

Leveraging Customer Satisfaction through Energy Efficiency

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ABSTRACT

Most utilities implement demand-side management (DSM) programs as part of a broad resource acquisition strategy. But with experience, utilities soon learn that these programs also directly influence another area of strategic importance: customer satisfaction. Utility managers need to integrate customer satisfaction into their DSM strategy to maximize the value of their program investments. And once they begin to strategically address customer satisfaction, their overall DSM strategy may change direction. This paper provides a case study from MidAmerican Energy showing how DSM programs were a leading contributor to improved customer satisfaction ratings from 2001 to 2005.

Energy Efficiency and Customer Satisfaction

Most utilities place an enormous emphasis on improving customer satisfaction. And for good reason, since research has shown links between high customer satisfaction and higher stock prices (Fornell et al. 2006), shareholder value (Anderson, Fornell & Mazvancheryl 2004), and higher credit quality (Standard & Poor’s 2005). However, most utilities have not yet integrated their DSM strategies with their broader customer satisfaction strategy.

DSM programs can influence customer satisfaction both directly and indirectly. Directly, programs give customers an opportunity for a significant positive (or negative) interaction with their utility company. For program participants, their program experience may be the most important utility interaction that occurs during a given year. Depending on the program, participants may learn of an opportunity through a television spot, direct mail, or other utility advertising; sign up for the program through a utility web site or call center; receive technical assistance in the form of an energy audit or equipment recommendation; receive financial assistance through a cash rebate, bill credit, or free service; provide feedback through a survey or focus group; and enjoy the ongoing benefits of the program services. These interactions can involve phone calls, emails, web interfaces, and personal meetings. These are substantial interactions for those customers whose other dealings with their utility may be limited to monthly bill payments.

Indirectly, customers learn of utility DSM programs through advertising and other outreach efforts. Even if they don’t participate directly in the programs themselves, knowing their utility offers programs may have a significant influence on the customers overall perception of the utility. Again, this is an opportunity for either positive or negative influence, depending on the quality and source of the information, as well as the customer’s outlook towards DSM.

How Important Is DSM To Overall Customer Satisfaction?

The key drivers of customer satisfaction tend to be reliability and price. (EPRI Solutions 2006; J.D. Power and Associates 2006a; TQS Research, Inc. 2005) When utility managers

analyze drivers of overall satisfaction, DSM program performance (or existence) typically ranks far below these two key areas, and utility managers often discount DSM programs as part of their overall customer satisfaction strategy. Yet managers may underestimate the importance of DSM programs for at least four reasons:

- The most important drivers of customer satisfaction are often outside of utility control, at least in the short term. Of the controllable factors, DSM programs rank high.
- Utility managers have typically already addressed the most important drivers of customer satisfaction, and so little additional gains can come from these areas. The influence of DSM programs on customer satisfaction can still improve for many utilities.
- DSM programs are relatively flexible and can be adapted to address customer satisfaction threats and opportunities.
- DSM programs can contribute to other factors that drive customer satisfaction.

DSM as a Controllable Factor

DSM programs are often more controllable than other satisfaction drivers, at least in the short term. Reliability, while controllable in the long term through capital investment, in the short term is driven by random events such as weather and equipment failures. Price, while controllable in the long term through successful capital investment and cost control, is mostly fixed in the short term due to regulatory lag in setting prices. DSM programs, on the other hand, are within utility control and can be implemented (or improved) on a relatively short time frame.

DSM as an Improvable Factor

Utility managers already focus on the key drivers of customer satisfaction. All utilities work on lowering price and improving reliability. Once utilities take on customer satisfaction as a concrete goal, they quickly address other key drivers, such as training personnel to improve the quality of customer contacts. After addressing these areas, managers may have difficulty wringing additional measurable improvements from them. To the extent that DSM programs can improve, grow, or be better integrated into the customer service strategy, they can improve customer satisfaction, even if they are small overall as a driver of satisfaction.

DSM as a Flexible Factor

DSM programs are relatively flexible and can be adapted in a relatively short time frame to address customer satisfaction threats and opportunities. For example, in the fall of 2005, natural gas prices spiked after the Gulf hurricanes limited production capacity. Utilities throughout North America implemented communications strategies to inform customers of the coming price changes and proactively respond to this threat. Some utilities adopted strategies that deflected blame using messages like: “Prices are going up. We’re sorry, but it’s not really our fault.” Utilities with DSM programs could use a different approach, offering messages of partnership such as “Prices are going up. We’re here to help.”

