



The Regulatory Assistance Project

Green Pricing Newsletter

May 1995, Number 2

One of the biggest questions facing Green Pricing is "willingness to pay" (WTP). How much will consumers—particularly those who are identified as likely green customers—be willing to pay for environmentally preferred, green electricity? Put another way, at a given price premium, how many customers will sign up for green electricity?

To figure out customer WTP, many utilities have undertaken market research. The reliability with which this research is able to offer answers depends in large part on how it is designed and conducted. This second *Green Pricing Newsletter* presents three utility market research case studies and their results.

Niagara Mohawk Power Company (NMPC)

NMPC undertook its market research in two stages. First, it conducted a telephone survey of 900 consumers. This ten-minute-long survey included questions about awareness of renewable energy resources, opinions on a variety of issues, WTP for environmentally beneficial programs and demographics. The survey was designed to understand the preferences of those most likely to participate in a Green Pricing Program and was not meant to serve as a vehicle to predict market response to a specific proposal. (However, a small sample from the 900 received more in-depth questioning.) The telephone survey sampled all customers, but emphasized urban customers (because the second phase would be conducted in three cities), high usage customers and DSM program participants (because the utility thought they would likely be "green" customers).

The second stage of research included computer-assisted conjoint interviews with a subsample of 116 of the telephone survey customers. Conjoint interviews are ones in which the interviewee is asked a series of questions, each of which requires a choice between two alternatives. The alternatives describe different possible program or payment attributes. To make the answers more reliable, prior to the interviews, participants were mailed descriptions of the programs being considered by NMPC, along with possible payment options. Providing detailed information about specific options is critical to an informed and accurate response about customers' WTP and participation levels.

Some of the results from the analysis of the conjoint interviews include:

_ On a scale of 1 to 5, where 1 means not at all likely and 5 means very likely, green respondents yielded average scores of 2.7 and 3.6 when they were asked how likely they

would be to participate in a renewable energy program if it cost an extra \$6 or \$3 each month. Other respondents (non-green) yielded average scores of 1.8 and 2.6, respectively.

_ The expected level of participation depends on program awareness. At a ten percent awareness level, six percent of the total population will adopt the program over a three year period at \$6 per month. At a 30 percent awareness level, 19 percent will adopt the program over three years at \$6 per month.

Table 1 - Percent Predicted to Adopt Over a 3-Year Period

Awareness Level	All Customers		Green Customers	
	\$3/mo	\$6/mo	\$3/mo	\$6/mo
10%	7%	6%	8%	8%
30%	20%	19%	24%	24%

This may seem obvious, but it serves as a reminder not to expect instant success. As with DSM programs, it takes time to create awareness, educate the public about benefits and develop market demand. Other findings may also be useful to program design. Respondents clearly like the idea of receiving a refund if more than enough customers participate in the program and knowing that a minimum level of customer participation is required for the program to be offered.

Anecdotal evidence from focus groups and unsolicited comments from the conjoint interviews suggest that customers think Green Pricing is a good thing for the utility to offer, even if they personally do not plan to participate in the program.

NMPC decided to move ahead with a Green Pricing proposal for four reasons:

- _ Its mission is to offer products and services that its customers want.
- _ Its policy is to reduce environmental pollution and expand the role of renewables.
- _ It wants to improve relations with its customers, regulators and interest groups.
- _ It believes market solutions should be used to achieve public policy goals when possible.

The market research was especially important in supporting the first reason. NMPC believes it cannot afford to ignore the interest of up to one-quarter of its residential customers. NMPC sees Green Pricing as a way to differentiate themselves from the competition and build customer loyalty.

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Massachusetts Electric Company (MECo)

The market research for MECo was managed by New England Power Service Company, but since the program will be offered by MECo, we refer to it by that name. MECo first conducted a general survey of customers to investigate an initial qualitative response to a program concept among customers most likely to participate.

MECo began its specific market research with three focus groups. While focus groups do not permit statistical conclusions to be drawn, they are a good forum for identifying issues and addressing initial response to a particular concept of Green Pricing among customers who are most likely to participate.

Of the three groups, one was composed of residential customers believed to be strongly concerned with or active in environmental issues, and who had participated in one of the utility's conservation programs. A second group, also residential customers, was moderately concerned with environmental issues but had not participated in a conservation program. The third group was made up of small commercial and industrial customers who had participated in a utility conservation program, and who believed that businesses have some responsibility for the environment.

The purpose of the focus groups was to understand customers' general interest in and WTP for additional renewable energy; identify areas of concern and barriers to participation; and get direction for refining the program concept and description. The focus groups showed that customers are enthusiastic about renewables, and the concept of a voluntary program is appealing. At the same time, respondents are concerned about the cost and some distrust the utility's real motives.

Researchers reached two conclusions from the focus groups: customers need to see specific information about the program, costs and controls, and MECo would need to mount a broad public education program to help customers understand the company's position on and commitment to the environment. Also, customers need to be educated about energy used in generating electricity.

The second stage of market research began with a telephone survey of 400 customers to assess interest in the Green Pricing program (based on a short program description which was read to them). This survey quantified the level of interest at various surcharge levels and also obtained customers' perceptions of various energy sources.

