



SmartGrid
consumer
collaborative

listen, educate, collaborate

EXCELLENCE IN CONSUMER ENGAGEMENT

October 24, 2011

The Smart Grid Consumer Collaborative (SGCC)

This 2011 assessment of customer engagement practices supports our mission that electric industry leaders must urgently pool resources to gain knowledge of what consumers need and how to communicate with them by listening to their concerns. The industry will need to address these needs and concerns, as it will need to engage and involve customers in order to realize the full potential of the Smart Grid.

This qualitative study examines customer engagement strategies and tactics used to engage with their customers from a range of smart grid programs across the United States. By learning from the successes of these emerging programs, Smart Grid stakeholders can better position themselves to meet consumer needs and preferences as they move forward with their Smart Grid efforts.

– SGCC Research Committee

www.smartgridcc.org

Foreword

We began this study with a universe of over 1,500 customer-facing U.S. Smart Grid programs, researched and analyzed ~150 of these programs, and focused in on the 21 organizations that form the basis for this report. As we assessed these 21 organizations' Smart Grid efforts and had conversations with more than 40 key personnel involved in these efforts, it became clear that many have focused on answering similar questions across a range of programs: What types of messages should I communicate? How do I engage the vocal minority? What can I do to drive program enrollment? From our study of these programs, several prominent, overarching findings emerged:

1. The industry's collective learnings now provide basic tenets for effective Smart Grid customer engagement. New programs can draw from these learnings to avoid many of the pitfalls that early programs faced
2. Energy is a low awareness category for most consumers but simple messages with clearly defined benefits and call-to-action can drive interest
3. To fully engage consumers, utilities must transform their core service model from one that focuses primarily on the reliable delivery of electricity to one that also focuses on customer needs and engagement

As utilities make this shift and tailor their market offer to meet consumers' interests and needs, they will have to move from "Industry Best Practices" – the focus of this report – to overall Customer Engagement Best Practices that many other industries have honed for years. Traditional utility customer engagement measures will change and draw comparisons not just from other utilities, but from other industries. Many consumer electronics companies have very good customer experiences despite rapidly evolving products and customer expectations. Telecommunications carriers manage multiple products and services that are deeply embedded in customers' homes, but have developed a robust service delivery model that economically segments, provisions, and supports individual customers. Utilities should look to models from these and other industries as they work to develop consumer-centric Smart Grid programs and engagement strategies.

This report offers a series of key themes and learnings from the early stages of this transformation.

Patty Durand, Executive Director, SGCC

Matt Dinsmore, Practice Lead – Energy, Altman Vilandrie & Company

Introduction: Excellence In Smart Grid Customer Engagement

Objective

The diversity of recent Smart Grid efforts in the United States has resulted in a dynamic ecosystem of activity that is both rich in learning opportunities but highly fragmented and time-consuming to navigate.

The purpose of this Excellence in Customer Engagement study is to look across a suitable sample of Smart Grid activity and identify key themes and best practices for customer engagement, with the goal of driving consumer Smart Grid awareness, understanding, acceptance, adoption and behavioral change.

Approach

This study is an analysis of prominent themes of customer engagement best practices resulting from an initial scan of over 1,500 programs and specific research and analysis on 20 U.S. utilities and 1 non-profit. The programs studied represented 1) IOUs, municipals, co-ops and non-profits, 2) programs that had been in the field long enough to have some meaningful measures of program performance, 3) pilots and full-scale deployments and 4) geographic diversity.

This study examines the latest generation of AMI (advanced metering infrastructure) deployments, pricing programs, and active energy efficiency programs (i.e., those centering around behavior change). It draws from public research resources and interviews with over 40 key personnel at these programs responsible in some capacity for customer engagement efforts during Smart Grid planning, implementation and operations.

This report focuses on both planning and execution activities involved in developing customer engagement strategies including education, messages, marketing tactics, and acquisition channels.

While quantitative performance metrics are referenced on occasion in this report, the findings in this report represent a qualitative assessment and do not reflect a quantitative or statistically significant analysis.