DSM as a Contributing Factor

DSM programs can also contribute to many of the factors that utility managers do find important in driving customer satisfaction. For example, J.D. Power and Associates evaluates the following attributes in its annual customer satisfaction ranking of North American gas and electric utilities (J.D. Power and Associates 2006a):

- Communications With Customers
- Power Quality and Reliability
- Billing and Payment
- Customer Service
- Company Image
- Price

DSM programs at most utilities contribute to communications, customer service, company image, and price. Depending on the specific service offerings, DSM programs can also influence power quality and billing/payment. For example, utilities can mitigate potential threats in the billing/payment area by referring customers with high bill complaints directly to DSM programs (e.g., residential energy audits with the utility providing contractor-arrangements for insulation services).

An Example from MidAmerican Energy

MidAmerican Background

MidAmerican is the largest utility in Iowa and also provides electric and gas service to customers in Illinois, South Dakota and Nebraska. Across all four states, MidAmerican serves almost 700,000 electric customers and more than 680,000 natural gas customers. MidAmerican maintains an electric generating capability of almost 4,900 megawatts.

MidAmerican's parent company, MidAmerican Energy Holdings Company, also owns other companies that provide electric generation, gas transmission, retail electricity, and real estate services throughout the world. MidAmerican Energy Holdings also completed its acquisition of PacifiCorp during the first quarter of 2006.

MidAmerican Energy began offering large-scale DSM programs to its Iowa customers in 1991. In 2003, the Iowa Utilities Board approved MidAmerican's latest energy efficiency plan (Iowa Utilities Board 2003) which began implementation in 2004. Total DSM expenditures in 2005 were \$42.9 million, including \$26.5 million on electric programs and \$16.4 million on natural gas programs.

One of MidAmerican's key corporate objectives is to maintain outstanding customer satisfaction across its customer base. MidAmerican monitors customer satisfaction using internal surveys and external industry benchmarking studies. For three years running, J.D. Power and Associates has ranked MidAmerican first or second in customer satisfaction in the Midwest region for all four of the categories that it tracks for utility providers (residential and small commercial; electric and natural gas) (J.D. Power and Associates 2004-2006). In addition, the TQS National Benchmark Study has rated MidAmerican first in the Midwest for customer satisfaction among large electric customers for the last several years (TQS Research, Inc. 2005).

TQS Survey Approach

TQS evaluates customer satisfaction using the following attributes:

- Handling Customer Contacts
- Reliability & Power Quality
- Price, Rates, Billing
- Account Management
- Image Index
- Energy Efficiency Programs

Of these, the energy efficiency attribute is the least important driver of overall satisfaction. TQS evaluates survey responses every year to determine how important each factor is in predicting overall customer satisfaction. Performance on the energy efficiency attribute can typically only predict 5 to 10 percent of overall satisfaction (TQS Research, Inc. 2005). In contrast, customer contacts, reliability, and price can each typically predict 20 to 30 percent of overall satisfaction. (TQS Research, Inc. 2005).

Yet, at MidAmerican, Energy Efficiency has been one of the most important factors in improving (and maintaining) customer satisfaction. It is not the most important factor, but it is significant.