Table 2 - Telephone Survey Results

	Expected Participation Levels	
Premium	Definitely	Probably
	Participate	Participate
Unspecified	5%	44%

5%	12%	37%
10%	6%	26%
20%	3%	10%

The telephone survey was followed by a mailed survey of 100 customers who had said in the telephone survey that they would definitely or probably participate or did not know. The purpose of the mailed survey was to obtain reactions to a prototype brochure describing the program and to provide information about MECo's current energy mix. The mail survey responses were more positive. After reading the brochure which described the cost as 1¢/kWh, or about ten percent of the monthly bill, 15 percent of those surveyed said they were certain or almost sure they would participate, while 24 percent said they very probably or probably would participate.

A third stage of market research was conducted to assess the educational value of MECo's Green Pricing marketing material. MECo found that understanding of renewable sources increased, as did customer awareness of what energy sources MECo currently uses. Based on these results, MECo is considering a filing for a Green Pricing tariff. The proposal under consideration would offer a green rate at a price premium of 1¢/kWh.

Having digested these results, why did MECo decide to develop a program? It was not based on any particular numerical threshold result. It is clear from the market

research and from prior similar research that customers are expressing some interest in the concept. The utility's attitude is, "If that's what our customers want, we should provide them with the option." The decision came down to a willingness to test it out.

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Portland General Electric (PGE)

Portland General Electric took a different approach to market research on consumer WTP for green resources. PGE explored several product concepts with focus groups. Then, instead of conducting surveys and testing consumers' reactions to hypothetical or proposed programs, PGE introduced two mini-pilots to test consumer attitudes through actions. (Neither of the mini-pilots was Green Pricing per se.)

In early 1995 PGE initiated one of the pilots in conjunction with US Bank. Consumers were solicited for three products: Certificates of Deposit (CD), debit cards and credit cards. All three products were marketed with the theme "Share the Wind."

_ The CD product was for customers who also have a US Bank checking account.

Participants had to make an initial purchase and had to agree to make regular monthly deposits of \$25 by transfer from the checking account over a six- or twelve-month period. US Bank agreed to contribute one percent of the opening balance to a wind fund, at no cost to the customer.

_ As a promotion of US Bank credit cards, the bank agreed to contribute one percent of any transferred opening balance, plus one percent of all charges added, again at no cost to the consumer.

_ The debit card accessed a US Bank checking account. US Bank donates one-half of one percent of every debit card purchase to the wind fund.

The second pilot asked customers to allow the utility to round up the customer's bill to the next whole dollar, with the money in the penny jar going to renewables. This amounts to about \$6 per customer per year. This solicitation was mailed to 2,000 residential customers.

The results from these two pilots were mixed. PGE hoped for a three percent response rate from the US Bank products, but the total response was under one per cent. This does not generate enough revenue to justify the cost of the program. PGE has concluded that much more education is necessary to make this approach work.

The penny jar pilot, on the other hand, performed well. The penny jar contributions were automatic and reliable and customers liked rounded bills. About 45 percent of the customers included in the test were aware of the program and 4.37 percent of those agreed to participate. This is an overall response rate of two percent, equal to PGE's performance hurdle for this pilot. Two percent of PGE's customers would generate about \$60,000 per year, but this is not enough by itself for the company to proceed. PGE will continue to explore other options including Green Pricing.

Both these pilots were able to fairly pain lessly test consumer attitudes through action. PGE believes their success will be linked to how well they introduce new products into the market. Accordingly, they want to begin with simple things, then introduce more complex programs. Thus their market research is controlled field testing. These controlled tests give PGE experience and begin raising consumer awareness and expectations. In the long run, PGE expects a successful program will be one that offers a variety of products, all of which reinforce awareness of the others.

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Will Customers Do As They Say?

Skeptics argue that there may be a big gap between what people say they will do and what they will do in fact. It is easy for customers to say they will participate in Green Pricing, but will they actually sign up when a product is offered?

That is a central question facing Green Pricing today. How many people will really subscribe, at what price and for what product? The answer will differ depending on how well the products are designed and marketed. For instance, if a program is poorly designed and does not build customer commitment and loyalty, its failure should not be construed as a definitive response to Green Pricing.

What Have We Learned?

Interest levels. Market research has routinely shown strong support for renewable energy, a clean environment and green utility products. On the other hand, we do not know to what extent this interest translates into actual customer participation. A customer's willingness to sign on depends on how well a particular program is designed and marketed. We do know from market research that customers like being given the choice of green energy, even if they chose not to pay the green premium.

Program design. The more product-oriented and better defined the program, the better the response. Customers at Sacramento Municipal Utility District showed strong interest in paying a 15 percent premium for the installation of a PV system on their rooftops because it was clear what they would get in return. But interest nearly doubled when the offer was coupled with a three-year freeze on rates. Value was increased by adding attributes that better defined the product.

Marketing and education. Public education and marketing will be crucial to a successful program. Market research tells us that consumers do not know much about their utilities' current energy resources and know even less about their resource options, renewable or otherwise. Education should include information about the utility's generation mix, descriptions of specific renewable resources, what the utility is already doing to deploy renewables, how much renewables cost above the utility's willingness to pay and how participating consumers and the environment will benefit.

As the NMPC research suggests, with greater awareness and understanding, consumers' WTP increases. It will take several years of marketing and education to achieve the projected levels of participation. We should not judge the ultimate success of Green Pricing until good programs have had time to permeate the public consciousness.

Additional research. Utility market research consistently shows support for the general concept of paying a small premium for environmentally-preferred power. For this reason, significant time or money should not be spent on research into the general level of consumer interest in Green Pricing. Useful market research will focus instead on testing various product configurations and tailoring a specific product offer to the interests of likely participants. Green Pricing research should be used to help design a program that is most responsive to consumer interests.