

AN EVALUATION OF THE MASSACHUSETTS ELECTRIC COMPANY'S RETAIL CHOICE PILOT: AN OVERVIEW

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Introduction

Implementing a pilot is an excellent way for an electric utility to learn how to prepare for the many challenges associated with impending retail access. The purpose of this paper is to describe key features of Massachusetts Electric's Retail Residential/Commercial Choice Pilot, summarize findings from a process evaluation of the pilot, and present conclusions resulting from Massachusetts Electric's experience with the pilot to date.

Background

Massachusetts Electric Company (MECO) is the largest of the four retail companies that are part of the New England Electric System (NEES) serving parts of Massachusetts, Rhode Island, and New Hampshire. MECO serves over 800,000 customers in Massachusetts. Currently it operates as an "all requirement" customer of the NEES generation subsidiary, New England Power Company (NEP). MECO buys electricity from NEP which is then sold to its customers through bundled tariffs. This, however, will soon change.

By early 1998, retail competition is likely to be implemented on a full scale basis in all three states which NEES serves. NEES is aggressively restructuring itself for this new environment by selling the NEES generation assets, forming a new retail power marketing affiliate (AllEnergy) with Boston Gas Company, and focusing the four retail companies, including MECO, towards distribution services. The MECO pilot represents one of a set of first steps in unbundling distribution and retail electricity services and preparing for full retail competition.

The MECO pilot follows on the heels of two other related pilots. In May 1996 NEES began by participating in the highly publicized New Hampshire Pilot through its New Hampshire distribution company, Granite State Electric, and its New Hampshire marketing affiliate, Granite State Energy. The New Hampshire Pilot is statewide, open to all suppliers and to a set of customers selected by lottery. It is coordinated primarily by the New Hampshire Department of Public Utilities.

In July 1996, the Massachusetts High Technology Council launched the first retail electricity pilot program in Massachusetts when thirteen MECO customers who are Council member companies began receiving 40 MW of electric power from a supplier (XENERGY Inc.) chosen after

a competitive bidding process. The High Tech Pilot runs through the end of 1997.

The Residential/Commercial Pilot

There were two compelling reasons for conducting a residential/commercial pilot in Massachusetts. First for retail choice to work, the utility must have systems in place to manage the complexities of billing, accounting for generation settlement, power flows, metering, and customer service. With the New Hampshire Pilot, utilities quickly became aware of the complexity of unbundling electric services. They began to develop the processes and systems required. The MECO Pilot provided an opportunity to refine and further design systems to support retail competition on a much larger scale.

In addition, for retail choice to work, customers must understand the concept of unbundled electricity service and the potential savings from retail electric competition. The MECO Pilot provided the utility with an opportunity to develop experience in customer education with a large and diverse participant base, and with an opportunity to assess customers' reactions to their experience with retail competition.

Design of the Pilot

The Pilot had several unique design features. First, unlike the New Hampshire Pilot, the number of suppliers allowed to participate was limited by a bid process. Respondents were allowed to submit bids into one of six categories - three residential and three commercial pricing categories, including:

1. Low Price Option -- Proposals were evaluated strictly on price and other offered services;
2. Green Option -- Proposals were evaluated based on environmental considerations; and
3. Other Option -- Proposals were evaluated based on price and other unique offered services such as real time pricing, in-home conservation services, and charitable contributions.

Another unique feature of the program is that the winning bids were summarized in a detailed ballot and provided to all eligible customers who requested the ballot.

For each bid category, the ballot showed the supplier bid price, bonus offers (such as a month of free electricity or cash rebate), and an estimate of the “effective” rate (the effective rate factored in cash incentives or free electricity offers). This was the only Pilot where participating customers could actually compare the price and service offers of all the supply options. Pilot suppliers are required to meet all energy and service requests at the posted price and specified contract terms for a one-year period. (The Pilot, however, did not preclude suppliers from offering prices lower than posted prices; a number of commercial participants were in fact offered prices below the posted bids). Lower prices were made available through aggregation only, and had to be indicated as a feature of the supply option in the bidding process.

