a number of iterations. In 1995, PSCo changed the name to the Renewable Energy Trust. RET participants volunteer to make small monthly donations to a renewable energy fund. Most of the money is used to fund photovoltaic projects, many of them in the Colorado state park system. In August 1995, PSCo added a "Round Up" option to RET in which customers can voluntarily round up their bill to the nearest dollar with the "change" donated to the RET program.

In November 1995, PSCo asked businesses to join the RET program by matching their employees' contributions, by adopting a renewable project in their community, or by challenging other corporations to match their contributions. This was unsuccessful. In 1997, the RET program was re-positioned once again. Its current focus is photovoltaic systems on public schools.

Throughout its life, RET has been plagued by insufficient marketing. Although PSCo has done some targeted marketing, 95 percent of participants were recruited through bill inserts. In July

1995, PSCo began underwriting several PBS programs on behalf of RET to increase awareness among Colorado opinion leaders and environmentally concerned citizens.

RET participants pledge an average of \$1 per month. Contributions are tax deductible and contributors receive a year-end statement. PSCo pays administrative, marketing, and program expenses. To date, RET funds have paid for 28 small PV projects. Overall program awareness has reached four percent and 13 kilowatts of photovoltaic panels have been installed. Currently, the program raises \$158,000 per year.

When PSCo first released this program, it hoped it would raise \$2 million annually and purchase enough solar power to make a positive environmental and risk diversification contribution from an Integrated Resource Planning (IRP) perspective. Although the participation levels are reasonable at roughly 1% of the customer base (and the impact of the Round Up program has been significant), the actual revenue collections are an order of magnitude below expectations. Likewise, the total amount of solar resource acquired, 13 kilowatts, is too small to have any meaningful influence in commercializing renewable energy.

We attribute the relatively weak performance of the RET program to several factors. First, contributing customers do not know what their dollars will be paying for. As a result, customers are not purchasing a well-defined product with clear environmental benefits. Second, PSCo discouraged environmental groups from participating in their efforts. Our review of the media coverage suggests that this decision may have harmed PSCo's credibility (see Attachment A). Finally, the utility spent little money on marketing.

Detroit Edison Company

Detroit Edison (DE) is one of eight utilities participating in the Utility PhotoVoltaic Group's PV Friendly Pricing Program. (The Utility PhotoVoltaic Group is a consortium of 82 electric utilities formed to accelerate the use of photovoltaics.)

A large investor-owned utility with 1.8 million residential customers, DE has a summer peak of 9,362 megawatts. DE's SolarCurrents program was launched in August 1995. Customers can purchase electricity from a central solar power plant. The 28-kilowatt, \$250,000 ground-mounted solar facility was installed in April, 1996 near Ann Arbor, Michigan.

The solar array produces about 40,000 kilowatt-hours annually. Detroit Edison offers residential customers 100-watt increments of solar capacity for \$6.59 per month. In effect, customers pay 56 cents per kilowatt-hour which includes roughly 12 cents in state property tax. The low capacity factor of the plant due to the lower solar resource in southeast Michigan also contributes to the high premium.

After a weaker than expected initial response from a direct mailing to 20,000 randomly selected residential customers, the utility decided to spend more money on marketing than originally planned. Direct mail was sent to an additional 60,000 randomly selected customers and Detroit Edison's 8,400 employees. Press releases were issued to the news media which resulted in radio and newspaper coverage. Company spokespeople were interviewed by local radio stations and featured as guests on local cable TV environmental programs. SolarCurrents received national news attention with two spots on Paul Harvey's broadcast.

Response from local environmentalists was limited. Although several organizations were given information about the program, only the East Michigan Environmental Action Council published an article promoting it during the subscription campaign. Through April 1997, only 600 out of the more than 3,900 residential customers inquiring about the program have identified themselves as being members of an environmental organization.

SolarCurrents was fully subscribed by the end of 1995 with 195 residential customers. The average customer pays about \$10 extra per month. Program participants receive a quarterly newsletter, a bumper sticker and a solar calculator and were invited to the groundbreaking ceremony in March 1996. Detroit Edison is franchising their solar concept to other utilities.

By the time the solar generating plant was installed in April 1996, the program had a waiting list of 40 customers which grew to more than 70 customers by the end of the year although Detroit Edison did not market the program in 1996. An article about the plant dedication which appeared in a company bill insert to its residential customers resulted in nearly 1,900 customers calling about the program, 1,500 requests for information and more than 1000 requests for contracts.

Although DE is to be commended for its pioneering attempt to sell solar power, the price per kilowatt-hour is extremely high and the project size, limited by the amount of UPVG funding, is small. The way the solar capacity is billed is difficult to understand and the customer contract appears intimidating (see Attachment B). Had the utility involved environmental groups during the program planning stage, these shortcomings might have been mitigated or avoided. As it turned out, many environmental groups stonewalled the program because of Detroit Edison's previous investment in a nuclear plant (Norm Stevens, 1997).

Northern States Power

Northern States Power (NSP), a large Minnesota investor-owned utility with 1.4 million electric customers, announced its EnergyWise Solar Advantage Program in December 1995. The utility installs 2-kilowatt rooftop photovoltaic systems on homes of participating customers. NSP was recently mandated to come up with renewable energy supplies to replace capacity associated with the future shutdown of the Prairie Island nuclear plant.

NSP, with financial support from the DOE and UPVG, pays for and installs the systems, which cost \$16,000 each. In return, customers pay \$50 per month for five years. The customer gets to use all of the energy generated from the solar panels, a benefit worth about \$14 per month. The net cost is about \$36 per month — or \$432 per year. At the end of five years, customers have three options. They can sign up for another five years on the same terms, at the end of which they can buy the system for \$1. They can purchase the system from NSP for \$3,000. Or they can have the utility remove the system from their house. The solar customers are paying about one-quarter to one-third the actual cost of the PV systems. Ratepayers and the DOE/UPVG grant pay the rest.

The EnergyWise program was first announced on the back page of a newsletter and did not generate media interest. However, utility representatives were interviewed on local television and local public radio. Over 270 residential customers responded. As of December 1996, 17 systems have been installed. These customers were chosen from the 270 applicants based on how closely their home matches the selection criteria. Although many customers were rejected due to shading, improper roof orientation, or inadequate roof area, ultimately budget constraints limited the program to only 17 systems.

The NSP program demonstrates customers' willingness to pay for rooftop photovoltaics. The opposition to the Prairie Island nuclear plant has put NSP into a position very similar to SMUD's position in the 1980s. SMUD turned citizen awareness and concern about its Rancho Seco nuclear plant into an opportunity to create a substantial market for their clean energy offerings and to gain clear public relations benefits. If the SMUD experience is any indication, NSP should be able to capitalize on this opportunity to create a significant renewable energy portfolio to meet the clear clean energy demands of its customers.

Wisconsin Public Service

Wisconsin Public Service (WPS) provides electricity to 368,000 residential customers. The utility's peak demand is 1,670 MW. Its SolarWise for Schools program was launched in February 1996. The ambitious goal: to install a grid-connected 12-kilowatt PV system on every public high school in its service territory. The 36 schools would receive the electricity produced (about \$2,100 worth each year), a curriculum on solar energy, performance data for students to analyze, and access to an Internet site featuring student solar projects. In the summer, when the schools are closed, unused power will flow into the grid.

WPS asked its customers to donate \$4, \$2, or \$1 each month. One hundred percent of this money is used to purchase and install PV systems. A reminder on the bill makes it easy to enter or leave the program. The contributions are tax deductible. WPS ratepayers and federal funds help support the projects. The systems are expected to last 20 to 30 years and should require little maintenance. A computer will monitor each system.