Selected Programs

Investor-Owned

AEP Ohio
Arizona Public Service (APS)
CenterPoint Energy
Central Maine Power (CMP)
ComEd
Duke Energy
Oklahoma Gas & Electric (OG&E)
Oncor
Pacific Gas & Electric (PG&E)
Portland General Electric
Reliant Energy
San Diego Gas & Electric (SDG&E)
Southern California Edison (SCE)
XCEL Energy

Municipal

Austin Energy
Memphis Light, Gas & Water (MLGW)
Sacramento Muni. Utility District (SMUD)
Salt River Project (SRP)

Cooperative

Connexus Energy
Wright-Hennepin CEA

Non-Profit

The Climate & Energy Project

Executive Summary: Basic Tenets (Themes 1-4)

THEMES

Theme 1: Utilities can address most customer complaints:

Utilities with customer-centric engagement programs and complaint resolution processes have responded to customer concerns and complaints effectively

Theme 2: Staged messaging helps manage expectations:

Nearly all successful AMI deployments have leveraged staged messaging programs to set expectations that can be met promptly, focusing messages on deployment logistics and near-term benefits that are immediately relevant to consumers

Theme 3: Internal messaging and education improve engagement: *Utilities that educate their employees about their Smart Grid activities present a more consistent message and are better prepared to handle customer complaints*

Theme 4: Fostering goodwill establishes a foundation for success: *Developing goodwill with customers appeared to minimize complaints and make customers more receptive to Smart Grid messages and programs*

IMPLICATIONS

- Utilities should establish both engagement and service strategies before beginning deployment to position themselves to handle customer issues effectively
 - In particular, utilities should prepare to address members of the vocal minority on a personal level
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- Utilities should stage their messaging campaigns to set only those expectations that can be delivered upon in a timely manner (3-6 months) and avoid communicating a holistic vision of the Smart Grid with benefits that are years out
 - Programs should avoid overcommitting
-
- Internal education is a critical step to driving a consistent and positive external message
-
- Consumers who trust their utility's intentions are more receptive to their utility's Smart Grid programs
 - Utilities can leverage partnerships with local organizations and leaders to help build goodwill with their customers

Executive Summary: Driving Action (Themes 5-10)

THEMES

Theme 5: Messages about saving money are applicable to all customers: *Messages promoting saving money have broad appeal and have proven more effective at driving enrollment than other messages*

Theme 6: Increasing incentives offer diminishing returns to enrollment: *While incentives help drive program enrollment, small incentives can be sufficient to pique consumer interest*

Theme 7: Simplicity facilitates program enrollment: *Simple Smart Grid programs that message benefits clearly and are easy to enroll in have higher participation*

Theme 8: Urgency and purpose spur customers to act: *Customers are more likely to enroll in programs and change their behavior when there is an impetus to do so*

Theme 9: Attitudinal segmentation may improve program messaging: *Preliminary evidence indicates that attitudinal segmentation could improve program performance*

Theme 10: Utility channels can transition from service to sales: *Utilities have seen promising results from building sales capabilities to drive Smart Grid program enrollment*

IMPLICATIONS

- Utilities should message saving money clearly and prominently in customer acquisition campaigns
 - Messages focused on environmental benefits or user control should be promoted only as secondary messages unless they can be targeted at specific segments (see Theme 9)
-
- Having an incentive to promote is more important than its size
 - Redirecting funds from higher incentives to other acquisition tactics may provide better returns
-
- Keep it simple – energy is not top of mind for the vast majority of consumers and simple messages with simple call-to-action make programs accessible
 - Clear messages and enrollment processes will maximize the limited opportunities to drive customer action
-
- Customers care about saving money, energy, and the environment, but must be motivated to make changes
 - To drive customer engagement, utilities should create impetuses that spur customers to take action
-
- Select utilities have begun to conduct segmentation studies of their base, but these schemes have yet to be implemented on a wide scale
 - Effective segmentation will enable targeted messaging, offer, and channel tactics tailored to individual customers' characteristics
-
- Utilities should integrate their Smart Grid programs into day-to-day business operations, promoting them and making them accessible across customer touch points

Utilities can address most customer complaints

Every smart meter deployment reviewed as part of this study experienced customer complaints, typically related to RF-related health impacts, data privacy and security, overbilling, rate increases, and meter reader job loss. While all utilities have experienced complaints and faced opposition from a vocal minority, many have minimized the intensity and persistence of this pushback by engaging and educating their customers and by adopting customer-centric issue resolution processes.