This Pilot was opened to over 100,000 residential and small commercial customers in a four-city area (Lawrence, Lynn, Northampton, and Worcester) from September through November 1996. MECO set a maximum of 50 million kWh of residential participating load and 50 million kWh of commercial participating load.

The Pilot’s Implementation Schedule

In order to prepare for retail access by 1998, the Pilot had to be implemented within an extremely tight time frame. A Pilot Administrator, Environmental Futures, Inc., was selected in May, 1996. A Request for Proposals to suppliers was issued in July, 1996, and suppliers were selected by the following September. To implement Pilot billing and settlement systems by January 1997, MECO had to close customer enrollment by the end of November; this allowed MECO and the suppliers slightly more than two months to recruit program participants.

Knowing that the Company had a tight schedule, MECO and the Pilot Administrator began an aggressive retail choice awareness campaign in June, 1996. The purpose of the campaign was to inform eligible customers about the upcoming Pilot, educate them on how retail choice will work, and on its relationship to potential bill impacts, customer service, and reliability. The campaign involved newspaper and radio advertisements, newspaper articles, radio interviews, posters, bill inserts, trade and community meetings, and participation in trade and home shows. Eligible customers could then request a Pilot ballot with the retail choice price options by either calling an 800 number or mailing a request card.

The Pilot Parameters

As shown in Table 1, in total six suppliers were selected. They included:

- Enova (San Diego Gas and Electric);
- NU Wholesale (Northeast Utilities);
- Northfield Mountain Energy (Northeast Utilities);

- Cinergy/Wheeled Electric Power Company;
- Working Assets; and
- AllEnergy (New England Electric and Boston Gas).

Several suppliers were selected for more than one of the six categories. Base bid prices ranged from \$0.023 to \$0.0335 per kWh, however some negotiated commercial prices remain confidential.

Table 1: Menu of Pilot Supply Options

RESIDENTIAL MENU			
Option	Company	Base Price (\$/kWh)	Bonus
Price			
	Enova Energy	\$.023	Yes
	NU Wholesale	\$.025	Yes
	WEPCO/Cinergy	\$.0271	No
Green			
	AllEnergy -A.	\$.0301	No
	AllEnergy -B.	\$.0321	No
	AllEnergy -C.	\$.0341	No
	Enova Energy.	\$.025	Yes
	Northfield Mtn	\$.026	Yes
	Working Assets	\$.0335	Yes
Other			
	AllEnergy	\$.0287	No
	WEPCO/Cinergy	“PMI” + \$.001	No
SMALL BUSINESS MENU			
Option	Company	Base Price (\$/kWh)	Bonus
Price			
	Enova Energy	\$.023	No
	NU Wholesale(G1)	\$.0255	Yes
	NU Wholesale(G2)	\$.0245	Yes
	WEPCO/Cinergy	\$.0264	No
Green			
	AllEnergy -A	\$.0301	No
	AllEnergy -B	\$.0321	No
	AllEnergy -C	\$.0341	No
	Enova Energy	\$.0310	Yes
	Northfield Mtn(G1)	\$.0275	Yes
	Northfield Mtn(G2)	\$.02555	Yes
Other			
	AllEnergy (G1)	\$.0282	No
	AllEnergy (G2)	\$.0272	No
	WEPCO/Cinergy	“PMI” + \$.001	No

Note: “PMI” refers to Power Markets Week NEPOOL Weekly Index

Pilot Participation

By the close of the enrollment period, the commercial quota of the Pilot was fully subscribed while the residential quota was not over 260 distinct commercial customers representing approximately 550 accounts and approximately 4,500 residential customers enrolled in the pilot.

As shown in Table 2, overall, the Pilot has generated savings of 14% for the participating customers. Savings associated with specific supply options range from 4% to

17%. While a strong majority of residential and commercial customers selected the Price Options, all three options were subscribed by some customers and a significant number of residential customers (30%) selected Green Options.