A particularly comprehensive and imaginative marketing strategy began with a press conference and press release. A bill insert was included in residential bills. The bill insert and one

direct mailing recruited 1,050 participants, contributing an average of \$1.71 per month. Direct mailings, bill stuffers, and media efforts are continuing. In May 1997, WPS sponsored a solar energy fair at a local high school to celebrate the new solar technology on its building. Also in May, WPS, in cooperation with the University of Wisconsin/Green Bay, held a Solar Olympics funded by contributions from Green Bay citizens. Next year this highly successful event will expand from three to ten participating high schools (see Attachment A).

To date, three systems have been installed. Because of good response, WPS expects to install one more system in 1997. Participation continues to grow. Approximately 2,600 customers now donate about \$51,000 per year.

SolarWise is effective public relations. The schools save on their electricity bills. Students learn about solar energy. Nevertheless, participation is small with less than 1 percent of WPS's customers contributing.

Municipal Utilities

Three municipal utilities have sponsored green pricing programs. These programs have attracted greater customer participation, and have brought more new renewables on line than green pricing programs sponsored by investor-owned utilities.

Sacramento Municipal Utility District

One municipal utility that has done a great deal to promote renewable energy is SMUD, the Sacramento Municipal Utility District. The fifth largest municipal utility in the United States, SMUD serves 430,000 residential customers and 50,000 commercial customers. SMUD's green pricing program is part of a much larger utility commitment to renewable energy and energy efficiency. The utility also operates a municipal wind farm and a large photovoltaic power plant.

Since 1993, each year SMUD has installed about 100 grid-connected, rooftop photovoltaic systems through its PV Pioneers program. The systems are placed on the homes of willing volunteers, who pay \$4 per month to host them. (In 1995, the program was expanded to include commercial customers.) To qualify, customers must have a 400 square-foot roof suitably sloped and oriented.

PV Pioneers pay the \$4 fee for ten years. This modest amount is only a small percentage of the systems' total cost; the bulk is borne by the utility, which is committed to commercializing solar power. When SMUD began installing 4-kilowatt systems in 1993, they cost about \$30,000. By 1996, the price had fallen to \$24,000.

SMUD purchases, owns, installs, and maintains the systems, which are grid-connected. Customers benefit from 400 square feet of shade that each system provides (reducing the need for

air conditioning in Sacramento's ruthless summer heat) with energy savings of as much as \$100 a year. SMUD uses federal funds and money from its own operating budget to support the program.

Since its inception, PV Pioneers has been well received. A 1993 telephone survey was used to establish the potential customer base. Since renewable energy had been on the ballot in two local elections, the level of citizen understanding about energy issues was relatively high. PV Pioneers receive a host of benefits, including membership in the SMUD PV Pioneer Club, the PV Pioneer Newsletter, and priority processing if they join SMUD's energy efficiency programs.

In 1993, 2,000 residential customers asked for information about the program. About 600 passed the screening process. From this pool, slightly over 100 PV Pioneers were selected. In 1994, 134 systems were added totaling 472 kilowatts. As of 1996, 350 residential customers were participating for a total of 1,216 kilowatts of PV power. This is a remarkable statistic, since the remaining 3,200 U.S. utilities have together installed less than 100 kilowatts of grid-connected PV.

Each year SMUD continues to get about 1,000 new requests for its rooftop program. Through the PV Pioneers program, SMUD has created the world's largest distributed PV system. In 1995, the program was expanded to commercial customers. Five area churches are now participating. Three or four non-profit agencies and businesses have also joined the program. The success of the PV program has led SMUD to enter into contracts for a full 10 megawatts of PV for 1998 through 2002. The more than \$22 million in contracts will result in major solar manufacturing facilities in Sacramento in 1998.

Several characteristics of this program, which continually draws more response than it can meet, appear to have contributed to its success. SMUD provided its customers with a well-defined product that enabled them to take personal responsibility for the environmental and other impacts associated with their electricity usage. The referendum process and the shutdown of the Rancho Seco nuclear plant educated a large number of customers about energy issues. Moreover, SMUD's renewable energy efforts are a true partnership, involving a broad segment of the community including businesses, nonprofit organizations, and churches.

THE MESSAGE MATTERS

When it comes to marketing clean power, many IOUs pull their punches. Vague expressions of environmental concern are bundled with fuzzy promises for how customers' green pricing premiums will be spent. In effect, some utilities behave as if they were a dairy that will not push its appealing new line of frozen yogurt for fear of hurting existing sales of ice cream.

IOUs can afford to straddle this fence as long as they are regulated monopolies. But in the new world of retail choice utilities will have to get real about renewables. If one utility will not meet its customers desire for renewables, its competitors certainly will. In time, it's possible that a utility could be proud of, and promote, both its inexpensive coal and natural gas resources and its somewhat higher priced wind and solar ones. Indeed, we think this is where the industry is headed.

Traverse City Light & Power

Located in Traverse City, Michigan, this municipal utility has approximately 6,800 residential and 1,200 commercial/industrial customers. The utility's electric supply is 92% coal, 8% hydro. The summer peak demand is 42 megawatts.

The TCL&P program is called Green Rate. The program began in 1995 with support from the Michigan Public Service Commission and the utility's board of directors. This was the first time in the United States that green pricing was used to finance the purchase of a wind turbine. Residential and commercial customers who subscribe to Green Rate get all of their electricity from a grid-connected, 600-kilowatt Vestas turbine, the country's largest.

The turbine is owned and operated by TCL&P, which, because of lower cost utility financing, reduces the cost of the wind power by about 30%. It was installed in May 1996 at a Class III wind site, where winds average 14.5 miles per hour. Annual generation should be about 1.2 million kilowatt hours.

Residential rates in Traverse City are 6.6 cents per kilowatt hour. The Green Rate premium is 1.58 cents per kilowatt hour. An average consumer using 480 kilowatt-hours per month will pay an extra \$7.58 each month to get all of his or her power from the wind machine. Residential customers must subscribe for three years and commercial customers for ten years. Green Rate participants are guaranteed that their electric rate will not rise.

The Green Rate is based only on the energy value of the wind power — the utility did not include its capacity value citing the fact that TCL&P does not need new generation facilities. The avoided cost was 2.5 cents per kilowatt-hour, which Steve Smiley, project consultant, says is conservative and should be higher.

Other funding came from a \$50,000 grant from the Michigan Public Service Commission and a 1.5 cent per kilowatt production incentive in the 1992 Energy Policy Act. Extending a transmission line to the site cost \$60,000. The utility paid a one-time easement fee and will pay an annual rental payment to the landowner.

The utility did not perform a study prior to releasing the program. The marketing was low-key, down-home, and soft-spoken. Initially, there were some interviews on local TV and ads in area papers. These produced few responses. A targeted mailing to 100 members of a local environmental group drew 20 enrollments.

Two weeks later, the utility, at the insistence of citizens and the Public Utilities Commission, sent a direct mail appeal to the entire customer base (8,000 letters) which brought in 160 subscribers (a response rate of 2%). The one page mailing included a tear-off response, terms of enrollment, and a description of the environmental benefits — by participating in the program, a

typical customer avoids the need to burn three tons of coal, thus preventing the emission of 10,000 pounds of carbon dioxide each year.

Businesses were told that they could offset the added costs of buying wind power by using their participation as a public relations tool. Marketing materials employed simple, understandable, and visible (the turbine is sited just outside of town) concepts. The utility provides a sticker or decal program for participants. Commercial customers like this idea because they want to have a green image in a town that earns much of its money from tourists. An educational display will be installed at the wind site in June 1997. All told, the utility spent only \$2,500 on marketing, mostly on direct mail.

