

CUSTOMER-CENTRIC DEMAND SIDE MANAGEMENT:

FIVE KEYS TO INCREASE CUSTOMER ADOPTION AND CREATE SUSTAINABLE BEHAVIOR CHANGE

By Dave Tilson

Customer education and outreach are essential if electric utilities are to achieve their smart grid goals and produce a positive return on the substantial investments involved. Smart grid-enabled demand side management (DSM) programs will differ from traditional DSM programs because of the strong reliance on customer participation to meet program goals. This article provides an overview of the evolution of demand side management and how five key DSM “pillars” must be introduced into DSM program planning to maximize the chances for success.

Both socioeconomic pressures and technological advances are forcing a fundamental transformation in the energy and utilities industry. Department of Energy studies suggest that over the next 25 years, electricity usage will increase by 50 percent due to population growth, changing economic stature, and increases in fossil fuel costs. The demand for renewable energy grows, as does the need for substantial improvements in infrastructure. As a result, many utilities have started developing a “smarter” electric grid—a complex journey that involves substantial investment and change, yet one that can yield significant benefits if planned and executed well.

New smart grid-enabled programs such as dynamic pricing, direct load control, and on-site renewable generation provide greater opportunities for utilities to meet their demand and energy goals. Delivering these goals, though, will depend heavily on customer adoption and participation in the new programs. In some cases, a significant portion of a smart grid or DSM business case is contingent on customer involvement to realize the benefits.

To deliver the potential benefits, utilities must pay close attention to the customer response to demand side management and, more specifically, be prepared to get it right the first time.

This paper intentionally does not focus on the typical DSM program design elements, such as the business case, rate design, demand and energy goals, program design, and technology selection. This is not meant to ignore the importance of the overall design of DSM programs.

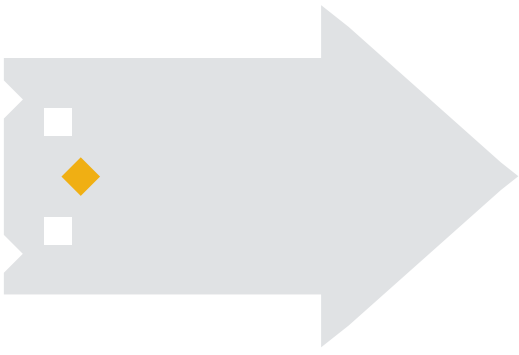
What this paper suggests is that the strategy on how to educate and manage the customer relationship is as vital as any step in designing a DSM offering, especially since utilities will be asking customers to make a change, and utilities have traditionally had limited customer interactions.

DEMAND SIDE MANAGEMENT DEFINED

Demand side management (DSM) includes the planning, implementing and monitoring all of the activities associated with educating and encouraging consumers to modify their level and pattern of electric usage to meet the utility’s energy and demand goals. These activities enable communication to flow between the utility and its customers with the purpose of managing the demand on the energy infrastructure — in some cases to reduce demand for better cost and distribution management, and in other cases to enhance customer experience and automate interaction with the utility.

EVOLUTION OF DSM PROGRAMS

As a concept, demand side management isn’t new. Efforts to engage customers in helping manage energy consumption and demand stretch back years - but many past programs weren’t successful in changing customer behavior and creating sustainable savings. A key reason for this was the lack of responsiveness: customers saw no incentive to participate, other than the satisfaction of helping the utility. There was no incentive for customers to shift (and meet the utility’s goals) because there was little visibility into how shifting benefited the customer. Also, the customer did not have easy access to tools that informed them how they could save energy and money.



Traditionally, utilities haven't focused on the customer element of DSM programs. Most utilities have approached smart grid initiatives primarily as technology and engineering projects, and they have lacked a customer focus—and more specifically, a well-defined plan for educating and communicating with customers (and other constituents, such as regulatory and government bodies) with respect to the benefits of participating, or “what’s in it for them”.

Not surprisingly, public perception of smart grid initiatives today is mixed. On the one hand, consumers associate a smart grid with more control, intelligent features, and potential savings. On the other hand, they remain concerned about factors such as privacy, accuracy, the eventual “real” cost, and a lack of understanding the benefits for participating. A customer base used to not interacting with their utility remains skeptical.