Process Evaluation of the Pilot

A process evaluation of the MECO Pilot was conducted in order to distill any lessons learned from the implemen-

Table 2: Massachusetts Electric Choice New England Pilot Program: Results Year To Date, April 1997

RESIDENTIAL MENU												
Residential Rate Classes	PRICE OPTIONS			GREEN OPTIONS						OTHER OPTIONS		TOTAL
	Enova	NUWP	WEPCO	All Energy A	All Energy B	All Energy C	Enova	North-field	WAGP, Inc.	All Energy	WEPCO	
Customers	2,043	972	134	57	4	9	123	479	762	125	3	4,711
MWh	4,520	2,404	299	87	12	9	254	912	1,117	250	3	9,867
Bundled Bill (1000\$)	\$475	\$250	\$31	\$9	\$1	\$1	\$27	\$97	\$122	\$26	\$0	\$1,041
Unbundled (Pilot) Bill (1000\$)	\$393	\$214	\$28	\$9	\$1	\$1	\$23	\$82	\$112	\$24	\$0	\$887
Savings From Pilot (1000\$)	\$82	\$37	\$3	\$1	\$0	\$0	\$4	\$15	\$10	\$2	\$0	\$154
% off Bundled Bill	17%	15%	11%	7%	6%	4%	15%	15%	8%	8%	7%	15%

COMMERCIAL MENU												
Commercial Rate Classes	PRICE OPTIONS			GREEN OPTIONS						OTHER OPTIONS		TOTAL
	Enova	NUWP	WEPCO	All Energy A	All Energy B	All Energy C	Enova	North-field	WAGP, Inc.	All Energy	WEPCO	
Customers	49	381	94	0	0	0	1	16	N/A	3	2	546
MWh	650	9,021	2,307	0	0	0	9	612	0	44	34	12,677
Bundled Bill (1000\$)	\$70	\$892	\$214	\$0	\$0	\$0	\$1	\$59	\$0	\$4	\$3	\$1,243
Unbundled (Pilot) Bill (1000\$)	\$60	\$759	\$189	\$0	\$0	\$0	\$1	\$52	\$0	\$4	\$3	\$1,068
Savings From Pilot (1000\$)	\$10	\$132	\$25	\$0	\$0	\$0	\$0	\$6	\$0	\$0	\$0	\$175
% off Bundled Bill	15%	15%	12%				14%	11%		9%	5%	14%

OVERALL PILOT RESULTS TO DATE												
Bundled Bill (1000\$)	\$545	\$1,142	\$245	\$9	\$1	\$1	\$28	\$156	\$122	\$30	\$4	\$2,284
Unbundled (Pilot) Bill (1000\$)	\$453	\$973	\$217	\$9	\$1	\$1	\$24	\$135	\$112	\$27	\$3	\$1,955
Savings From Pilot (1000\$)	\$92	\$169	\$28	\$1	\$0	\$0	\$4	\$21	\$10	\$3	\$0	\$329
Total % off Bundled Bill	17%	15%	12%	7%	6%	4%	15%	14%	8%	9%	5%	14%

Notes:

Savings from Supplier's Bonuses have been prorated

Results reflect usage in the months of January, February, and March (bills received in February through April).

tation of the Pilot and to assess customer reactions to the marketing, education, and customers' first months of Pilot experience. Regional Economic Research (RER) was contracted to conduct the evaluation. To assess lessons learned in implementation, the evaluators interviewed key utility staff, the Pilot Administrator, and participating suppliers. To assess customer response, telephone surveys were administered to a random sample of 336 residential and 100 commercial participants and 300 residential and 300 commercial nonparticipants. The following sections summarize findings from the evaluation.

Findings Related to Developing Processes and Systems to Support Retail Competition

1. Smooth operation of the implementation team was key to the MECO Pilot's success in meeting its deadlines and producing the new systems. MECO established a retail competition implementation team that spanned several departments including Load Research, Information Service, Customer Service, Revenue Accounting, Metering, Marketing, and Transmission and Generation. Some members of the team met once a week to identify specific tasks and completion dates for each of the hundreds of changes required to the existing customer, billing, and metering procedures and systems, and the development of new systems for supporting supplier load flow accounting and billing.