Although the Traverse City region is politically conservative, environmental protection is a widely held value. To date, 224 residential customers and 26 businesses have signed up. This represents 3.3 percent of the customer base. Subscribers represent a broad spectrum, and there have been no dropouts. In 1995, the utility won the American Public Power Association's Energy Innovator Award. Currently there are 75 customers on the waiting list to buy wind power. Once it gains some operating experience with this turbine, TCL&P may launch a new subscription drive to buy an additional one or two turbines.

In our view, the TCP&L program was a tremendous success. The simple program design, fair price, and visible turbine held strong appeal for a community that values quality of life and the natural environment. The utility achieved a 3.3 percent participation rate (the highest rate of any utility program) and now acquires close to 1% of its power from renewable resources. The utility was also able to expand its marketing beyond residential customers and obtain significant business support.

Ft. Collins Light & Power

This municipal utility serves 40,000 residential customers and 4,000 commercial customers in northern Colorado. The winter peak load is 170 megawatts. Residential rates are 6 cents per kilowatt-hour. FCL&P buys its wholesale power from Platte River Power Authority (PRPA), a public utility owned by Ft. Collins, Loveland, Longmont, and Estes Park.

Ft. Collins has successfully enlarged the Traverse City model with its Wind Power Pilot Program. With the blessing of the Ft. Collins city council and FCL&P utility board, the program began in September 1996. Residential customers were offered the option to buy all their electricity from two wind turbines to be located near Medicine Bow, Wyoming. PRPA handled the site and turbine selection. Groundbreaking is expected this summer, with the turbines becoming operational in the fall of 1997.

Participants will pay a 2 cent premium for wind power. That's about 30 percent more than they pay for conventional power, and it will add \$10 to \$15 to an average residential customer's bill.

Commercial customers, whose regular rates are 4 to 6 cents per kilowatt-hour, can buy wind power in 1,000 kilowatt-hour blocks per month. All participants sign up for three years, but can leave the program on 30 days notice. The utility was able to reduce the cost of the premium to subscribers by firming the wind turbines' output with spot market purchases.

About 700 subscribers have agreed to buy power from the wind turbines. FCL&P is entering into a 20 year purchase power contract with the project developer, Northern Alternative Energy. The wind site was previously home to two large U.S. Department of Energy wind turbines.

FCL&P launched its program without doing market research. The marketing budget was about \$28,000. A local advertising agency designed a logo and marketing messages. After a go-ahead in July, the program was launched on September 18, 1996. In addition to 15 FCP&L staff members, the presence of two reporters and the local cable television station resulted in TV coverage and a front page story in the Ft. Collins Coloradoan. A news release was sent to local media and environmental organizations.

Direct mail to 6,000 customers, including 40 small commercial customers, was followed up with phone calls. This targeted mailing received a 2 to 3 percent response. Utility bill stuffers attracted additional response. A brochure format was sent to interested customers. City Councilman Alan Apt signed up as the first customer. All subscribers received wind power stickers with double sized ones for commercial customers.

Newspaper ads began running the day after the program was released. FCL&P's good relationship with local reporters bore fruit as stories appeared in a variety of newspapers and on the local television station. FCL&P arranged for reporters to visit the National Wind Technology Center in Golden, Colorado, to be briefed on wind power and observe a wind turbine in operation. During this time, sign ups were just trickling in.

Radio spots on local public radio began well into the marketing campaign and had significant impact. An open house on the wind program was held on election night at the City Council chambers. Staff from the National Renewable Energy Laboratory, PRPA, and FCL&P were on hand. About 100 people attended (17 subscribed that night) including representatives of the local Sierra Club.

This event marked the beginning of the Sierra Club's highly successful support of the program. Sierra Club volunteers set up a phone tree, organized and staffed an information table with student volunteers for four days at a local health food grocery store, and signed up over 50 people. People asked the volunteers most often about the price, where the wind turbines would be located, and if their electric service would stay the same. A Denver TV channel interviewed the volunteers staffing the tables and the story aired that day. (A one-day effort at the Community Booth in the local shopping mall saw more traffic but fewer sign ups than the grocery store tables.) The support of the Sierra Club lent credibility to the program and triggered broader community interest in wind power.

Another article in the *Ft. Collins Coloradoan* was picked up by *The Denver Post*. Stories followed on two additional television stations. The stories pointed out that 200 people had joined, but 350 were needed by the November 22 deadline to ensure success. The intensified media coverage reminded customers of the deadline, legitimized the program, and resulted in an additional flood of subscribers.

During the first month and a half after the program launch there had been only 8 to 13 returns a day. After the burst of media coverage, 40 to 50 returns came in per day, with over half of the subscriptions arriving two days before the deadline. As a result, the deadline was extended to December 31 to take advantage of increasing program awareness. The new deadline still allowed the utility to meet its goal of having turbines on line this fall.

FCL&P will stay in contact with subscribers through a quarterly newsletter. It will also coordinate a visit to the wind site and a groundbreaking ceremony. At ribbon-cutting time in the fall of 1997, the marketing focus will shift from high visibility awareness building to working with environmental groups on a grassroots, community-based subscription campaign. Because the utility expects some customers to drop out, the grassroots campaign will provide a buffer for attrition.

There are 640 residential customers (1.7 percent of the customer base) and 15 commercial customers in the program. Most commercial customers are buying one or two 1000-kilowatt blocks. Since the January 1 deadline there have been 40 more sign ups and they are continuing to receive 2 to 3 per week. On January 30, the program received national coverage on FOX news.

The FCP&L program was successful. Customer participation was reasonably high at 1.7 percent and renewables now account for about 2% of the utility's resource mix. Like Traverse City, FCP&L was able to involve a broader segment of the community including larger customers, environmental groups, the City Council, NREL, and the media. The flow of program subscriptions suggests that this broader involvement was key to the program's success. In May 1997, the Wind Power Pilot Program won the Energy Innovator Award from the American Public Power Association.

LEADERS

It is interesting to note that a number of the most successful green pricing programs have been the brainchild of renewable energy champions in the local community or at the utility. There was David Freeman's visionary leadership at SMUD. In Aspen, Randy Udall and the City of Aspen's public works director, Bob Gish, joined forces to boost the idea of wind power. Steve Smiley, in Traverse City, convinced a community that they could have the country's largest wind turbine provide their electricity. And Jim Welch, an electric board member, campaigned for years to make wind power a reality for Ft. Collins. Likewise, the LAW Fund has worked at every level — regulatory, legislative and grassroots — to bring the first wind turbines to Colorado.

Reviewing the experience of clean energy providers confirms that many customers will purchase clean power. As a rule, however, investor-owned utilities have had great difficulty designing successful green pricing programs, whereas municipal utilities have been able to effectively aggregate customer demands. Municipals have garnered higher levels of participation, relied on renewable resources for a greater percentage of their energy mix, and played a larger role proportionately in helping to commercialize renewable resources. Table 1 below summarizes the relative participation rates, and the amount of renewable energy acquired, for the green pricing programs reviewed in this report. Some of these programs are newer than others and the products offered differ. Not all of the programs were marketed to the entire customer base. Nevertheless, Table 1 illustrates our finding that some programs bring more renewable energy on line and achieve more widespread customer participation than others.

Table 1

Participation Rates and Amount of Renewable Energy Brought On Line by Utility Green Pricing Programs					
	Customer Base	Participating Green Customers	Participation Rate	Renewable Energy Brought On Line kW	Notes
Investor Owned Utilities					
Niagara Mohawk	1,400,000	145	0.01%	0	Program abandoned
Wisconsin Electric	800,000	6,200	0.78%	0	Existing biomass and hydro facilities
PSCO RET	1,100,000	12,000	1.09%	13	Solar PV
Detroit Edison	1,800,000	195	0.01%	28	Solar PV
Northern States Power	1,400,000	17	0.00%	34	Solar PV
Wisconsin Pubic Service	368,000	2,600	0.71%	36	Solar PV
Publicly Owned Utilities					
SMUD	480,000	350	0.07%	1,200	Solar PV
Traverse City Light & Power	8,000	250	3.13%	600	Wind
Fort Collins Municipal Utility	44,000	700	1.59%	1,500	Wind

The Retail Choice Pilots

In addition to the utility green pricing programs, several retail choice experiments have been undertaken that allow a small subset of utility customers to choose their own supplier. To gain a competitive advantage in these markets, some suppliers offered customers a clean energy product. To date, at least two states where pilots occurred — New Hampshire and Massachusetts — provide experience which is useful in understanding green marketing.