THE DSM GAME IS CHANGING, AGAIN

The goals and benefits desired in a DSM program are still the same. Utilities will still seek to reduce their peak load, shift load, or reduce consumption. However, smart grid technologies - such as advanced meters, load control management systems, and in-home displays – change the DSM game substantially. These new tools enable utilities to implement more effective load control management systems that give utilities and consumers visibility and control of energy demand, and allow customers to respond to utility-initiated signals more quickly. While the utility still has its load goals, the customer now has incentive to participate.

As wholesale electricity prices rise over time, and thus affect retail prices, customers may realize a more tangible benefit to DSM participation.

Utilities now need to back up these advanced offerings with DSM strategies that really do influence customer perspectives and behaviors. This means taking the right steps to educate, convert and retain customers on pervasive rate and demand response programs. And it likely means undergoing some significant organizational changes to support and sustain these perspectives and behaviors. Utilities and their customers have not gone through a change of this magnitude since electricity was brought into the home.

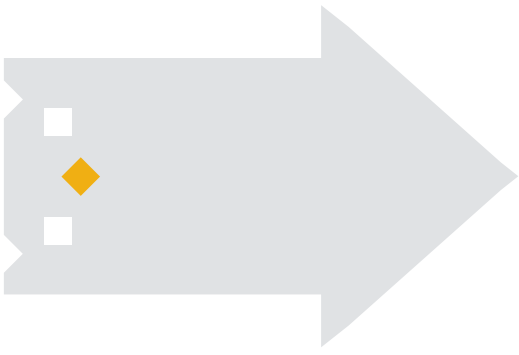
An electric utility can build the best network infrastructure systems to manage data, initiate events, and offer dynamic prices, but if its customers don't buy in to the program, the investments in time and dollars will fail to produce the benefits intended. Establishing a successful DSM program requires knowing your customers and how they use electricity, and then educating them on how to select the right tools and programs to help them monitor, manage and, ultimately, reduce their energy usage.

FIVE PILLARS TO MAXIMIZE SUCCESS OF A DSM PROGRAM

It is important to have a holistic and broad-reaching approach to DSM that builds upon both the utility's load goals and the approach for having the customers help meet those goals. In order for DSM programs work and deliver value, five key customer elements must be present:

1. Communication and outreach
2. Customer enrollment
3. Customer fulfillment
4. Multi-channel customer experience
5. Measurement and validation

Each of these “pillars” is important. If one is missing, the program will likely be unstable and may fail to establish sustainable behavioral change and create value for customers and the utility. Moreover, these must be well coordinated, with the right governance model to support all pillars and manage the multitude of partners likely to be involved.



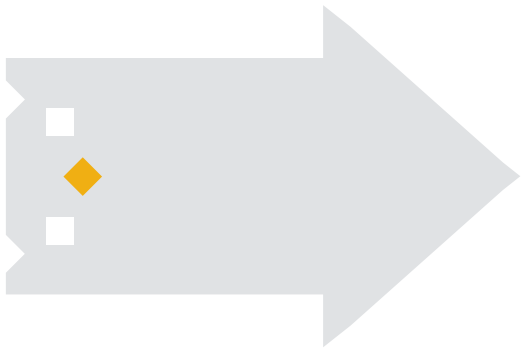
Considerations for each pillar during DSM program development include the following:

- 1. Communication and outreach.** DSM program success, even with the best strategic guidance, requires a tactical and diligent education and marketing campaign to drive and enhance your initiative.
 - ◆ Use DSM as a way to kick off public outreach on the utility as a whole, informing them about their relationship with electricity, what influences power costs, and why the utility is even undertaking the efforts.
 - ◆ Include a strong, multi-channel public relations and outreach program as part of your overall marketing plan—one designed to move consumers and other constituents along the maturity model from awareness to ownership. Continually stress the personal and societal benefits.
 - ◆ Involve multiple internal and external audiences and stakeholders; for example, a city council and public utility commission, in addition to customers and employees.
- 2. Customer enrollment.** In order for the program to be successful, you need to have participants enroll. The enrollment process needs to be seamless and both the utility and customer must understand how to enroll.
 - ◆ Utilize business intelligence capabilities to develop target customer segments and personas. Target key customers likely to participate first (early adopters).
 - ◆ Define enrollment channels and methods clearly.
 - ◆ For customers not enrolled, produce customer usage comparisons that show customers how their rates would differ if they participated in a DSM program such as a time of use rate or real time pricing.
 - ◆ Don't oversell the benefits of the program, and manage customer expectations about potential savings.
- 3. Customer fulfillment.** The fulfillment process is often overlooked as a critical step in the process of rolling out DSM programs to customers.
 - ◆ Make sure that you have strong customer delivery partners and a solid fulfillment ecosystem.
 - ◆ Develop knowledgeable customers who know how to use the system to realize benefits. Provide in home tutorials as well as frequently communicated best practices for leveraging the capabilities.