Utilities have been able to control the scale of consumer complaints by conducting customer outreach and education. While many utilities with early AMI (advanced metering infrastructure) deployments did not take significant steps to engage their customers and received significant pushback, utilities have since developed engagement approaches to manage these issues. For example, SMUD conducted pre-deployment forums and more than 100 informational presentations to address potential customer concerns, and has avoided major issues during its AMI deployment.¹

Additionally, utilities have managed customer pushback by establishing trouble-handling capabilities to receive and resolve customer complaints in advance of their AMI deployments. Utilities

that have not just adopted trouble-handling capabilities but that have also been receptive to all customer complaints and treated them as legitimate have better handled these complaints, especially those from the ever present “vocal minority”. These utilities have often handled complaints with personal, one-on-one attention, especially for the very small number of deeply concerned customers that every utility has encountered (Portland General Electric found this group to constitute ~10 customers).² For example, for deeply concerned customers, AEP Ohio would escalate their issues to VP-level employees who would deal with them personally.³ SDG&E finds that these issues are often emotional for its most upset customers, and accordingly tries to respond sensitively and rely less on evidence-based argument.⁴

IMPLICATIONS

- *AMI complaints can be managed by taking steps before deploying to engage customers early on and establish policies and procedures that grant all issues legitimacy*
- *Utilities should address especially concerned customers in a personal way, as vocal minorities are sufficiently small that this will not overburden the organization*
- *Engaging communities promotes goodwill (see Theme 4) and helps address customer concerns before they have the opportunity to snowball (see Theme 2)*

“CenterPoint Energy understands your concern about privacy. We believe energy use data does belong to the consumer...”

— CenterPoint Energy⁵

Utilities can address most customer complaints

SUPPORTING EVIDENCE

AEP Ohio: “Came in soft” with their AMI deployment, hosting community events and public forums to explain the deployment and build goodwill;⁶ escalation procedures for serious complaints could reach company VPs;⁷ deployment generated very few customer complaints⁸

Arizona Public Service: Complaints about AMI were “virtually nonexistent” for two thirds of deployment until ~1,200 RF-related complaints were filed in Prescott, AZ⁹

Austin Energy: Installation notifications through direct mail, door hangers, and newspaper ads; installation personnel notified billing department of customers who might experience higher bills with AMI due to old meters that ran slowly; customers could schedule meter swap if first attempt failed; “when we did have an issue, we dealt with it right away” using rapid response team;¹⁰ few customer complaints

CenterPoint: Distributed “MythBuster” pamphlet with FAQs about common customer concerns at community events; even when unable to fully address a complaint, tried to convey that CenterPoint had good intentions; tried to “work with [customers] to the maximum extent possible”;¹¹ messages that “CenterPoint Energy understands your concern about privacy. We believe energy use data does belong to the consumer...”;¹² received 500 complaints (<0.1% installed meters)¹³

Central Maine Power: No extensive outreach prior to AMI deployment due to high customer satisfaction and CMP’s success changing ~20k meters each year without issue;¹⁴ deployment elicited a range of negative feedback regarding RF health concerns, privacy concerns, and lack of pre-deployment education;¹⁵ some cities requested deployment moratoriums; CMP’s PUC-mandated opt-out plan that charges customers to keep non-AMI meters has not been well received

ComEd: Notified customers about AMI pilot deployment; investigated irregular smart meters, resolved problems proactively; deployment received few customer complaints

Memphis Light, Gas & Water: Some opposition among union and some City Council members due to loss of meter reader jobs¹⁶

Oklahoma Gas & Electric: Old meter left in place for one month and took a picture of the old meter’s reading as evidence that the new meter was accurate; received some positive feedback, complaints were “nothing major, but there have been comments”¹⁷

Oncor: In 2004 and 2010, unusually cold winters inspired high bill complaints from customers that had just received new meters;¹⁸ only 25% of all high bill complaints came from customers with a smart meter;¹⁹ complaints spurred Oncor to expand its customer service department; complaints received one-on-one attention and Oncor tried to

“address [complaints] head on and as quickly as we can”²⁰

Pacific Gas & Electric: Was an early AMI deployer and did not initially take significant steps to educate or inform customers;²¹ after receiving complaints, developed an AMI marketing, education, and installation notification campaign;²² hired 165 call center employees to handle AMI-related inquiries;²³ some customers have continued to oppose deployment despite revamped customer engagement²⁴

Portland General Electric: Focus groups expressed concern about information privacy, meter accuracy, rate hikes, outage times, and layoffs;²⁵ found customers believe they have ownership over “their meter” and Portland General Electric strove to respect this view; found that knocking on the door to engage the customer was the most effective engagement tactic; escalated complaints from installation team to customer center to specialized smart meter service team; AMI deployment received very few (~10) persistent complaints²⁶