In both of these states, regulators have opened a portion of the retail market to competition, allowing selected customers to choose their energy supplier in the same way they do their long

distance telephone provider. The purpose of the pilots is to give producers, consumers, and regulators experience in competitive electricity markets. New Hampshire and Massachusetts confirm the hypothesis that a sizable market for green power exists, even as they raise troubling questions about how that market might operate, and how easily green marketing can become a green scam.

New Hampshire

The New Hampshire pilot program began in May 1996, and is scheduled to run for two years. The pilot requires each of New Hampshire's six incumbent utilities to open three percent of their retail load (a total of 50 MW) to competing energy suppliers. A total of 17,000 participating customers have the freedom to choose their electricity supplier.

Although suppliers were required to seek approval from the New Hampshire Public Utilities Commission, no limit was placed on the number of suppliers that could sell into the market. In the end, close to 30 companies — ranging from marketing affiliates of the incumbent utilities to established energy firms like Enron to new players like Working Assets — elected to participate. Of the 30 suppliers, about half focused their efforts on residential customers.

Massachusetts

The Massachusetts pilot program is smaller in scope than the New Hampshire program. Called Clean Choice: New England, it was open to customers of a single Massachusetts utility — Massachusetts Electric — who reside in the towns of Lawrence, Lynn, Northampton and Worcester. Originally 10,000 customers were expected to participate. In the end only 5,292 enrolled. Of this total, 4,745 are residential customers and 547 are businesses.

Unlike the New Hampshire program, which placed no restrictions on the number of suppliers, the Massachusetts program was limited to nine options provided by six electricity suppliers. These choices were selected from 47 proposals submitted by 15 companies in response to a request for proposals by Environmental Futures, Inc., a consulting firm acting as program administrator. The RFP called for proposals in one of three categories: 1) low price; 2) environmental sensitivity; and 3) other criteria (e.g. value added-services or variable rate pricing). Of the nine proposals selected, four were from the environmentally sensitive category.

Outcomes

Initial results reveal that products perceived to be environmentally friendly did gain a meaningful market share. In New Hampshire, roughly one-third of energy suppliers appealed to customers' environmental values. Overall, these suppliers captured approximately 20 percent of the market. In Massachusetts, the four environmentally sensitive products captured 31 percent of the residential market, and three percent of the small business market, even though the green products were not marketed to the small business market. Both pilots support the hypothesis that there is a significant green electricity market to be tapped.

Unfortunately, the pilots provided relatively few lessons on how to successfully market clean power. Neither in New Hampshire nor in Massachusetts were customers forced to make a clear choice between higher priced clean power and lower priced dirtier power. That's because all suppliers were offering rates below what customers were already paying. In New Hampshire, for example, the product offerings ranged in price from 2.5 to 3.5 cents per kilowatt hour with no correlation between higher price and cleaner power. Conventional power was priced from 2.5 cents to 3.1 cents per kilowatt hour, while green power ranged from 2.6 cents to 3.5 cents.

This overlapping range meant that some products being marketed as clean power were priced less than some conventional energy products. A similar situation existed in Massachusetts, where two of the environmentally sensitive options were priced below two of the low price options. Here, too, *none* of the products offered — regardless of whether they were marketed as green — were priced above what customers were currently paying for electricity from incumbent utilities. Thus, even those customers who chose the most expensive green option realized a saving relative to their existing bills.

The pilots also raised troubling concerns about the truthfulness, factual accuracy, and greenwashing that may arise once the retail electricity market opens up in California and other states. For example, the generation source of a supplier's power was often not the method used to establish product greenness. Several suppliers used energy efficiency to establish their environmental credentials, offering credits to customers who saved energy or offering to install and finance energy efficient equipment. One supplier offered customers bird feeders. Another gave away tree seedlings. Some promised to donate money to environmental and community groups. Of those suppliers who did mention their energy mix, none focused on bringing new renewable energy generation on line. Instead, what was typically offered as "clean power" was a mix of hydro and natural gas — electricity that would have found a market regardless. The suppliers who offered these products have come under significant attack in the media and at national marketing conferences.

Although neither pilot provided lessons on how green marketing can be used to bring new renewables on line, they did underscore the need for meaningful disclosure requirements and green power certification by an unbiased, credible organization. Indeed, we believe the community-based approach, outlined in the next section, largely solves certification and disclosure problems because of

the collaborative involvement of environmental groups in the product design and green marketing process.

Finally, the pilots yielded little information on how to market clean energy in urban areas. New Hampshire is a rural state. The largest city, Manchester, has a population less than Yuma, Arizona. Similarly, the cities in the Massachusetts pilot have an average population of only 88,000. Thus, the pilots shed little light on the challenges of marketing clean power to customers in urban areas. Understanding this problem is likely to be crucial if green marketing is ever to fund significant amounts of renewable energy. This is particularly true in the western United States where more than 75% of the population resides in metropolitan areas.

Lessons Learned: The Importance of a Community-Wide Focus

As a general matter, the green pricing programs of the municipal utilities were reasonably successful, while those of the investor-owned utilities have struggled. A variety of relatively obvious utility-specific reasons can be used to explain individual differences between the programs including, especially, management commitment, budget size, and motivation for undertaking the program.. For the purposes of this paper, however, we have sought to identify the key marketing elements — particularly those relevant to selling a clean energy product in a retail choice environment — that are likely to make the difference between success and failure.

Our analysis of the utility green pricing programs and the green marketing efforts associated with the retail choice pilots, suggests that there are at least three primary reasons — relevant to marketing a clean energy product in a retail choice environment — that are useful in helping to distinguish successful efforts from those that failed. These three key elements are: (1) the nature of the product offered, (2) the credibility of the message and the messenger, and probably most importantly, (3) the ability to create a sense of community ownership of the clean power program.

Nature of the Product

The municipal utilities we studied in Traverse City, Michigan; Sacramento, California; and Ft. Collins, Colorado offered their customers a well-defined, tangible product that had clear environmental benefits. For example, Traverse City installed a 600-kilowatt wind turbine at a site located near the city. Providing an even more tangible product, Sacramento installed 2 to 4-kilowatt solar panels on individual customers' roofs. Similarly, Ft. Collins is installing two 750-kilowatt wind turbines at a pre-existing site in neighboring Wyoming. In all these instances, the environmental benefits of the utility program were clear to customers at the time they were asked to purchase the clean energy project.

In contrast, many of the investor-owned utilities including Detroit Edison, Public Service Company of Colorado, Niagara Mohawk, and Wisconsin Electric Power Company offered products that were not well defined or whose environmental benefits were limited or non-existent. For example, several utilities, like Public Service Company of Colorado in its RET program, set up renewable energy trust funds to solicit contributions. However, these programs did not make clear to customers at the time they were asked to contribute how their money would be spent. Likewise, Wisconsin Electric Power Company asked customers to pay more to purchase renewable energy from existing power plants located outside the state and in Canada.

Credibility of the Messenger and the Message

Another distinguishing characteristic between programs that worked and those that did not was the credibility of the clean energy provider. The non-profit municipalities seemed to have significantly more credibility than did the for-profit utilities. Our review of media coverage of each green pricing program showed that the environmental community, other non-profit groups, and the media responded much more favorably to programs advanced by municipalities (see Attachment A).