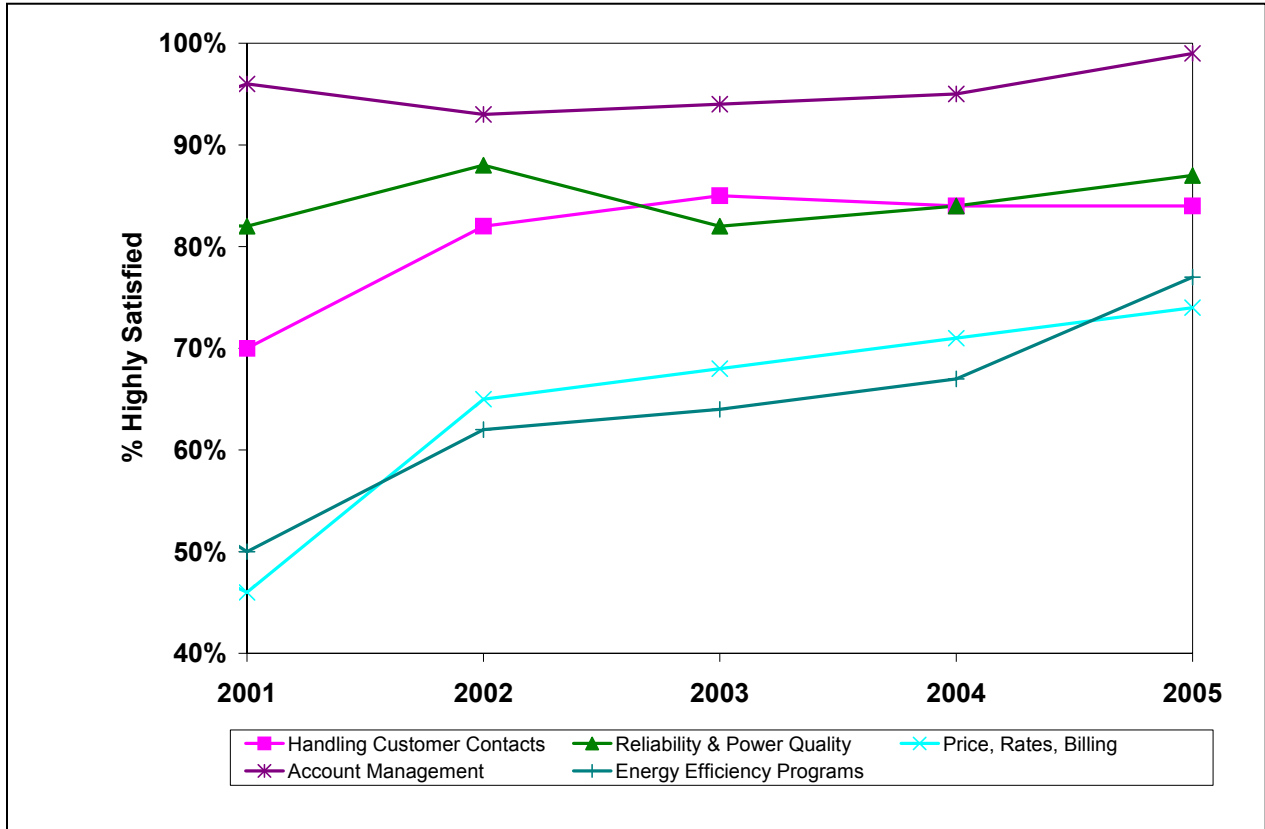
The contribution of a given factor to overall improvement can be thought of as the product of two elements: the weight of the factor's importance and the magnitude of the factor's improvement. While energy efficiency has a low importance weight, it has shown large improvements. And since MidAmerican's account representatives were already performing at very high levels in other areas, energy efficiency has had a larger-than-expected impact on overall customer satisfaction.

Figure 1 shows MidAmerican's customer satisfaction ranking on TQS's five component rankings for 2001 through 2005. TQS implemented its Image Index in 2003, and, since it was not evaluated for the entire timeframe, it has been eliminated from this analysis to maintain consistency.

MidAmerican's results for the five factors fall into three broad groups:

- Account management has maintained consistently excellent rankings above 90 percent.
- Customer contacts and reliability showed initial improvements that have more or less leveled out between 80 and 90 percent.
- Price and efficiency began with very low ratings (45 to 50 percent), but have showed substantial and ongoing improvements to reach levels between 70 and 80 percent.

