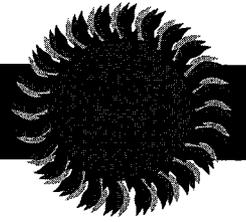


TOPICAL ISSUES BRIEF



The New Hampshire Retail Competition Pilot Program and the Role of Green Marketing

Edward A. Holt, Ed Holt & Associates, Inc.
Jeffrey M. Fang, National Renewable Energy Laboratory



National Renewable Energy Laboratory
A national laboratory of the
U.S. Department of Energy

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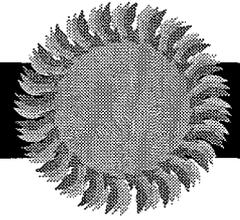
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Prepared for:

Office of Utility Technologies
Energy Efficiency and Renewable Energy
U.S. Department of Energy



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Abstract

Most states in the United States are involved in electric industry restructuring, from considering the pros and cons in regulatory dockets to implementing legislative mandates for full restructuring and retail access for all consumers. Several states and utilities have initiated pilot programs in which multiple suppliers or service providers may compete for business and some utility customers can choose among competing suppliers. The State of New Hampshire has been experimenting with a pilot program, mandated by the State Legislature in 1995 and implemented by the New Hampshire Public Utilities Commission (NHPUC), before it implements full retail access.

The New Hampshire pilot program was the first to be opened to all classes of customers in a single program, and numerous suppliers and service providers registered to compete. In the short marketing blitz that followed the announcement of eligible participants in May 1996, many marketing strategies, techniques, and messages were tested. These methods have frequently been used to sell consumer products and services but have rarely, if ever, been tried by electric monopolies.

Green marketing, an attempt to characterize the supplier or service provider as environmentally friendly without referring to the energy resource used to generate electricity, was used by several suppliers or service providers to attract customers. This appeal to environmental consumerism was moderately successful, but it raised a number of consumer protection and public policy issues. This issue brief examines the marketing methods used in New Hampshire and explores what green marketing might mean for the development of renewable energy generation. It also addresses the issues raised and their implications.

The New Hampshire pilot program makes a good case study because it was lightly regulated and allowed the marketplace to function freely. Other states and utilities that consider pilot programs, and even full-scale competition, would do well to learn its lessons, including those on consumer education, impact evaluation, data control, uniform information disclosure, and further unbundling of costs.

Acknowledgments

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The New Hampshire Retail Competition Pilot Program And The Role of Green Marketing

I. Introduction

The New Hampshire retail competition pilot program is the first in the nation to offer direct access to all classes of customers in a single program, and was the largest when it began in May 1996. It involved a relatively large number of competitive suppliers. Mass-marketing techniques were used, including green marketing, which resulted in lower-than-expected retail electricity prices. Because more and more states are considering opening electricity supply markets to customer choice, most stakeholders in the electric industry deregulation process are interested in the results of this program. This brief assesses the program's design, marketing, and implementation to learn lessons that could apply to retail competition efforts in other states. In addition to a general description and results, a special focus is given to green marketing and, in particular, renewable energy options.

II. Description

Unlike the other early retail competition pilot programs in Illinois, Massachusetts, and New York, where the programs were proposed by the specific electric utilities involved, the New Hampshire program was ordered by the New Hampshire Legislature in June 1995. From October 1995 through February 1996, interested parties gave intensive consideration to the issues of implementation and the preliminary and revised guidelines issued by the New Hampshire Public Utilities Commission (NHPUC). Much of the discussion was collaborative and involved working groups on specific issues. On February 28, 1996, the NHPUC issued the final guidelines for implementing the pilot program. The program start date was set for May 28, 1996, and would last for two years.¹

According to the final guidelines, the objectives of the pilot program are to:

- Determine the level of interest among customers and suppliers for competitively provided retail services
- Determine whether all customer classes can benefit from competitive markets
- Estimate the financial impact on utilities
- Develop unbundled rates.

These objectives did not address the full set of issues posed by restructuring, and the NHPUC recognized the program's limitations. It "is not necessarily a blueprint for industry restructuring; rather, it should be viewed as an opportunity to examine the implications of and obstacles to competition in retail electric markets. Accordingly, the pilot is limited in scope, size, and duration."²

Selecting Participants

All six utilities in the state, Concord Electric Company, Connecticut Valley Electric Company, Exeter and Hampton Electric Company, Granite State Electric Company, New Hampshire Electric Cooperative, and Public Service Company of New Hampshire (PSNH), were to participate (see Appendix B). The size of the program was limited to 3% of the retail peak load from each utility (about 50 megawatts [MW] total). Each customer class was represented in proportion to its aggregate peak load. Also, all new large commercial and industrial customers (projected to involve about 20 MW) were eligible to participate.

Customers could become participants in two ways. First, they were given the opportunity to volunteer. Unifil Resources (the parent of Concord Electric Company, Exeter, and Hampton Electric Company) and Connecticut Valley Electric Company sent direct-mail notices to their customers and achieved a 14% response.³ PSNH relied on newspaper advertising and a toll-free number, and

received a 3% response. Granite State Electric Company also did not use direct mail and received less than a 3% response. Except for Granite State Electric Company, which still accepted volunteers as of early May 1997, participants were selected at random.

The second method was to be a resident of a town that volunteered to aggregate customers within its borders. These were called geographic areas of choice (GACs). GACs received bids from suppliers to serve the aggregate load, but they must convince their residents to sign up with them. Customers in a GAC might choose not to participate in the pilot program at all, sign with the GAC, or select their own suppliers.

Those eligible to participate were announced about May 1, 1996, less than one month before the pilot program was scheduled to begin, and suppliers began to market to these customers immediately. In total, about 16,500 customers were eligible to participate: 14,765 residential, 1,728 commercial, and 16 industrial customers. Of these, 8,521 residential and 1,019 commercial customers were located in GACs.