In addition to the credibility of the messenger, the municipals also were able to deliver a clearer message. As a general matter, these utilities were not as concerned about drawing the distinction between cleaner renewable energy and their existing dirtier power plants. Our review of utility marketing and media materials suggests that the municipals were more assertive about the environmental benefits of purchasing renewable energy. In contrast, the IOUs relied on a fuzzy message that did not clearly identify the benefits of paying more for clean power (see Attachment B).

Community Ownership

Finally, the municipal utilities were able to create a sense of community ownership of the clean energy effort. These utilities were able to educate and inform customers about the program in a way that empowered them to take personal responsibility for the consequences of their energy choices. The municipals were able to successfully tap a spirit of community goodwill, local participation, and volunteerism. They were able to spark dialogue and galvanize interest. They brought to life people's unmet desire to purchase renewable energy and behave in an environmentally sustainable way.

By tapping into community spirit, the municipal utilities were able to successfully market to a broader segment of the customer base including governmental entities, small and large businesses, and non-profit institutions like churches. Standing in sharp contrast, the investor-owned utilities focused exclusively on residential customers. This broader focus by the municipals appeared to create a sense of community ownership of the clean energy product.

CREATING A SENSE OF COMMUNITY OWNERSHIP

The green pricing programs that have succeeded have tapped community spirit, a sense of pride, and shared values. The marketing messages and public discourse in Traverse City and Ft. Collins emphasized the community's shared vision. The words "our community," "our town," "our environment," "our children," "our future," appear time and again in newspaper articles and letters to the editor.

Successful green pricing programs are tapping a wellspring of community goodwill. They are visionary by definition. They are participatory. They are grassroots. The utility must help paint this vision. We recognize that this idea of community goes against the grain for many IOUs, which are focused on competition, but we think green pricing or green marketing, for that matter, can only succeed when animated by a sense of generosity, compassion, and public spirit.

Several entities played important roles in these marketing efforts. The environmental community is one obvious example. In Fort Collins, the Sierra Club, through one tabling effort, accounted for close to 10% of the subscriptions. Likewise, access to environmental group newsletters can provide an inexpensive avenue for reaching customers inclined to participate. Finally, environmental groups were critical in obtaining both good press (Fort Collins) and bad press coverage (WEPCO, PSCO RET program).

City governments also played a critical role in leading to the development of both the Fort Collins and Traverse City programs. The active participation and endorsement of the municipalities appeared to have added credibility. There was no participation by governmental entities in the investor-owned utility programs.

Finally, each of the municipal utilities was able to attract institutional customers — businesses, churches, or other non-governmental entities — to their programs. Again, the investor-owned utilities ignored these customer segments. In our view, this broader participation throughout the community tended to create the feeling that everyone was pulling together to promote renewable energy.

III. A NEW APPROACH FOR AGGREGATING GREEN CUSTOMER DEMANDS: MOVING TOWARD COMMUNITY-BASED MARKETING

To date, green pricing has added under ten megawatts of new renewable energy capacity nationwide. Since total U.S. generation is about 750,000 MW, the effect on America's energy mix can be compared to a single grain of sand on a beach. But this may change in coming years, as more and more people gain the option to buy clean power.

In January 1998, ten million California households will become eligible to choose their energy provider. Rhode Island, New Hampshire, Pennsylvania, and other states are poised to follow. Dozens of state legislatures and the U.S. Congress are considering bills to restructure the utility industry, with the goal of providing consumer choice. Increasingly, green *pricing* — programs offered by regulated utilities to captive customers — will yield to green *marketing*, in which unregulated energy providers sell clean power to willing buyers.

Selling Clean Power

Writing a business plan to sell clean power is a sobering exercise. In either a regulated or deregulated utility environment, clean power providers face a number of daunting challenges:

- Clean power is invisible. Why should consumers buy something they cannot touch or see?
- Clean power's environmental benefits are also invisible.
- Clean power is a more expensive, low-margin product in a commodity business.
- Marketing will be expensive. There are few cost-effective ways to target your audience.

Can a power marketer make a living? Perhaps. Can he or she “do well by doing good” — make a profit *and* help the environment? This may be more difficult. Green marketing as it was practiced in the New England retail pilots and as it may be practiced in California is unlikely to make any profound difference in the way energy is generated. As middlemen, buying low and selling high, blending clean power with dirty, green marketers may be trapped in a marginal economic niche. Since the marketplace will be noisy and product differentiation difficult, the temptation will be to boost profits by watering down the blend.

To meet these marketing challenges, clean power providers must have a sharp understanding of their product.

A New Product

The \$200 billion electric utility industry is the largest and most polluting business in America. But as the industry is restructured, electricity consumers will gain new choices that could

lead to a cleaner, more sustainable energy future. Monopoly service territories and the invisible nature of electricity itself have always conspired against product differentiation in the utility industry. But now, for the first time in a century, it is possible to conceive of a fundamentally new utility product — the clean kilowatt-hour.

Today, clean energy is not so much a product, as a value widely shared by the American people. Clean power speaks in many tongues. It has a message for everyone. It's about clean air. Human health. It's about the environment. It's about pollution. Climate change. Acid rain. It's about a better future. It's about not stealing from our kids. Space age technology. Human ingenuity. It's about investing in tomorrow. Putting money where our heart is. Most of all, it's about hope.

Think back ten years. Buying recycled paper used to be a politically correct act. The emphasis was on the verb “buying.” But today recycled paper has become a product, whose virtues are broadly understood. Recently, the Pentagon, which buys 65% of all the government's paper, instituted a policy to buy only recycled paper products. You cannot get much more mainstream than that. In a consumer society, products drive awareness. Health food, running shoes, compact fluorescent light bulbs, and dolphin-free tuna are just four examples. Clean power has the potential to be a tremendous product — but it needs to be positioned correctly.

Marketing Clean Power in the Intermountain West

Although the East and West coasts are moving rapidly toward full competition, restructuring may occur more slowly in the heartland, where electricity rates are lower. In Colorado, Texas, and a number of other states, green pricing will continue to be an attractive approach for bringing new renewable energy generation on line. In Colorado, as a result of our partnership with Public Service Company of Colorado (PSCO) and Holy Cross Electric Association, more than 1 million households now have the option of buying clean power.

In this region, one important challenge must be met if green pricing is to achieve its potential: ways must be found to cost-effectively market renewable energy in urban areas. Despite its “home-on-the-range” image, the Intermountain West is the most urbanized region in the United States. Close to 70% of the population lives in urbanized areas. (Census Bureau, 1990) Denver, Albuquerque, Colorado Springs, Phoenix, Salt Lake City, Las Vegas — these cities are the region's driving forces (see Chart 2).