2. There are many transaction issues which need to be resolved even after a basic unbundled system has been mapped out. Attention to details is critical to the success of the pilot. The new procedures and systems required by the pilot can be broken down into two general areas: 1) Customer billing and services; and 2) Supplier load accounting and settlement procedures and systems. Examples of some of the detailed transaction issues related to these which the Pilot addressed are listed in Table 3.

3. Estimating each supplier's prior day hourly load profile, an essential aspect of accounting for competitive suppliers' load flows, requires considerable resources and effort. This has been perhaps the most challenging aspect of implementing the Pilot. Power flow accounting is largely driven by New England Power Pool (NEPOOL) operations requirements. On a daily basis, NEPOOL dispatches generation units throughout New England based on unit availability, run cost, and other auxiliary service needs. NEPOOL utility members then "settle" the difference between what they sold to their customers and what generation units were actually dispatched to meet customer demands.

The introduction of competitive power suppliers significantly complicates the process. Each retail supplier must also participate in NEPOOL and the settlement process; this requires prior-day hourly demand profiles for each retail supplier. Retail suppliers may sell to a mix of residential, commercial, and industrial customers through several

different distribution utilities. Since there is no direct means to meter the retail supplier's hourly demand, a procedure for estimating supplier load profiles had to be developed.

The load estimation system involves processing millions of customer billing records, customer interval data, load research data, weather data, and bulk metered data on a daily basis, and generating and delivering supplier profiles and supporting reports. The alternative to this approach, placing an interval recorder on every single customer, is exorbitantly expensive. The cost of new metering equipment alone would outweigh any savings resulting from retail competition.

Table 3: Transaction Issues

◆	Customers switching from one supplier to another
◆	Billing options that include the ability to issue a "joint" MECO and Supplier bill or separate MECO and Supplier bills
◆	With partial bill payments, who gets paid first - MECO or the Supplier
◆	New distribution and supplier rates
◆	Low income subsidies, e.g. fuel assistance funding
◆	Customer billing and service questions
◆	Assigning a Supplier of last resort and what happens if a Supplier drops a customer
◆	Capacity shortfall conditions and responsibility for load interruption
◆	Transferring billing units from Customer Information Service to Suppliers
◆	Business rules and communications procedures between Suppliers and MECO
◆	Supplier access to customer load research data

Findings Related to Marketing the Pilot

1. Several barriers to recruiting the residential customers led to less than full enrollment. These include: time (the enrollment period was limited); hassle (36% of nonparticipants felt it was too much hassle given the potential savings); and limited success in reaching and educating the eligible population (suppliers observed there were few cost-effective media that allowed them to place city-specific advertisements. The telephone survey indicated that over 60% of the eligible population did not know about the Pilot and for those who called with questions, it took an average of fifteen minutes per phone call for the Pilot Administrator's staff to explain retail choice to an interested customer).

2. Residential customers received relatively little marketing from participating suppliers. One exception was Working Assets which aggressively marketed offering a free pint of Ben and Jerry's ice cream every month along with their Green Power Option; they received 16% of the residential market share. By contrast, the three other suppliers of Green Power combined received 27% of the residential market share.

3. Targeted marketing by certain suppliers ensured full subscription on the commercial side of the Pilot and it also influenced the mix of businesses participating. NU Wholesale and Cinergy/WEPCo received the largest commercial market shares by targeting the municipal accounts (including over eighty Northampton municipal accounts and a large number of street light accounts) and members of the Retail Trade Association of Massachusetts.

4. MECO's "ballot" which outlined all the supplier/price options was considered understandable and helpful by most participants.

5. Using the analogy of telephone deregulation to explain electric retail choice presents problems and opportunities. The major problem is that some aspects of telephone competition are disliked by customers, while one advantage is that it is an efficient way to describe retail choice.

Customer Experience With Retail Competition

Overall, customers received Pilot information from similar sources. MECO, newspaper articles or ads, and bill inserts were among the most common sources of information recalled by survey respondents - including residential and commercial participants and nonparticipants. Roughly half the eligible residential and commercial customers received marketing information from suppliers. Trade organizations were also a significant source for commercial participants.