Suppliers

To participate in the pilot program, suppliers and service providers were required to register with the NHPUC, providing only the most basic information such as company name, address, telephone, and contact person. To ensure that competitive suppliers had adequate power supply resources to meet their firm load obligations and their apportioned share of New England Power Pool (NEPOOL) required reserves, suppliers are required to obtain NEPOOL membership or contract with a NEPOOL member.

A total of 35 competitive suppliers registered for the pilot program (see Appendix C for a complete list of registered suppliers). The array of registered suppliers was impressive and included exempt wholesale generators, qualifying facilities, nonaffiliated marketers and brokers, and non-jurisdictional utilities. Jurisdictional utilities (those regulated by the NHPUC) had to establish marketing affiliates if they wished to sell power to

pilot program customers. PSNH Energy, Granite State Energy, and Unutil Resources are examples of such affiliates.⁴

Affiliation was the game *du jour* for suppliers as they jockeyed to acquire a power supply, established a regional presence, strengthened marketing capability, added customer services, and offered all-source energy supplies. Several registered suppliers teamed up to market in the pilot program. Others created new partnerships. For example, Green Mountain Energy Partners includes Green Mountain Power, Hydro-Quebec, Consolidated Natural Gas, and Noverco. KBC Energy Services is a partnership of Koch Gas Services of Houston, Bay State Gas, Connecticut Natural Gas, and Koch Power Services.

Branding electricity, i.e., creating a brand name for electric services provided by a supplier, was being tried out in New Hampshire as well. Northeast Utilities, for example, offered multiple products through its registered suppliers, PSNH Energy and Connecticut Light and Power (CL&P), and CL&P marketed under two brand names, Northfield Mountain Energy and Northeast Utilities Wholesale Power. ChoicEnergy was a brand name of United Illuminating and KCS Power Marketing.

Only about half the registered suppliers successfully acquired customers. There were several reasons for this. Some suppliers had not been active and did not plan to be. Others reported they had no sales or had made no deliveries of electricity. This could simply be another way of saying that they had not been active, or it could mean that their marketing efforts had been unsuccessful, or that they had customer agreements that were contingent on other developments.

Strategic alliances between registered suppliers also reduced the number of active marketers. For example, Cincinnati Gas & Electric and PSI Energy were not active because their parent company CINERGY acted as a wholesale supplier to Wheeling Electric Power. XENERGY worked with Freedom Energy Company as a team. Other examples of teams included United Illuminating and KCS Power Marketing, and Montaup Electric and Louis Dreyfus Electric Power.

III. Results

Marketing and low prices by competitive suppliers were the two most eye-opening aspects of the New Hampshire program. Both exceeded most observer's expectations. Consumer reaction to the program in general and to marketing activities in particular is noteworthy.

Marketing

Consumers were subjected to a barrage of mass-marketing efforts. Techniques included direct mail, telemarketing, print and TV advertising, and other attention-getters. These efforts were at their peak during the first three months, and have since largely disappeared.

The following summary of residential marketing is based on a review of direct-mail advertising and some mass media print advertising.⁵ Techniques include limited offers, give-aways, environmental appeals, additional services, choice flexibility, and a few digs at the competition.

Although the NHPUC did not impose a sign-up deadline, some suppliers used *artificial deadlines* to urge immediate action.

- "Lock in these prices if you sign up before July 1"(Central Maine Power [CMP])
- "Act by May 20, 1996, and you'll also get a Free Bonus—an *energy-efficient showerhead* (Northfield Mountain Energy)
- Special limited supply of low-cost power at 2.29 cents per kWh only available until June 14 and only for the 1st 500 customers who sign up" (Unitil Resources)
- Special introductory rate of 2.75 cents offered for a limited time (Central Vermont Public Service).

Some suppliers offered *give-aways* to entice customers.

- Immediately after eligible customers were listed, PSNH Energy sent out \$25 checks and told

customers that by cashing them they would automatically be signed up with PSNH.

- Not to be outdone, Enron sent out \$50 checks. Apparently some customers cashed both!
- Green Mountain Energy Partners (GMEP) sent free spruce seedlings to potential customers.
- CMP offered a DeLorme New Hampshire Atlas, *and* savings on long-distance calls.
- Granite State Energy wrote, "When you select our Two-Year Savings Plan, you'll also receive a *free* bird feeder (\$18 value). It's made in New Hampshire and officially licensed by the National Audubon Society."
- Unitil advertised that "one percent of the first 1000 residential customers to sign up will be picked at random to receive free electric power from Unitil for the duration of the Pilot Program."

Environmental friendliness was another angle used in marketing.

- GMEP advertised: "When you take steps to help the environment, like a home energy survey, energy-efficient light bulbs, or planting a tree, you'll receive Eco-Credits—real credits that you can apply to your bill." GMEP also advertises that it "relies heavily on renewable energy sources, like hydroelectric power, that offer the most environmentally sound forms of electricity generation."
- Granite State Energy advertised: Save Money - Energy - the Environment. "No other utility is doing more to protect our environment" and "Granite State's family of companies is the only energy supplier in the pilot to receive the *President's Environment and Conservation Challenge Award* for our long-standing commitment to protecting the environment."

Additional services were offered by a few suppliers.

- Northfield Mountain Energy (a trade name of CL&P) offered a "free energy guidebook,

energy savings catalog, energy-efficient light, outlet plate draft stoppers, child-safe outlet plugs, plug-in rechargeable flashlight."

- Freedom Energy/XENERGY offered "meaningful services, like installation and financing of energy-efficient equipment, to lower your costs further."
- Granite State Energy offered "a free analysis of your home's energy use, a free booklet with tips on conserving energy, and a free catalog of energy-saving products."