Figure 1. MidAmerican Energy TQS National Benchmark Survey Results

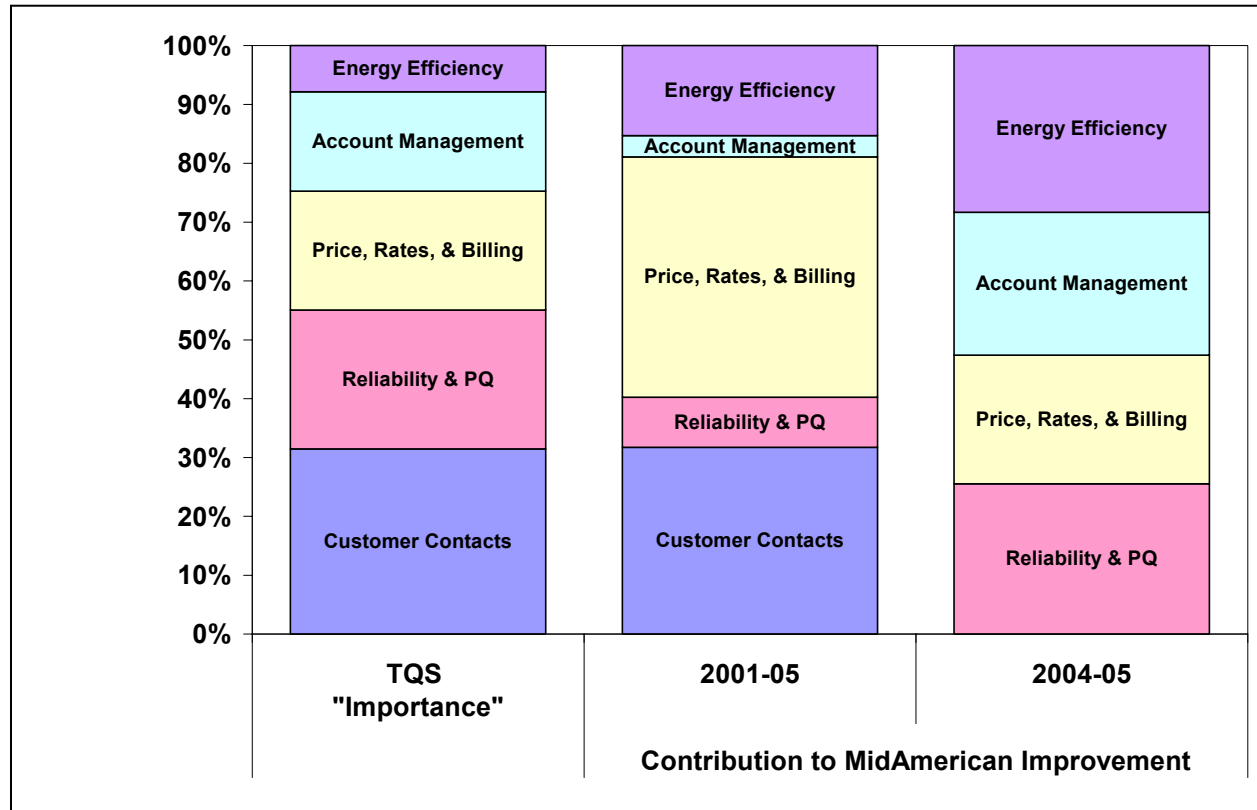


These changes are consistent with management decisions made at MidAmerican as well as with external events that were not entirely within MidAmerican's control.

- In the late 1990s, MidAmerican experienced some turnover in its key account staff as it created a retail services subsidiary in anticipation of a deregulated Iowa electric market (which, after the California experience, did not come about). This led to some declines in the customer contact rating as customers needed to adapt to new contacts. As account assignments stabilized, customer contact ratings improved and then leveled off.
- Reliability ratings seem to be driven by external factors such as ice and thunderstorms. Throughout the period, ratings vary from 82% to 88%.
- For many years, MidAmerican has offered its largest customers some of the lowest electric prices in the United States. In 2003 MidAmerican extended an existing rate stabilization initiative, which was set to end in 2005, for an additional five years to 2010. In addition, MidAmerican has been very aggressive in pricing attractive contracts for those customers served outside of the normal tariff structure.
- MidAmerican developed a new Energy Efficiency Plan which was approved by the Iowa Utilities Board for implementation in 2004. One of the strategies of the new plan was to address large customer concerns that the existing programs were not tailored to their specific needs. New programs, additional resources, and better coordination with key account representatives were all put in place as a result of the new plan.

Figure 2 show how these results translate into overall customer satisfaction ratings. The overall rating can be thought of as a weighted sum of the individual attribute ratings.¹ By calculating these weighted sums for each year, MidAmerican could estimate how much of the overall satisfaction change was contributed by each attribute.

Figure 2. MidAmerican Energy TQS Customer Satisfaction Results



The column on the left in Figure 2 shows TQS’s “importance factor” for each attribute².

The middle column shows the contribution of each attribute to MidAmerican’s overall increase in customer satisfaction from 2001 to 2005. While energy efficiency has the lowest importance, it shows such a large increase that it has the third largest contribution to overall customer satisfaction increases. The largest contribution comes from price, which shows both large increases and is relatively important. The second largest increase comes from customer contacts, which shows smaller increases, but is the most important.