Sacramento Municipal Utility District: Conducted pre-deployment forums and >100 informational presentations to address potential concerns;²⁷ if installation was unsuccessful, customers could schedule their installment date; 95% customer satisfaction with installation;²⁸ some AMI complaints about higher bills

Salt River Project: Conducted robust education campaign; received isolated complaints about AMI; ranked 3rd of 132 utilities in customer satisfaction (2010)²⁹

San Diego Gas & Electric: Trained entire staff on smart meters; during deployment, sent customer service representative into the field to handle complaints; addressed AMI complaints quickly;³⁰ during installation, identified old meters that were running slow and called relevant customers one week later to explain potential bill increase; two weeks after install, sampled customer reactions with door-to-door survey; responded to emotional complaints in an empathetic manner as well as factual argument;³¹ received a few health concerns, some high bill complaints, and requests for an opt-out option; California PUC received far fewer complaints from SDG&E’s customers than PG&E’s³²

Southern California Edison: Notified customers of deployment with letters and community events; allowed customers to schedule installations if the first attempt failed; handled more serious AMI complaints on an individual basis;³³ achieved 85% customer satisfaction with the meter installation process;³⁴ few customer AMI-related complaints³⁵

Wright-Hennepin Electric: Total billing complaints decreased after AMI was installed, but some customers complained on a small enough scale that they could be dealt with personally³⁶

Xcel: SmartGridCity informed community through direct mail, email, telemarketing, informational forums, and a mobile demonstration exhibiting Smart Grid technology; did not receive extensive complaints about the meter installation process

Staged messaging helps manage expectations

The utilities in this study found that staged messaging programs effectively managed customer expectations during AMI deployments by establishing only those expectations that would be met promptly. Staged messaging strategies ensure that both deployment logistics and Smart Grid benefits are promoted at the right time during deployment. Utilities that failed to establish accurate customer expectations in these two areas have experienced customer pushback.

Utilities that conducted pre-deployment education campaigns focused primarily on deployment logistics, explaining the what, when, and how of the deployment and installation, have been able to carry out their deployments without significant issues. Many of these utilities based these campaigns on staged messaging strategies, like SDG&E, which followed a 30-60-90 day program to engage local leaders and educate customers about the deployment.³⁷ On the day of installation, SDG&E left a door hanger notifying the customer that the installation was complete, but other utilities including Portland General Electric and CenterPoint have also had the installer knock on the door on arrival to engage the homeowner and explain their activities. While utility strategies vary, each has followed a similar blueprint, outlined below.

When messaging the Smart Grid benefits, APS, OG&E, Portland General Electric, and other utilities have emphasized near-term

EXAMPLE AMI STAGED MESSAGING SCHEDULE

Local Outreach (60-90 days before install)	Notification (7-21 days before install)	Installation (Day of install)
<ul style="list-style-type: none"> Educational forums and community events Outreach to politicians, media, etc. 	<ul style="list-style-type: none"> Installation notification mailer Automated call reminder 	<ul style="list-style-type: none"> Pre-Install: Door knock Post-Install: Leave door hanger with FAQ

benefits, like improved service and reliability, and avoided disappointed customers. For example, APS has avoided making pledges about the future Smart Grid benefits, saying instead that the Smart Grid “will continue to change and evolve.”³⁸ Some utilities pivoted from plans to use future-oriented messages to focus on near-term benefits. CenterPoint transitioned to messaging near-term capabilities after some customers directly requested these future AMI-enabled technologies (e.g., smart appliances).³⁹ Utilities that have promoted long-term benefits too early have faced criticism for failing to deliver these benefits promptly.

“Austin Energy is coming to change your meter! In the next few weeks, we will be in your neighborhood to replace your electric meter ...”