Some suppliers required that a customer stay with them for the duration of the pilot project. Others differentiated themselves from this stance by emphasizing *low risk*:

- "We'll never restrict your right to change suppliers" (Freedom Energy/XENERGY).
- "We guarantee that if you do find a lower price for electric power in the pilot, we'll meet or beat that price, or you'll be free to switch to another electric power provider with absolutely no charge or complication" (NU Wholesale Power).
- "If, within 60 days, you find a better offer, we will match it, or switch you at no charge. No risk. No confusion" (Granite State Energy).
- "Best of all, switching to Granite State Energy requires no hassles on your part, no installation of additional metering equipment, no rewiring, and no interruption in service" (Granite State Energy).⁶

Of the 35 registered suppliers, 16 succeeded in signing up customers. Of these, 10 achieved more than a 1% market share in any customer class, as shown in Figure 1. Details on these 16 suppliers are presented in Appendix D.

Price

Residential rates for electricity in New Hampshire ranged from 10.5 cents to 15.5 cents/kilowatt-hour (kWh), depending on the utility, and large-business rates ranged from 8.0 cents to 10.2/kWh.

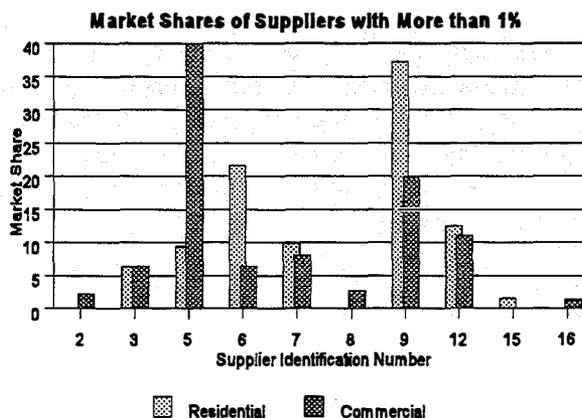


Figure 1. Market shares of suppliers with more than 1%

These rates included distribution, transmission, stranded costs, and power supply. One of the early steps to competition was the unbundling of utility rates. Table 1 shows the unbundled rates for a high-cost and a low-cost utility in New Hampshire.

For the pilot program, the NHPUC argued that participants should not be liable for all the stranded costs. NHPUC proposed that utility shareholders absorb some of this burden, and negotiated with each utility to reduce the stranded costs charged to participants. Because each utility has different stranded costs, the actual amount reduced varied from one utility to another and among customer classes, but the net result was that program participants would see a 10% reduction in the total price per kilowatt-hour.

The unbundled price of power supply to residential customers was estimated to be 3.5 cents/kWh (3.1 cents/kWh to large-business customers). Thus, if the competitive market price was 3.5 cents as expected, residential participants would enjoy an overall 10% savings. If the market price were lower, participants would save more; if higher, they would save less.

In fact, the actual retail market prices, for the most part, were significantly lower than 3.5 cents. Judging from supplier advertising, the prices offered for residential power supply ranged from 2.29 to 3.8 cents/kWh, with most offers in the 2.5 to 3.1 cents range. Thus, residential savings

Table 1. Unbundled Utility Residential Rates

Cost Component	Distribution	Transmission	Stranded Cost	Generation
High-Cost Utility	\$0.0371 (24%)	\$0.0042 (3%)	\$0.0788 (51%)	\$0.0350 (23%)
Low-Cost Utility	\$0.0437 (42%)	\$0.0047 (4%)	\$0.0217 (21%)	\$0.0350 (33%)

Source: NHPUC pilot program presentation.

could be as high as 18%, with most in the 12% to 16% range. Savings for large business customers were likely in the 15% to 20% range. Average generation prices offered by participating suppliers in the pilot program are shown in Table 2.

Suppliers who appealed to environmental values priced their offers mostly in the middle range. Working Assets charged among the highest prices, at \$0.035/kWh. Granite State Energy offered one of the lower prices, at \$0.025/kWh. Green Mountain Energy Partners, at \$0.028/kWh, and Northfield Mountain Energy, at \$0.0311/kWh, were in the middle. Thus, green options were neither the lowest nor the highest prices offered in the pilot program, possibly because the green power being marketed was mainly from existing hydro projects (among the cheapest power sources). These were usually blended with other nonrenewable energy resources.

Table 1 also shows another aspect of the cost of electricity. In the unbundled form, the cost of generation accounted for only 23% to 33% of the total delivered costs.

Consumer Reaction

Based on two market research studies, New Hampshire participants clearly appreciated the opportunity to save money on their electricity bills, but found the marketing confusing and the effort to understand the competitive offers taxing.

Participants were invited, at random, to participate in four focus groups to learn about consumer information needs.⁷ But before asking participants about specific information, they were asked to describe their experience in the program. Their level of frustration at evaluating the barrage of advertising and marketing material was very high. They described their efforts to compile tables (and

even spreadsheets) to compare the competing offers, and their difficulty in making comparisons.

Although these were for the most part motivated consumers, several said that they gave up trying to evaluate competing offers, and either guessed or opted not to choose a supplier.⁸ They spontaneously asked for standardized information across all suppliers to assist with the decision-making process.

The NHPUC sponsored a quantitative telephone survey of 400 participants.⁹ This survey provided insights into overall reactions as well as some specific issues. Overall, 67% were either very or somewhat satisfied with the program. At the same time, only 40% said that the program strongly or somewhat exceeded their expectations, and 57% said that it strongly or somewhat fell short of their expectations.

Lower rates appealed most to participants, but their dislikes were scattered. However, several reasons were related to marketing: too much advertising (5.5%), unclear information (6.5%), overall confusion (7.0%), and deciding whom to use (2.8%). When asked an open-ended question about what should be done differently in the future to ensure competition that best serves consumer interests, respondents gave many answers, but the two most frequently mentioned were no answer (17.7%) and consumers need more accurate information (17.5%).