- ◆ Define customer experience clearly, as well as back office processes for getting customers the devices and training they need to participate.
- 4. Multi-channel customer experience.** Once a customer is enrolled, enhancing how the customer interacts and interfaces with you enables higher program buy in, increased support internally and externally, and long term cost savings.
 - ◆ Conduct a customer experience assessment.
 - ◆ Identify and coordinate management of specific customer touchpoints.
 - ◆ Create an environment in which customers “want” to interact with the utility and recommends programs/solutions to others.
 - ◆ Measure customer satisfaction and demonstrate continuous improvement on customer programs.
 - 5. Measurement and validation.** You achieve success only when you take a measurement and validate that your goals are being achieved.
 - ◆ Take baseline measurements to track improvement
 - ◆ Quantify enrollment goals and develop dashboards to identify and monitor progress on all aspects of marketing, acquisition, retention, and benefits.
 - ◆ Identify easily measurable and available data points to track progress.
 - ◆ Create dashboards and reports for different levels (executive, operations, financial, program management office, etc).
 - ◆ Refine goals and targets as lessons are learned. Share successes with the internal team, customers, participants, and media.

GETTING STARTED

Putting an effective DSM program in place—and getting it right the first time—is a substantial undertaking, but it is vital to the success of a utility's broader smart grid investment. Including these customer-centric pillars in planning can help in building a clear road map that addresses all aspects of marketing communication, technology, and fulfillment rates.



Utilities can take the following first steps toward customer-centric DSM program design:

- ◆ Conduct a comprehensive current state definition for each of the five pillars, including a program inventory, current technology and regulatory assessment, customer touch point inventory, SWOT (strengths, weaknesses, opportunities, threats) analysis, and needs assessment.
- ◆ Leveraging the smart grid business case as a guide, develop a future state vision, including a future program inventory, strategy, and governance model.
- ◆ Using the current state definition and future vision, determine the utility's ability to execute each of the five pillars. This should seek to identify risks and capability gaps for implementing essential programs, as well as specify organizational and customer impacts of DSM.
- ◆ Create a road map that defines and prioritizes programs and initiatives. The road map should outline estimated resources, timelines, budgets, and interdependencies, and should align initiatives with the larger smart grid implementation plan. This allows the utility to plan ahead on how these programs will be deployed effectively to the customers.

The diagram below provides an example of a customer-centric DSM road map. Note that marketing communications and customer fulfillment, both core customer components, are given equal weight as supporting technology and rates.

Whether or not utilities are implementing smart grid technology, they must be prepared to facilitate substantial changes in consumer perceptions and behavior as the industry continues its transformation. Even without a smart grid as the driver, demand side management must become more customer-centric than it is today.

	Wave 1: Strategy Alignment 0-3 Months	Wave 2: Foundation 3-6 Months	Wave 3: Process Definition 6-9 Months	Wave 4: Technology Implementation 9-12 Months	Wave 5: Measure Customer Experience 12-15 Months
Rates	High-level rate structure and metrics	Rate Study	Implement processes for new rate structure	Integrate rates into existing and new systems	Rate rollouts to customers
Fulfillment	Fulfillment strategy development and metrics	Define the components of the fulfillment process Define what role the partners will play in fulfillment	Define enrollment and fulfillment process	Develop tools for enrollment and fulfillment	Measure customer satisfaction for enrollment and fulfillment
Technology	Customer facing IT strategy for smart grid	Develop customer facing IT architecture Identify top IT partners and vendors	Develop/ modify procurement process for IT Define portal/web/ content governance process	Design and implement portal phase 1 Fulfillment strategy development and metrics	Rollout customer facing technologies and measure success
Marketing Communication	Develop marketing/ communications plan and metrics	Marketing/ communication plan execution	Re-evaluate communications process	Begin aligning communications plan with deployment	Measure success of marketing communications

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