As discussed earlier, one of the challenges of the residential Pilot was marketing a relatively complex concept in an extremely short period of time. Only 40% of the eligible population of 100,000 households said that they heard about the Pilot. Less than 5% elected to participate.

Results of the telephone surveys suggest that participants' experience of the Pilot has been seamless and positive to date. For example, over 77% of residential and 91% of commercial participants were satisfied or very satisfied with their experience of the Pilot. (Less than 1% were dissatisfied). Approximately 65% of commercial and residential participants feel their new bill is clear and understandable. Nearly 20% of residential and commercial customers do not recall which supplier they selected.

Price was by far the biggest factor in selecting a supplier; 67% of residential and 88% of commercial customers cited price as the primary reasons for selecting their supplier.

Sixteen percent of the residential participants cited environmental and social concerns as the primary reason for selecting their supplier. Among commercial participants, 3% were attracted by incentives offered and 2% cited concern for environmental or social issues. These responses correlated fairly strongly with the supplier market shares.

Once residential customers gain experience with retail choice, there appears to be a dramatic reduction in overall concerns about the complexity of unbundling electric service. When nonparticipants were asked, "What is your biggest concern as to how retail competition will affect you?" nearly

33% of the residential nonparticipants gave "increased complexity" as a primary concern. This is in contrast to residential participants, where 46% had "no real concerns," and less than 1% gave "more complexity" as a primary concern.

By contrast, roughly equal proportions (40%) of commercial participants and nonparticipants have "no real concerns" about how restructuring will affect them. However, slightly larger proportion of nonparticipating commercial customers voiced concern about reliability.

The only real concern raised by all customers surveyed was that full retail choice might result in higher electric bills. Roughly 20% of those surveyed expressed this as a primary concern.

Despite some concerns as to how retail competition will affect electric costs, reliability, and customer service, the majority of participants and nonparticipants believe that the ability to choose an electric supplier is important. While roughly 81% of the residential and commercial participants believe it is "very" or "somewhat" important to be able to choose, 59% and 76% of the residential and commercial nonparticipants, respectively, said it is "very" or "somewhat" important to be able to choose.

Conclusions

Marketing matters. Despite an aggressive awareness campaign only half the eligible residential customers elected to participate. The lack of interest reflects that for most residential customers the perceived savings were not worth the additional hassle of dealing with two electric companies or the uncertainty in how customer service and reliability may be affected. Convincing residential customers that they will see direct benefits from retail competition presents challenges; the inertia in the residential market is likely to be high.

Once commercial customers were convinced that reliability was not a real issue, they were relatively quick to join the Pilot. Commercial customers are likely to be marketed by aggregators or by suppliers directly, and may be expected to quickly switch to suppliers with attractive prices.

Trade organizations acting as "buyers" agents will play a major role in promoting retail competition. In the MECO Pilots, both the High Tech Council of Massachusetts and the Retail Association of Massachusetts played a significant role in lending credibility to retail competition in general, and acting as buyers agents in negotiating prices and selecting the best suppliers for their members. Trade organizations represent a vehicle that can efficiently reach large groups of commercial customers.

Competing suppliers are likely to target specific market segments. Several of the participating suppliers used this approach in the Pilot. Cinergy/WEPCo focused on retail customers, NU Wholesale focused its recruitment effort on municipalities, and Working Assets targeted households that

have strong environmental concerns. Target marketing allows suppliers to offer tailored services and design specific marketing campaigns that utilize marketing dollars in the most cost-effective means.

While the utility benefitted from the MECO Pilot as it was designed, suppliers expressed a desire to have had a Pilot with less restricted design. The presence of a Pilot Administrator, the intermediate step of bidding to the Administrator before marketing to customers, and the requirement that supplier prices be held constant during the Pilot were perceived as constraints by the suppliers.

The Pilot is invaluable in providing the utility with an opportunity to prepare for the many new transactions required in retail choice, specifically: developing new business procedures, outlining new information and process flows, modifying the existing Customer Information Service and billing systems, developing new data transaction and communication systems, and training in the procedures and systems for handling unbundled electric service transactions.

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References

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