Continuing this theme, 84% of participants felt that power suppliers should be required to provide consumers with uniform information about the average price of electricity, and 87% agreed that power suppliers should be required to provide consumers with comparable information in a standardized format about other service characteristics, such as fuel used to generate electricity, contract length, and environmental emissions.

Table 2 Price Characteristics for the Quarter Ending November 30, 1996

Type of Customer	Average Generation Price (All Suppliers)	Number of Suppliers with Market Share
Residential	\$0.0273	12
Commercial	\$0.0239	15
Industrial	\$0.0238	5

Source: Data provided by Amanda Noonan and Minot Hill, NHPUC staff, April 15, 1997.

Overall, 84% of those surveyed agreed that supplier competition is good for consumers, yet 53.5% felt that power suppliers needed to be regulated more to protect consumers. On the surface these results appear to be contradictory, but if the regulation mentioned refers to requirements to provide more consistent information and follow truth-in-advertising, the results are consistent.

Finally, a significant majority (59%) believed that the public utilities commission should be responsible for educating consumers about electric competition.

IV. Assessment

Given the pilot program and its results described above, it is appropriate to examine the role of renewable energy and green options and discuss green-marketing themes and performance. The price of power supply is also covered.

The Role of Renewable Energy and Green Options

In this brief, a distinction is made between renewable energy and green options. Renewable energy refers to energy derived from hydro, solar, wind, geothermal, and biomass sources. When such energy is in the form of electricity, it is termed renewable power. In contrast, green options may include renewable energy, conservation and demand-side management, and other options that claim to be environmentally friendly or responsible, or to contribute to improved environmental quality.

In the New Hampshire program, renewable energy or green options were not supported by explicit public policy. They were not among the major issues considered by the working groups in

planning the pilot program. The Conservation Law Foundation touched on renewable energy when it commented, in response to preliminary and revised guidelines issued by the NHPUC, that the pilot program should not violate the state's energy policy relative to renewable energy and least-cost planning. However, the NHPUC decided that "issues related to renewable resources, conservation and load management, and the State's Energy Policy will continue to be explored in the context of the larger debate over restructuring."¹⁰

The NHPUC made no suggestions about how electricity should be marketed. In contrast, in the Massachusetts Electric Company pilot program, the request for proposals included green options as one category for which marketing products were solicited. The NHPUC's near silence on the topic of renewable energy or green marketing is consistent with its hands-off approach to the marketplace and its stated intention that the pilot program be an experiment or test.

However, at least six suppliers used an explicit appeal to environmental values in their advertising. Foremost among these were Green Mountain Energy Partners, Northfield Mountain Energy, Working Assets, and Granite State Energy. The other two were PSNH and CMP. PSNH stressed its history of environmental leadership, and CMP indicated that it had a solid environmental record. Although these latter two power suppliers incorporated environmental messages in their advertisements, green marketing was not really the focus of their advertising campaigns.

Suppliers who pursued green marketing did not conduct any significant market research that led them to emphasize environmental values. Several did none at all, but followed utility green-pricing

programs and thought there might be potential market appeal. The most active green marketers chose to position themselves as environmentally responsible to differentiate themselves from pure price competitors and because it was consistent with their corporate philosophy.

Green-Marketing Themes

It is important to note that electric service providers recognized that the environment matters to consumers. However, the green marketing employed was superficial at best and misleading at worst.

Consider the following examples:

Granite State Energy, the marketing affiliate of Granite State Electric, a New England Electric System company, devoted two pages of an eight-page booklet to Save the Environment. Accompanied by photographs of a small dam and a man and a boy fishing, the copy states:

Granite State Energy and its sister companies comprise the largest hydroelectric energy suppliers in New Hampshire. So one of our strongest commitments is our ongoing effort to preserve and protect the environment. Our conservation efforts are nationally renowned, and have received numerous awards including the *President's Environmental and Conservation Challenge Award*—the nation's highest such honor. We also work with a number of environmental organizations to ensure the safe, ecologically responsible treatment of our natural resources and our children's environment.

But perhaps our greatest source of pride is that our customers have an energy company they can be proud of. A company which, since its very first hydroelectric facility began operating in 1909, has treated our environment with the respect and care it deserves—planting more than a million trees; preserving our properties and their surrounding recreational lands, trails, and water supplies; helping wildlife through habitat preservation; and much more. In fact, since 1987, we have invested over \$550 million in conservation efforts—more than any other

utility in New England.

Providing low-cost energy while protecting the environment is not only possible, it's the only way of doing business that we know. Which means you can feel good knowing that every time you turn on the switch, you're saving money and helping to protect the environment.

This message was true. The company had a good environmental reputation. It did not promise that it would supply only renewable energy, nor did it claim any specific supply mix, although it stressed hydroelectric power when its power supply affiliate, New England Power Company, has a mix of generation that is composed of coal (34%), nuclear (19%), gas (27%), oil (2%), hydro (6%), Hydro-Quebec (6%), and nonutility renewables (waste to energy and hydro, 6%).¹¹

Granite State Energy reinforced its image with the offer of a "free analysis of your home's energy use, a free booklet with tips on conserving energy, and a free catalog of energy saving products . . . and a free quality-crafted bird feeder (\$18 value)—made right here in New Hampshire and officially licensed by the National Audubon Society."

Northfield Mountain Energy stressed its attractive setting:

You may have heard of, or even visited the Northfield Mountain recreation area. If so, you've probably seen the lake at the summit. It's beautiful. But it is also powerful. Where you see a breathtaking vista, we see megawatts. The way it happens is simple: Water is pumped up the mountain at night and flows down during the day to generate low-cost power. And now, thanks to the pilot program, we're able to bring our years of experience and highly-advanced technology to New Hampshire.