The column on the right in Figure 2 shows similar data for 2004 to 2005. Here energy efficiency has the greatest contribution to the overall customer satisfaction increase, although the

¹ TQS actually directly measures overall satisfaction as well as satisfaction with each individual attribute. TQS then estimate the “importance factors” based on a regression of attribute results across all customers and utilities. For each utility, overall satisfaction can be estimated as the weighted sum of the individual attribute ratings, although this estimate will not exactly match the overall satisfaction rating directly measured in the survey.

² Note that TQS reevaluates these factors each year. For simplicity, an average importance for the five attributes (excluding Image Index) across the 5-year period was used in the analysis.

four factors shown all provide relatively similar contributions. Since customers indicated no change in their satisfaction with customer contacts, it did not help to increase (or decrease) overall customer satisfaction.

Strategy Implications for Utility Managers

Once utility managers begin to include customer satisfaction as a management objective, it can lead them to adjust DSM program strategies. Below, we provide examples of program decisions that might be influenced by customer satisfaction considerations. Note that these examples address customer satisfaction in isolation (all other things being equal); other attributes, such as costs, efficiencies, or magnitude of impacts may offset these considerations in management decisions.

Market Transformation Versus Resource Acquisition

Some market transformation strategies attempt to influence upstream actors like manufacturers, engineering firms, and equipment dealers to “push” the market rather than downstream consumers to “pull” the market. For example, utilities may pay manufacturers to reduce prices on energy-efficient equipment rather than rebate consumers for their retail price premium. From a customer satisfaction perspective, upstream approaches are probably less attractive. While customers may receive the same overall benefits of lower equipment prices, if customers do not understand the utility efforts that created the benefits, they will not translate into customer satisfaction increases.

Third-Party Administrators

In some states, DSM programs are funded by utility rates but administered by third parties. Third parties can be state agencies, regional consortiums, or independent organizations selected through competitive procurement. From a customer satisfaction perspective, third party administration is probably less attractive than utility administration. If the third party operates under its own independent brand, then utility customers may not understand the utility role in funding services.

Outsource Contractors

Many utilities rely on outsource contractors to administer portions of program (e.g., call centers, energy audits, rebate processing). If the outsource contractors are not clearly identified as representing the utility, or, at least being part of the utility “team,” customer satisfaction benefits may be diluted.

Program Rules

DSM managers need program rules to define eligibility, deadlines, and other requirements for program participation. These rules have direct impacts on program satisfaction and, by extension, the overall customer satisfaction. For example, program rules that shut down

programs once annual budget are exhausted may help utilities manage budget constraints, but they also threaten customer satisfaction.

Some rules are imposed externally. For example, multi-state utilities often provide different offerings in different state service territories. These create customer satisfaction threats, especially from customers exposed to marketing messages that leak across state lines. Since they are out of utility control, these threats can only be managed, not eliminated.

Integration With Other Utility Departments

DSM programs are often integrated throughout the utility organization, touching departments responsible for call centers, account representatives, communications, rates, environmental compliance, and government relations. These departments need ongoing training and coordination from DSM program managers: to accurately describe program offerings; to accurately communicate program benefits and costs; and to serve as reliable channels for participant references (for example, by not overloading program capacity with too many referrals).

Advertising

DSM managers generally develop advertising spots with the primary goal of driving additional customers to participate in programs. However, advertising also reaches a much broader audience, helping to craft their overall image of the utility, with implications for customer satisfaction. Managers may want to address both audiences—participants and non-participants—in their advertising message. For example, by helping customers understand the broad benefits delivered by DSM programs, they will be less likely to negatively associate programs only with increased costs.

Hard-To-Reach Markets

Many utilities target hard-to-reach markets as a matter of equity. All customers contribute to funding DSM programs and so all customers should have the opportunity to benefit from the programs. However, there is an additional customer satisfaction component to these markets as well. Utilities without DSM programs that target hard-to-reach markets limit their ability to respond to satisfaction threats from these customers. For example, customers with high bill complaints can be referred to an on-line audit program.

Conclusion

Customer satisfaction is a key performance indicator for many utilities and DSM programs can both directly and indirectly influence customer satisfaction. By incorporating customer satisfaction explicitly into programs, DSM managers can help their companies improve customer satisfaction while also providing cost-effective resources.

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