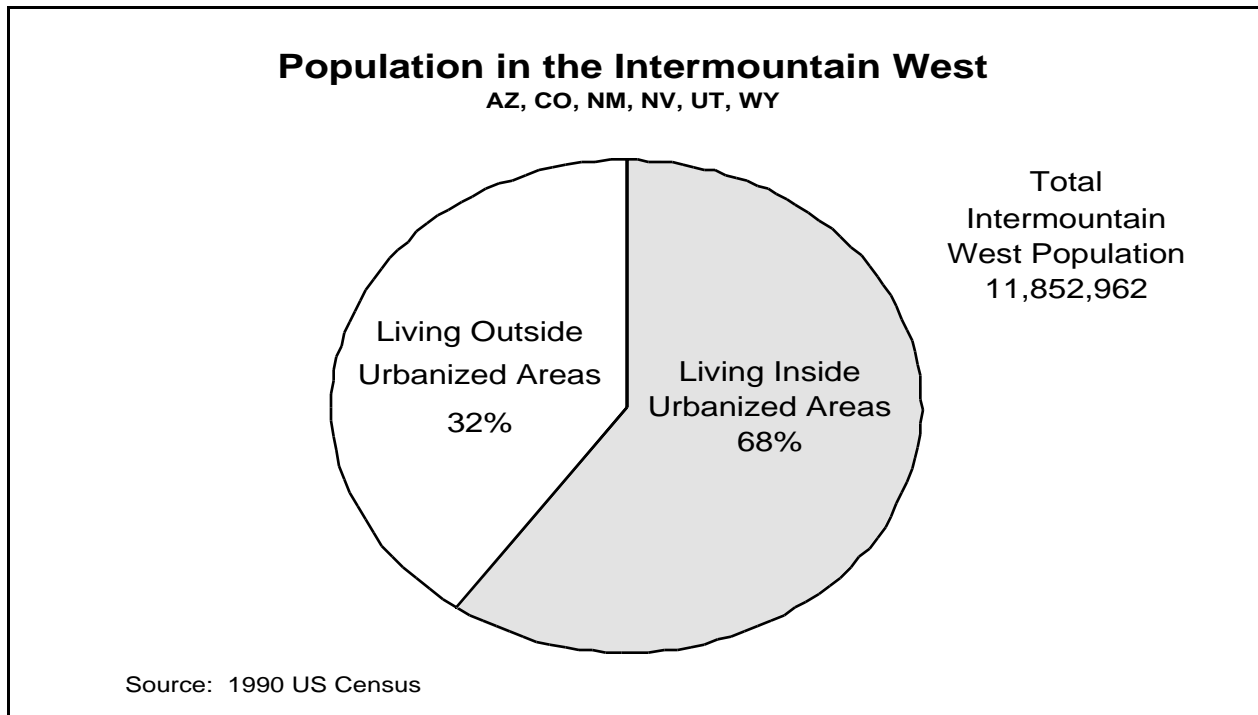
Given their economic and demographic weight, urban areas must be at the core of any regional effort to encourage customers to purchase clean power. Outside the urban areas, there are not enough customers to commercialize renewable technologies or to bring enough renewable energy on line to have a meaningful impact in improving environmental quality.

To date, municipal utilities have successfully marketed clean power. Utilities in Fort Collins, Colorado and Traverse City, Michigan were able to instill in consumers a sense of personal

responsibility for their energy use decisions and to develop a sense of community pride and ownership of wind turbines.

In contrast, no investor-owned utility has yet been able to run a cost-effective green marketing program in a large and diverse urban setting. Green pricing programs developed by utilities serving Portland, Detroit, Syracuse, and Minneapolis did not obtain the expected participation rates or raise enough money to purchase significant amounts of renewable resources. As a rule, green pricing programs developed by IOUs have been plagued with poor design, weak advertising, and inadequate marketing.

Chart 2



In our view, one issue will ultimately determine if renewable energy technologies are commercialized in the West — how to create a sense of community ownership for a clean energy product in a large urban setting. This central marketing problem must be solved if renewable resources are to thrive in a competitive environment.

Community-based Green Marketing

In Colorado the LAW Fund and CORE are developing a new community-based approach for marketing clean power. Our work at the grassroots level is intended to supplement the conventional marketing efforts of Public Service Company of Colorado as it advertises *Windsource*, its new green pricing program.

Our community-based, grassroots approach aims to create a series of partnerships among the clean energy provider, city, county, and state governments, civic groups, social service organizations, environmental groups, and other nonprofit organizations. The goal is to organize non-profit and governmental entities to enhance the efforts of PSCo in a way that lends credibility, better targets key market segments, and takes advantage of low-cost methods of outreach.

The message that animates this grassroots approach is personal responsibility for environmental improvement. The obvious analogy is recycling. Research suggests that people's willingness to pay more for clean power is directly related to how much they understand about the impacts of energy production and consumption. It's essential to educate consumers so that they begin to feel a sense of responsibility for the impacts associated with their energy use. Every time a light switch is flipped, a turbine generates electricity and air pollution. Clean power choices provide an easy, convenient way to mitigate these impacts. Personal responsibility is the key to transforming the public benefits of renewable energy into private goods.

It's been said that clean power is a vehicle for guilt alleviation. But clean power is not about guilt, it's about hope, about choice. In the energy realm, as elsewhere, choice can drive social change. Think of the Pill. The condom. The now ubiquitous question, "Smoking or non?" Thirty years ago, everyone smoked in restaurants and on airplanes. Now most meals and flights are smoke-free. As concerns about fossil fuel depletion and climate change grow, burning coal may become as unthinkable as smoking in a hospital room.

With choice comes responsibility. The average American family produces 25,000 pounds of carbon dioxide at home, and another 25,000 pounds on the road. For most families, buying clean power is the easiest, cheapest way to make dramatic reductions in pollution. Here in Colorado, buying \$10 per month of wind power saves 10,000 pounds of CO₂. That's equivalent to not driving 10,000 miles or planting an acre of trees. This is a huge bang for the buck.

Organizing the Campaign

In engineering a grassroots marketing campaign, a catalyst organization is needed on the non-profit side. This entity serves to educate the non-profit community, identify and organize key groups, mobilize a network of volunteers, and provide leadership and coordination.

To begin the customer education phase, we recommend a coordinated series of events that produces sustained media coverage. The first story could be the announcement of the product, made in the context of ongoing efforts to promote renewable resources. The second news peg could be that environmentalists and local utilities (or other clean energy providers) are working together to take advantage of the economic development and environmental benefits of renewable energy. Stories about project siting and high-profile endorsements could follow.

The cities and county governments have an essential leadership role to play in catalyzing interest in the clean energy product. Their purchases of clean power “certify” the product, provide a role model for the community, and garner media attention. In addition, cities and counties can use their own channels — such as municipal bills, cable TV programs, and employee newsletters — to heighten citizen awareness of a green marketing effort.

Environmental groups are critical partners. Their newsletters can target customers who are more likely to purchase a clean energy product. Environmental groups can also set up tables at strategic locations (natural food stores, shopping malls) to recruit customers at low cost. Indeed, 10% of the customers in Ft. Collins’ green pricing program resulted from such effort by the Sierra Club. Similarly, environmental groups can set up booths at large public events or use their mailing lists for direct mail campaigns. For example, the LAW Fund staffed a booth at the Boulder Creek Festival, a three-day event that attracts thousands of people, and got over 50 people to sign up on the spot for PSCo’s *Windsource* program.

Environmental organizations can also lend substantial credibility to a for-profit clean energy provider in its dealings with the media. Large utilities tend to be viewed skeptically by the press. Even when they attempt to do the right thing, their motives may be questioned. Environmental group endorsements can assuage media skepticism (see Attachment A).

A critical component of our grassroots strategy is developing ways to create value for large energy customers in order to convince them to buy clean power. Because residential customers typically purchase only about one-third of a given utility’s power, it is important to better understand how to influence the buying decisions of large commercial and industrial customers. In the long run, we believe the movement toward corporate sustainability will convince companies to buy clean power. At the moment, however, most companies need a well-developed proposal for a “PR kicker.” Public Service Company of Colorado, the LAW Fund, and on a more limited basis, CORE, are working with commercial customers, including the Aspen Skiing Company and Celestial Seasonings, to understand their motivations, needs, and desires.

If substantial media attention can be obtained, then a modest purchase of clean energy could be an inexpensive way for a company to enhance its image. Indeed, we think there are opportunities for larger companies to own their own wind turbine or, alternatively, buy all the energy from a single turbine. By taking advantage of the 1992 Energy Policy Act production tax credit, companies with tax liabilities could lower their wind premium to perhaps a penny per kilowatt-hour. In that way, they could buy 1.6 million kilowatt-hours of wind power, the annual output of a 750-kilowatt machine, for about \$16,000 more than they now pay for coal power.