This copy is describing pumped storage. The company—CL&P, a subsidiary of Northeast Utilities—saved money by using low-cost, off-peak power to pump the water up the mountain and then ran it through turbines when other plants were more expensive to run. Pumping the water uphill required

other power sources that the advertising did not disclose. The general assumption by environmental observers was that baseload plants—coal and nuclear—did the job. Whatever the mix, the emphasis on hydropower was not the whole story.¹²

Green Mountain Energy Partners presumably derived its name from Green Mountain Power Company in neighboring Vermont, and the name was ready-made for an environmental message. GMEP's advertising copy read "Choose wisely. It's a small planet." In fact, that tagline was service marked. GMEP raised a high profile when, during the weeks before the pilot program, it flew an eight-story green hot-air balloon to create name recognition across the state. It also sent a spruce seedling to participants to get their attention and to emphasize its commitment to the environment.

One of its print ads touted its power source:

Not all electricity is created equal. And not all power companies are the same. When you choose your electricity provider, here are some key questions you'll want to ask:

Ask How Their Power is Generated

At first, it might not seem to matter. After all, a kilowatt is a kilowatt. But there are different ways to generate that kilowatt, and some are cleaner than others.

At Green Mountain Energy Partners, over 90% of the electricity we supply to the power grid is hydroelectric power. And that's no coincidence. We want to be a company that makes a real contribution to the environment, starting with our energy sources. No energy source is perfect, but we think hydroelectric is one of the best options available. It doesn't pollute the air, it's renewable, and it's inexpensive.

So when you're considering a new provider, take a close look at their power source. Your decision could have a real impact on the environment and your future.

A news article went further and stated that hydropower would supply 97% of the power, with the rest split between nuclear and fossil fuels, and that only 1.5% of the electricity was made from sources that generate greenhouse gases.¹³

Of the green marketing in the pilot program, GMEP's was the clearest about the kind of energy the consumer was buying and where it came from. Based on some advertising, one of GMEP's partners was Hydro-Quebec, and GMEP was selling electricity that Hydro-Quebec generated. The issue here was that some environmentalists objected to large hydro projects undertaken by Hydro-Quebec, some of which were very controversial. The reaction illustrates all too well GMEP's copy: Not all electricity is created equal, and no energy source is perfect.

Working Assets Green Power tried to differentiate itself by advertising what it was not selling:

We know you are currently being barraged with marketing from other electricity providers, many of them claiming to offer huge savings. Some even claim to be an environmental choice. But before you choose another company, ask them a few simple questions:

- Do they currently use nuclear power; thereby generating tons of radioactive waste?
- Do they currently use power derived from burning coal; the cause of acid rain?
- Do they purchase power from Hydro-Quebec; the sponsor of some of the most destructive dams in North America?

Unless they answer NO to each one, the hidden costs of your electricity are just too high!

Working Assets Green Power does not rely on nuclear power, coal, or Hydro-Quebec. We donate 1% of your power bill to groups working to protect New Hampshire's environment. And we only charge 3.5 cents per kWh.

So where did Working Assets' power come from? "The ultimate source of our power is the New England Electric System, widely recognized for its environmental performance and overall reliability. We looked long and hard for a great partner and decided that New England Electric was the only supplier that could meet our tough standards."

If consumers understood who the suppliers were, this might sound like an ad for Granite State Energy, part of the New England Electric System (NEES) family.

Working Assets was severely criticized for marketing social responsibility without substance, but the company denied this by stating:

In our contract with New England Power, we are purchasing shares of the output of eleven specific production facilities, which include small- and large-scale hydroelectric in New England, natural gas, landfill gas, and oil-pumped storage sources. None of these sources are nuclear plants, coal, or Hydro-Quebec facilities, which destroy native lands . . . The actual purchased mix for the first quarter of 1997 has averaged 51% hydro, 41% natural gas, 3% landfill gas and 1% oil-pumped storage. Balancing power, which we estimate at about 4% of the mix and is typically used during power surges, has to be purchased from the NEPOOL system and thus cannot be targeted to specific sources.¹⁴

The Performance of Green Marketing

The market shares of the suppliers who used green marketing are not known publicly, so it is difficult to say how well those specific suppliers performed. However, a survey of pilot program participants conducted for the NHPUC in January 1997 provides some insight into what influenced participants' choices.¹⁵ Overwhelmingly, price was the strongest factor in the decision to choose a supplier. Seventy-one percent of those surveyed said that price was a strong influence.

The best insight into the role the environment and renewable energy played in customer choice is

that 20% said that the environmental message had a strong influence, and an additional 17% said the environmental message had a moderate influence in their decisions. Renewable energy had a strong influence for 17% and a moderate influence for 13% of those surveyed. Of course, the 20% of participants who were strongly influenced by the environmental message does not necessarily indicate the combined market share of the four suppliers who used a strong environmental message. These suppliers would have other factors, such as price, familiarity, and reputation, and the recommendation of a GAC, that could work for or against them.

The same survey also reported that one-third of the participants believe they received unfair or deceptive advertising from suppliers. The survey was not specific, however, about the source or cause of this perception, or whether they found the green marketing unfair or deceptive. Some marketers sold system power and a green image, without attempting to address renewable energy at all. A major concern is that, if consumers find these marketing efforts confusing or even deceptive, the future credibility of green power marketing will be undermined.

For example, some marketers repackaged existing renewable resources and promoted them as green. Reliance on current resources did not increase the amount of renewable energy in the region, nor did it improve the environment. Green power advocates wanted to incrementally add clean power and consequently retire or displace dirtier plants. New Hampshire green marketers defended themselves by arguing that the pilot programs are too small and too short. The number of customers gained was insufficient to justify acquiring new renewable power plants, and directing consumers' dollars to cleaner and renewable sources of energy that would, in the longer term, improve environmental quality. Based on focus group research not related directly to the New Hampshire pilot program, consumers apparently understood that their purchase of green power would result in longer-term investment in cleaner facilities. For the most part they did not expect immediate changes in the way power was produced. But how long they will remain patient is unknown.¹⁶

General Marketing Observations

The number of registered suppliers and their marketing efforts demonstrated that the New Hampshire pilot program was a test bed for learning competitive behavior. This is what the NHPUC wanted. In addition to the experience in competitive supply markets, suppliers were interested in gaining a foothold in New Hampshire before the entire state opens for competition in 1998 and in New England, where most other states have proposals or legislation that will lead to open markets in the near future. Many people, however, were surprised by the quickness and intensity of the marketing, described by some as a feeding frenzy, which resulted in part from a relatively large number of suppliers chasing a relatively small number of customers.

The marketing effort, which included tele-marketing, direct mail, print ads, radio, and television, was varied and probably quite expensive. Most suppliers were willing to incur this expense because, on balance, they felt it held the potential for winning market share, and because they wanted the experience. Some, however, were discouraged by the marketing investment (and perhaps were caught flat-footed), and decided not to participate actively.

The marketing was intense when the market first opened, but it died down after the first three months. To maintain that level of intensity would be expensive. Although marketing efforts continue today, the activity is less visible. Some suppliers continue to pursue specific customers. Residential customers were the object of marketing by about a dozen of the 16 active suppliers, although a few of these suppliers garnered only a few customers and may have been halfhearted in their efforts. This result may allay concerns that small consumers would be ignored by competitive suppliers. The cost of marketing to these customers, however, may deter some suppliers from this market segment in the future, and small customers may still need to be aggregated to make some market segments attractive to marketers.

Will marketing be as intense in other states? Probably not for small pilot programs, but when an entire state (or part of a much larger state) is opened to competition, marketing will likely be just as

strong as in the New Hampshire program, and with more innovation in products and services. The larger markets will require and justify bigger investments in marketing costs. This may work to the advantage of the larger suppliers with deep pockets. Small suppliers will find it more difficult to compete if they lack the resources to achieve wide recognition and reputation. On the other hand, small suppliers may find niche markets, including green markets, if they can develop targeted and cost-effective marketing strategies.

The Market Price of Power Supply

Prices of power supply (generation) in the New Hampshire pilot program were lower than expected. Some suppliers believed that their competitors were selling below cost, because the prices offered for generation were so low. Others were not so sure but agreed that the pricing was very aggressive and might be at or near market cost for short-term purchases. Whether prices were, in fact, below cost cannot be verified, and whether other states will see similar savings is not known. Prices may not be as low, depending on regional power markets and how long suppliers can afford to operate on thin margins. For this program, however, suppliers were apparently not out to make money, but wanted to gain experience and market share.¹⁷

V. Observations

What can we learn from the experience of the New Hampshire pilot? What should be done in other pilot programs, or for full retail competition, to improve on the process in New Hampshire? Observations for consumer education, impact evaluation, program data release and quality control, information disclosure, and further unbundling of costs are presented below.

Consumer Education

Most residential and small-business customers seldom think about electricity except when paying their bills, and they are not used to making decisions about electricity supply. Because this is a new area of choice for them, a systematic program of consumer education needs to be undertaken. A successful consumer education program might have

features such as: starting the program well before the market opens, multiple exposures through different media, providing consumer guides and assistance, covering a variety of issues, and non-preferential to specific providers.

Impact Evaluation

In order to derive appropriate lessons from the implementation of a retail competition pilot, it is necessary to develop a plan for evaluating the impacts of the pilot. Such an evaluation plan might have the following elements:

- Statements about the goals and objectives of restructuring or increased competition
- Questions that must be answered by the evaluation
- A rationale for the information required to answer those questions
- Identification of data needs
- Data collection method(s)
- Before-and-after surveys of consumer knowledge and attitudes for judging the effectiveness of the efforts, assessing consumer satisfaction with market changes, and identifying areas that need to be addressed by policy.

Program Data Release and Quality Control

Electric service providers in the New Hampshire pilot were required to file quarterly reports to the NHPUC on the number (and account numbers) of customers served, the amount of kWh sales and revenues. This information could be used to determine average prices and market share for each supplier. Whether this type of data will be made publicly available or kept confidential can be decided in advance, based on the questions the pilot program is trying to answer, and the needs of program evaluation. To ensure data filed by suppliers are accurate and meaningful, it is also necessary to develop a quality control plan.

Information Disclosure

The experience in the New Hampshire pilot shows that there is a need to disclose information concerning the fuel mix of the generation portfolio

of suppliers and unit price of electricity. Like the Food and Drug Administration nutritional labeling, this would be another piece of information that consumers could use to make their choices concerning electric service provider. If consumers really do have a preference for clean energy, they will then be able to exercise their choice with some assurance that they get what they pay for.¹⁸ There are also interests that the disclosure requirement be extended to include environmental impacts, presented in a standard format that supports comparison shopping.¹⁹

Further Unbundling of Costs

In the New Hampshire pilot, generation is the only competitive component in electricity costs, accounting for only about a quarter to one-third of the average delivered costs to consumers. There are arguments that, in future pilots or full-scale competition, subjecting a larger share of the final consumer cost of electricity to competition by allowing competition in metering and billing services could further reduce the total delivered costs of electricity.

VI. Conclusions

The New Hampshire pilot program caused a major shift in the thinking about marketing in the electric industry. Mass marketing and branding of electricity had begun elsewhere (e.g., UtiliCorp United's EnergyOne brand), but had achieved little visibility with consumers and the media, and was not fully internalized by many utility industry participants until it was experienced in New Hampshire.

The need for consumer education is great. New Hampshire participants were overwhelmed by the marketing blitz and frustrated by their inability to compare supplier offers. Also, they were surprised to learn that the cost of electricity is such a small part (23% to 33%) of the total delivered cost.