The clean energy provider, environmental groups, and governmental entities can provide further value for commercial customers by mentioning that these companies are buying clean power in their newsletters and other outreach materials. As businesses search for ways to enhance their image, clean power could become a “tie-breaker,” giving them an edge on their competitors.

A related opportunity is to target the employees of institutions that have agreed to purchase clean energy. For example, if a large customer purchases a green product, the company may allow a non-profit organization to distribute clean power materials to its employees. Likewise, universities, governmental entities, and non-profits may allow materials to be made available to their employees. This would be a low-cost approach for greatly increasing public awareness.

Another low-cost marketing approach involves focusing on entities that would benefit from the commercialization of renewable resource technologies. Project developers (and their employees), the local community where a new project will be sited, and others involved in promoting renewable energy or sustainable energy policies are likely to be significantly more inclined to purchase a clean energy product.

Other educational avenues exist. For example, school children may provide a unique way to influence the decisions of their parents, as they have with recycling. At least three utilities have developed green pricing programs designed to put solar panels on school buildings.

The Internet can also be used to market clean power. One California power marketer, Foresight Energy, is on the Web. Others will follow. The Pace University Energy Project, with support from several other environmental groups around the country, is developing a Green Rating Web site to give consumers ready access to how different electricity providers stack up environmentally. Finally, it may be possible to integrate a renewable energy product into the marketing message of energy service companies who sell efficiency services. Energy efficiency and renewable energy go hand in hand. Unlike a pure renewable energy purchase, which would raise customer bills, end-use efficiency could allow customers to rely on clean energy and, at the same time, lower their electric bills.

Although green marketers have tried several of these ideas, no one has tried to run a comprehensive grassroots campaign to do all of them. We believe that the combined impact of these efforts will be significant, resulting in sustained media attention and greater public awareness of clean energy choices.

A Colorado Case Study

What will likely become the largest green pricing program in the world is now underway in Colorado. The program, sponsored by Public Service Company of Colorado and called *Windsource*, is an innovative partnership between the utility, the LAW Fund, and CORE. Our involvement dates to 1995, when the LAW Fund and CORE received a U.S. Department of Energy grant to develop a green pricing program in Colorado.

Under the terms of that proposal, the LAW Fund and CORE proposed to test our community-based approach for selling clean power in a pilot project in Colorado's Roaring Fork and

Eagle valleys. The original goal was to make wind power from Kenetech's Arlington, Wyoming project available to 40,000 customers of Holy Cross Electric Association.

Subsequently, however, Kenetech went bankrupt, and the Arlington project was put on hold. In response to this set back, the LAW Fund and CORE switched gears, and began helping Ft. Collins Light & Power to develop a green pricing program which would provide wind power from turbines to be sited in Medicine Bow, Wyoming. We also began working with Public Service Company of Colorado to develop a Colorado-based wind project that could be marketed to customers along Colorado's Front Range — a large and diverse urban setting including the Denver metropolitan area. Ultimately, the work on the Colorado-based wind project proved successful. Other utilities, including Holy Cross Electric Association and the Colorado Springs Municipal Utility, are also purchasing wind power from this project. These utility programs (especially the PSCo and Holy Cross programs) likely would not have occurred without the efforts undertaken by the LAW Fund and CORE to produce this report. Our work on these projects is summarized in Attachment C.

In developing the PSCo project, we tried to incorporate many of the lessons learned from the broader green marketing literature, the utility green pricing experience, and the Fort Collins program. PSCo should be commended for developing an innovative green pricing program that offers customers a great product at a fair price. To achieve this, the company embraced the idea of partnering with environmental groups and other stakeholders (including the LAW Fund, CORE, the Boulder Energy Conservation Center, the Sierra Club, the City of Boulder, and the Colorado Renewable Energy Society) to market wind power. How *Windsource* fares over the next two years will be a tremendous test of this community-based approach and more generally, the potential for green marketing.

PSCo Background

Public Service Company of Colorado is a for-profit investor-owned utility serving 1.1 million customers in Colorado. PSCo's service territory is large, diverse, and primarily urban. As such, it is representative of other urban areas in the Rocky Mountains and Desert Southwest.

Like many IOUs that operate large coal plants, PSCo has clashed with environmental groups and state and federal regulators in recent years. The company's Hayden, Craig, and Pawnee plants have been implicated in a number of Colorado's most intractable environmental problems including concerns over regional haze, urban air pollution, and acid rain in the Mt. Zirkel Wilderness Area. As a result, PSCo is cautious about messages that criticize its existing generation mix. Nonetheless, the company has sponsored green pricing programs since 1993, and has more experience in this area than any IOU in the country.

Colorado also has a large, sophisticated, and active advocacy community on clean energy issues. The Colorado PUC has been searching for ways to promote renewable resources since the

mid-1980s. The environmental community is well organized and regularly participates in the debate on clean energy policies. In addition, the National Renewable Energy Laboratory (NREL) is located in Colorado and a number of renewable developers are headquartered in the state. For all these reasons, Coloradans care about clean energy.

For some time, PSCo has been under regulatory, customer, and public pressure to invest in renewable resources. The utility is using its green pricing program to deflect some of this pressure. At the same time, however, it seems genuinely interested in gaining green marketing experience, improving its corporate image through renewable resource acquisitions, and in working with the environmental and non-profit communities to sell a green product. However, because of the company's large investment in fossil fuel plants, it will not, in its *Windsource* advertising, compare wind power to coal power — or directly address global warming, acid rain, or air pollution.

Still, the PSCo case study should be a useful test of whether or not it is possible to create a functioning market for clean energy. Although the utility is constrained in its advertising, if green marketing can succeed under these conditions it may be relatively easy to sell clean power in a competitive market where the clean power provider can use a sharper message.

The Program

PSCo will be one of the first investor-owned utilities in the United States to offer its customers wind power. The *Windsource* program was announced in March 1997. The Class IV moderate wind site in northeastern Colorado was analyzed during a Wind Resource Assessment Program sponsored by the state and was chosen on the basis of its environmental suitability, including avian issues. The first six turbines, or 4.5 megawatts, will be on line by January 1998. During 1998, seven more turbines (5.25 MW) will be added. Eventually, the site may host 20 megawatts.

Project Economics

The wind premium is 2.5 cents per kilowatt-hour. For residential customers, the rate is 35 percent higher than existing electric rates. PSCo, partnering with the LAW Fund and CORE, received a \$3 million Commercialization Ventures grant from the U.S. Department of Energy to help buy down the premium. The premium was approved by the Colorado Public Utilities Commission after an extended negotiation between the utility, the environmental community, renewable energy advocates, and consumers. At the end of the negotiations, a broad consensus was reached that the rate offered by PSCo was fair.

The wind power will be sold to residential customers in 100 kilowatt-hour blocks. Each block will cost \$2.50 per month in addition to the customer's regular electric bill. One block is about 20 percent of the average household usage. Purchasing five blocks would provide approximately

100 percent electricity from wind. Large commercial and industrial customers will be offered power in 1,000-kilowatt hour blocks.

Marketing Plans

The marketing budget for 1997 is approximately \$200,000. PSCo plans to sustain these expenditures for several years. PSCo used extensive market research to test marketing messages and themes, to understand each customer segment (residential, commercial, and industrial), and to understand how price might affect the willingness of customers to pay.

The LAW Fund, representing environmental interests and concerns, was included in the planning process and attended focus groups in Denver, Boulder, and Ft. Collins. During the market research, rooftop PV and biomass concepts were also tested. Telephone surveys were used for commercial and industrial customers. The promotional plan for *Windsource* was based on this research. Thomas & Perkins, an advertising agency, was contracted to develop ads and implement a direct mail campaign.