The pilot program created significant pressure to resolve many practical technical and business arrangements for metering, billing, power pool arrangements, customer data transfer, and standards of conduct between franchised utilities

and their marketing affiliates. Some such issues and their resolutions are listed in Appendix A.

The pilot program was a very small step in the development of renewable energy in that learning about green marketing occurred. It showed that there is consumer interest in green power and that there is supplier recognition of a potential green power market. It also showed that valid comparative information on supply offerings needs to be provided to the consumer.

VII. Notes

1. For additional background of the New Hampshire pilot program, see Appendix A. The focus of this brief is on the pilot program, not the full retail competition. With respect to the latter, it is noteworthy that Public Service Company of New Hampshire had filed suit to suspend its implementation until various issues were settled. As of October 1997 the lawsuit was still pending.

2. New Hampshire Public Utilities Commission, DR 95-250, "Order Establishing Final Guidelines and Requiring Compliance Filings." Order No. 22,033, February 28, 1996. This order and other documents relating to the pilot program may be found at <http://www.state.nh.us/puc/pilotfnl.html>

3. Schachter, Deborah, "Public Outreach and Education in Electric Utility Restructuring," National Consumer Law Center and the Regulatory Assistance Project, August 23, 1996.

4. See Appendix B for the parent companies and the number of customers of these utilities. Note also that instead of establishing a marketing affiliate, New Hampshire Electric Cooperative (NHEC) petitioned the NHPUC to act as an aggregator for its customers. As a result NHEC has solicited and evaluated bids from competitive suppliers, but it is not taking action until legal issues relating to its wholesale power purchase contracts with PSNH are resolved by the Federal Energy Regulatory Commission (FERC). In the meantime, its pilot program customers who want to make their own choice may do so, but those who wanted NHEC's assistance as a facilitator were waiting as of early May 1997.

5. Marketing strategies for business customers generally have not relied on public channels, although printed mail advertising is available.

6. Schachter (op. cit.) questions whether this message is misleading by inferring that switching to other suppliers *would* entail these hassles.

7. These focus groups were sponsored by the National Council on Competition and the Electric Industry. See Levy, Alan, Mario Teisl, Lynn Halverson, and Edward Holt, *Information Disclosure for Electricity Sales: Consumer Preferences from Focus Groups*. July 1997. Available from the National Association of Regulatory Utility Commissioners, Washington, D.C.

8. This experience was in sharp contrast to the feelings expressed by participants in the Massachusetts Electric pilot program, who were all provided with standard information about each supplier in a table provided by the utility. Although the Mass Electric participants wanted the same kinds of information as participants in the New Hampshire pilot program, they did not express the same frustration and difficulty in making a choice of supplier.

9. UNH Survey Center *Retail Electric Competition Pilot Program Survey Report*. The survey was conducted for the NHPUC in January 1997. The report is available at the NHPUC Web site: <http://www.state.nh.us/puc/pilotfnl.html>

10. See note 2.

11. New England Electric System, Form 10-K for fiscal year ending December 31, 1995, page 20. Data presented is net generation estimated for 1996.

12. Center for Science in the Public Interest, "10 Bad Ads 'Win' Lemon Awards." Press release dated December 4, 1996. See also accompanying statement by Karl R. Rabago, Energy Program Manager for the Environmental Defense Fund.

13. "Green Mountain to Provide 'Green' Power to NH," Global Warming Network Online Today, June 19, 1996.

14. Laura S. Scher (CEO Working Assets), e-mail message dated April 17, 1997.

15. See Note 9.

16. Teisl, Mario, Lynn Halverson, and Edward A. Holt, *Information Disclosure for Electricity Sales: Consumer Preferences from Focus Groups, Report 2: West Coast*. Draft. June 1997. Available from The Regulatory Assistance Project, Gardiner, Maine.

17. Schuler, Joseph F. Jr. "Residential 13 Pilot Programs: Who's Doing, Who's Dealing?" *Public Utilities Fortnightly*, January 1, 1997.

18. See, for example, Holt, Edward A., "Disclosure and Certification: Truth and Labeling for Electric Power," *REPP Issue Brief No. 5*, College Park, MD: Renewable Energy Policy Project, January 1997.

19. New Hampshire pilot program participants have voiced a strong desire for this kind of information. See Note 7.

Appendix A: The New Hampshire Retail Competition Pilot Program: Background

The New Hampshire pilot program was ordered by the New Hampshire Legislature in June 1995:

The commission shall establish a pilot program, under such terms and conditions as the commission shall deem appropriate, for the purpose of determining the implications of retail competition in the electric industry, provided that the commission determines that such program is fair, lawful, constitutional, consistent with RSA 378:37 and in the public good. This pilot program shall be open to all franchised areas and to all classes of customers.¹

In response to this legislative direction, the New Hampshire Public Utilities Commission (NHPUC) issued Preliminary Guidelines on October 9, 1995, and subsequently First Revised Guidelines on November 20, 1995. On January 23, 1996, the NHPUC issued Second Revised Guidelines, which addressed additional comments submitted by interested parties and the recommendations that emerged from an intensive series of collaborative meetings held during late December 1995 and early January 1996. Hearings were held on the Second Revised Guidelines on January 29, 1996.²

Significant pilot program issues discussed during the planning period are listed in Table A.1. The role of renewable energy, and whether it merited any special consideration, was not a significant factor in the debate. The reason for this seems to be that, although the NHPUC approved contracts for wood generators under the Public Utilities Regulatory Policy Act during the early 1980s, New Hampshire has not had activist policies that support renewable energy research, development, and demonstration projects. States with more aggressive renewables

support policies have enjoyed vigorous debate about the fate of such policies in utility industry restructuring. New Hampshire, lacking such policies, had little to lose from restructuring. According to NHPUC staff, although the least-cost planning statute directs the NHPUC to take environmental issues into consideration when reviewing resource portfolios, other goals, such as minimizing rates, have often taken precedence.³

The NHPUC issued the Final Guidelines implementing the legislature's mandate on February 28, 1996. It established the official start date for the pilot program of May 28, 1996, for a term of two years. On May 21, 1996, while the pilot program was being implemented, House Bill 1392 became effective, requiring the NHPUC to establish a plan and implement full retail choice for all customers by January 1998, with an allowable delay of six months (no later than July 1, 1998) without prior legislative approval.⁴

Notes to Appendix A

1. New Hampshire Revised Statutes Annotated (RSA) 374:26-a.

2. New Hampshire Public Utilities Commission, DR 95-250, "Order Establishing Final Guidelines and Requiring Compliance Filings." Order No. 22,033, February 28, 1996.

3. George McCluskey (NHPUC). Personal communication, June 19, 1997.

4. House Bill 1392 (RSA Chapter 374-F). NHPUC DR 96-150, Order of Notice.

5. New Hampshire PUC, DR-250, "Report Addressing Comments and Collaborative Process Recommendations and Establishing Second Revised Guidelines," January 23, 1996.

Table A1: Selected Issues Considered in Planning Pilot Program⁵

Issues Considered	Result
Effect of pilot program decisions on full restructuring	Decisions apply to pilot program only and do not establish precedent for full restructuring
Jurisdiction between NHPUC and FERC over intrastate transmission	Negotiated mechanism that is nonprecedential to avoid delay of pilot
Pilot program size and duration	Declined to extend or ramp up pilot
Selection procedures for participants	Random selection of individual and community volunteers; aggregation later
Requirements of competitive suppliers	Minimal requirements for registration with NHPUC and NEPOOL membership or access
NHPUC role in consumer education	Brochure prepared and distributed
NHPUC role in policing marketing activities	No NHPUC role; no limits on supplier marketing activities beyond current law
Accounting of pilot program costs by franchised utilities	Utilities required to report marketing costs; no ratepayer subsidies allowed
Franchised utilities marketing to consumers in own territories	Allowed; franchised utilities required to compete through a separate marketing affiliate
Continuation of utility conservation and load management (C&LM)	Franchised utilities required to provide C&LM as before; costs to be borne by all customers
Determining customer load shapes for NEPOOL billing	Estimated based on customer class load profiles, rather than individual hourly meters
Customer metering and billing	Use extant meters; suppliers may contract for billing by utility or may bill on their own
Treatment of stranded costs	Initial 50/50 split between utilities and customers, with true-up after completion of separate stranded-cost docket
Unbundling of franchised utility retail services	Disaggregated to customer service, transmission, distribution, C&LM, market price of power supply, and stranded cost
Monitoring and analysis of pilot program results	Utilities to report pilot program costs, revenues, and customer participation; suppliers report sales and customer information; most information confidential
Consumer protection rules	NHPUC winter termination rules apply to competitive suppliers and franchised utilities
Consumer responsibilities	Responsible to negotiate and evaluate competitive supply offers

Appendix B: New Hampshire Utilities

New Hampshire is served by six franchised utilities with a retail market worth about \$1 billion. Public Service Company of New Hampshire (PSNH) is by far the largest of these with about 80% of the total New Hampshire load. The following table presents information concerning the parent company and the number of customers.

Table B1: Utility Parent Companies and Customers

Utility	Parent	Customers
Concord Electric Company	Unitil Corporation	25,000
Connecticut Valley Electric Company	Central Vermont Public Service	10,000
Exeter and Hampton Electric Company	Unitil Corporation	36,000
Granite State Electric Company	New England Electric System	36,000
New Hampshire Electric Cooperative	member-owned	65,000
Public Service Company of New Hampshire	Northeast Utilities	414000

Appendix C: New Hampshire Registered Suppliers

AGF Inc.	KCS Power Marketing
Alternate Power Source	Louis Dreyfus Electric Power
American National Power	Montaup Electric Company (EUA)
ANP Energy Direct	Oceanside Energy Inc.
Bangor Hydro-Electric	Plum Street Enterprises (NMPC)
Central Maine Power	PSI Energy
Central Vermont Public Service	PSNH Energy
Cincinnati Gas & Electric	QST Energy
Connecticut Light & Power	QST Energy Trading
Duke/Louis Dreyfus Energy Services	Sprague Energy Corp.
Eastern Power Distribution	Strategic Energy Ltd.
Enron Power Marketing	United Illuminating
Freedom Energy Company	Unitil Resources
Global Petroleum Corp.	Virginia Electric and Power Co.
Granite State Energy	Wheeled Electric Power
Great Bay Power Corp.	Working Assets Funding Service
Green Mountain Energy Partners	XENERGY
KBC Energy Services	

Appendix D: Market Shares by Customer Class as of November 30, 1996

Supplier	Residential		Commercial		Industrial	
	Number	Percent	Number	Percent	Number	Percent
1	14	0.17	3	0.36	0	0.00
2	25	0.30	18	2.18	6	40.00
3	522	6.34	53	6.41	6	40.00
4	0	0.00	7	0.85	0	0.00
5	773	9.39	330	39.90	0	0.00
6	1,784	21.66	53	6.41	0	0.00
7	813	9.87	67	8.10	0	0.00
8	18	0.22	22	2.66	0	0.00
9	3,066	37.23	165	19.95	2	13.33
10	0	0.00	1	0.12	1	6.67
11	0	0.00	1	0.12	0	0.00
12	1,027	12.47	91	11.00	0	0.00
13	0	0.00	1	0.12	0	0.00
14	16	0.19	4	0.48	0	0.00
15	126	1.53	0	0.00	0	0.00
16	52	0.63	11	1.33	0	0.00
Total	8,236	100.00	827	100.00	15	100.00

Source: Data provided by Amanda O. Noonan and Minot Hill, NHPUC, April 15, 1997.

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