During 1997, the utility plans a number of promotional events for *Windsource* including:

- 1) targeted direct mail
- 2) partnerships with environmental groups and community-based organizations
- 3) partnerships with products or organizations that promote an environmentally friendly lifestyle
- 4) media opportunities tied to wind farm construction
- 5) development of articles for environmental group newsletters
- 6) Internet home page
- 7) a promotional campaign for PSCo employees
- 8) targeted advertising, beginning in July
- 9) a promotional packet for commercial and wholesale customers

The goal is to have the first five megawatts fully subscribed prior to the wind turbines becoming operational in January 1998. PSCo would like to have 1,000 residential subscribers, ten commercial customers and one wholesale customer within six months of product launch and 4,000 residential customers, 35 commercial customers and one wholesale customer within the first year. The long term goal is to have 50,000 residential customers representing five percent of the residential customer base participate in the program.

With PSCo's support, the LAW Fund and CORE have taken the lead in organizing a grassroots, community-based campaign to encourage customers to participate in the *Windsource* program. Initially, the LAW Fund is marketing the program in the Boulder-Denver area; CORE is selling wind power in the Roaring Fork and Eagle valleys of western Colorado.

Media

Windsource has received substantial media attention. During the Colorado PUC hearings in February of 1997 — when PSCo, the LAW Fund, and other parties reached agreement on the economics of the program — the *Denver Post* published a front page article describing the program, highlighting the fact that the environmental community was partnering with the utility. Additional press coverage occurred in a number of Front Range newspapers the day after the PUC unanimously approved the program. The following day, the *Denver Post* ran an editorial strongly encouraging Coloradans to participate in the program. PSCo received further favorable coverage on March 21, 1997, when it formally announced the program.

Throughout this process, the LAW Fund, CORE and PSCo have coordinated the development of press releases in support of the program. Given that it has been rare for the utility and the environmental community to work together, this partnership in itself was newsworthy. Also, in our view, the joint nature of the effort added substantial credibility to the utility program. Indeed, the coverage that did not involve the LAW Fund or another environmental group was noticeably less favorable (see Attachment A).

Cities and Counties

To date, the City of Boulder, Snowmass Village, and Pitkin County have each agreed to buy from 100 to 200 blocks of windpower each month. We are developing media stories around each of these purchases. For example, Boulder will use the wind purchased to power its municipal building. Boulder County is contemplating using wind to power the County Court House. We hope to have the mayor of Boulder announce these purchases publicly. The City of Boulder also may use its water bills, energy efficiency efforts, and cable TV channel to help promote wind energy.

Commercial Customers

Given the City of Boulder's purchase, the LAW Fund is working with PSCo and the Boulder Chamber of Commerce to approach several large Boulder-based companies that might also be interested in wind power. For these customers, a wind purchase could be an inexpensive way of gaining local media coverage. The Boulder Bookstore became the first business customer to sign up. At the same time, PSCo has approached the City of Denver, Regis University, and the Regional Transit District about purchasing wind power. If these efforts are successful, we plan to target several other Colorado cities in the next several months including Colorado Springs, Littleton, and Grand Junction.

Environmental Groups

The LAW Fund is coordinating the efforts of environmental groups. These groups, such as the Boulder Energy Conservation Center, the Colorado Renewable Energy Society, and the Sierra

Club, will include articles about *Windsource* in their newsletters and will potentially use their mailing lists to further promote the program. The Boulder Chamber of Commerce has agreed to run an article in its monthly publication. Newsletters can also be used to give recognition to customers who are participating in the wind program as a method to further create public relations value for those customers.

The LAW Fund, the Colorado Renewable Energy Society and staff members at the National Renewable Energy Laboratory will be setting up booths at various public events and strategic locations in Boulder to determine if this is a cost-effective way to create awareness of the program and encourage customers to participate.

Meanwhile, resolutions in favor of green pricing will be included in an upcoming report by the Governor's Renewable Energy Task Force. (Both the LAW Fund and CORE serve on that Task Force.)

Evaluating the Campaign

Each of the individual components of the grassroots, community-based approach will be separately evaluated in terms of its cost effectiveness in influencing customer decisions. Our goal is to understand the economics of different ways of marketing green power. We hope to identify a cost-effective package of marketing methods and channels that can be used outside of Colorado for promoting a clean energy product. We are especially interested in mechanisms that would work in a retail choice environment.

Preliminary Results

Although our grassroots marketing campaign began only two months ago in March, preliminary results are particularly encouraging. The LAW Fund is spearheading an awareness building and sign up effort in Boulder and PSCo is "seeding the environment" with various promotional activities leading up to a direct mail and advertising campaign in July.

PSCo's goal for subscriptions was to receive 1,000 within six months of the product launch and then build from there until the first five megawatts come on line in January 1998. Already over 1,200 residential customers have subscribed with approximately 20 percent of these recruited by the grassroots campaign. A booth at the three day Boulder Creek Festival distributed several hundred brochures and signed up over 50 customers.

THE BOULDER CREEK FESTIVAL

Working the "Grassroots Campaign for Wind Power" table for three days at the Boulder Creek Festival turned out to have value far beyond the number of Public Service Company customers we got to sign up for *Windsource*. In many ways it was like facilitating an intensive three day focus group session. We learned how much people know, what they are interested in, what messages got them to pick up a pen and sign up, who these people typically are. We learned what works on signs, how to draw passers by to the booth, what props to have there.

The message that worked was "Would you rather pay for wind or coal when you pay your electric bill?" This, followed by talking about the tons of CO₂ they could keep out of the air and about the coal they could avoid being burned to provide their household's electricity, usually made the sale. Finally, we realized that booths provide the education and awareness building that is crucial for aggregating green demand.

Since April first, CORE, in association with Holy Cross Electric Association, has managed to sell one megawatt of wind power. The Town of Snowmass Village will purchase 120,000 kilowatt-hours of windpower next year. Pitkin County will buy 240,000 kilowatt-hours. Nearly 800 residential customers have signed up, agreeing to pay from \$2.50 to \$60 more per month for wind power.

CORE distributed "WindPower Pioneers" brochures at the Sustainable Living Fair in Montrose, Colorado, at a community school annual event, and at the Holy Cross annual members meeting. Other outreach efforts will include public service announcements, a program on local cable television, and newspaper advertisements. Holy Cross had originally intended to purchase just one megawatt of wind power, but is now considering purchasing two megawatts. *The Aspen Times*, *Roaring Fork Sunday*, *Glenwood Post*, *Aspen Daily News*, and *Snowmass Sun* have all run articles on the program (see Attachment A).

As a result of this early success, the first phase of the wind project (4 1/2 megawatts that will begin operating in January 1998) was fully subscribed after only two months. There are a number of reasons that could explain this early success such as pent up demand and response by early adopters. Nevertheless, we believe the community-based approach has been an important factor. By getting community and environmental groups involved early on in the process, we were

able to develop a tangible renewable energy product with real environmental benefits and a fair price. The grassroots campaign is using a strong message that vividly conveys the environmental benefits of purchasing wind power. And support from environmental and community groups laid the groundwork for the flurry of positive media coverage that was the real launch of the *Windsource* program.

IV. CONCLUSION

By the end of 1997, we will know how well our grassroots marketing campaign has worked. In the meantime, we are beginning to evaluate this approach for possible use in states that have embraced retail choice.

The similarities between green pricing and green marketing will become more evident as time goes on. Although the concept of selling renewable energy on its merits is young, the LAW Fund and CORE believe that it has a promising future. Indeed, we believe that as people and businesses learn more about renewable energy's benefits, many will be willing to pay the small premium between clean power and the conventional kind. Within a decade, we predict, clean power will break out of this current small niche and become a mass market. And within two decades, as public concerns about climate change and fossil fuel depletion grow, clean power will grow to capture ever larger shares of the nation's energy demand.

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