— Austin Energy⁴⁰

IMPLICATIONS

- *With respect to Smart Grid programs, consumers are most interested in these programs’ near-term impact to them*
- *Staged messaging strategies, which provide customers with information only when it is immediately relevant, ensure that customers receive the right information at the right time*
- *Promising too early or overpromising can lead to missed expectations and perception of failure, which can diminish future interest*

Staged messaging helps manage expectations

SUPPORTING EVIDENCE

AEP Ohio: Educated customers on how/when install would occur; staged messages using welcome letter and phone call prior to installation, door hanger after install, and ongoing communication through outbound phone calls, email, and direct mail; received very few customer complaints, no bad press⁴¹

Arizona Public Service: Has kept future Smart Grid plans flexible, saying that the Smart Grid “will continue to change and evolve.”⁴²

Austin Energy: Explained installation process using direct mail and door hangers; AMI installers wore name tags; avoided creating “a lot of hype” and having to backpedal from high expectations;⁴³ simple, logistic messages (“Austin Energy is coming to change your meter! In the next few weeks, we will be in your neighborhood to replace your electric meter ...”);⁴⁴ focus group participants were cynical about overly positive messages and just wanted to know “what you are doing and what you are not doing”;⁴⁵ messaged immediate, service-focused benefits (e.g., shorter outages); few customer complaints

CenterPoint: Notified customers of deployment using door hangers, small billboards, posters in retail stores, and cinema advertisements; customers could track deployment progress online; meter installers knocked on doors and left door hangers; initially promoted future benefits (e.g., HAN) but shifted towards immediate benefits after receiving customer inquiries;⁴⁶ ~500 complaints (<.01% of installations)⁴⁷

Central Maine Power: No extensive outreach prior to AMI deployment due to high customer satisfaction, CMP’s success changing ~20k meters each year without issue, and the fact that CMP is not the retailer that will eventually promote pricing plans;⁴⁸ deployment elicited a range of negative customer feedback⁴⁹

ComEd: Staged messaging with a letter two-three weeks before install and an automated call one week before install; installer knocks on door, provides info card, and leaves door hanger; messages about portal began after meters were installed through letters and community presentations

Oklahoma Gas & Electric: Staged AMI deployment by region, relying on targeted notifications; sent a letter 90 days before installation; left door hangers after installation; customers appreciated nametags on installers; messages promoted immediate and future benefits of smart meters, but explicitly stated the difference between them; no wide-spread issues during AMI deployment

Oncor: Did not conduct significant messaging during their early AMI deployment;⁵⁰ in response to high-bill complaints, increased their AMI education notification programs⁵¹

Pacific Gas & Electric: Did not initially use a rigorous notification system;⁵² after initial customer complaints, developed an AMI-focused marketing, education, and installation

notification campaign that stages notifications;⁵³ initial customer complaints have persisted⁵⁴

Portland General Electric: Sent notification letters, knocked on customers’ doors before meter installation, and left a door hanger after installation; found two-three weeks before installation is the optimal time to send notification letters;⁵⁵ avoided promoting uncertain benefits of the Smart Grid and chose not to “make a big deal” of smart meters;⁵⁶ referred to smart meters as “a foundation for tomorrow’s Smart Grid”;⁵⁷ initially planned to promote customer control, but shifted to promote better information and operational savings; received very few persistent complaints

Sacramento Municipal Utility District: Prior to installation, send letters, reach out to local media, host community presentations (>100 overall)⁵⁸, and contact public health organizations; installer knocks on the door before changing meters, leaves a door hanger and a FAQ booklet afterward; have not promoted future Smart Grid programs during deployment; 95% satisfaction with installation and no significant complaints regarding AMI deployment⁵⁹

Salt River Project: 2-week notice of AMI installations via direct mail; no significant issues with AMI deployment

San Diego Gas & Electric: Pre-installation “90-60-30” day engagement plan; stakeholder outreach 90 days before installation, community events 60 days before installation, and notification letter 30 days before installation;⁶⁰ left a door hanger after installation; avoided promising specific dates for future Smart Grid programs; PUC received far fewer AMI-related complaints from SDG&E customers than from PG&E customers⁶¹

Southern California Edison: Customers progress from pre-installation, to installation, to acceptance testing, to full operation; notified customers of deployment on a just-in-time basis with letters, community events at schools, television ads, and radio spots; messages initially include installation logistics and incorporate messages about other Smart Grid programs as they become available; <200 AMI complaints;⁶² received inquiries about AMI-enabled programs from customers who did not have smart meters

Wright-Hennepin Electric: Send customers educational letters on AMI installations; installation personnel wear ID tags; customers with AMI appreciate not having meter readers in their yard;⁶³ few complaints

Xcel: SmartGridCity informed community through direct mail, email, telemarketing, informational forums, and a mobile demonstration; did not receive significant AMI complaints; initially promoted SmartGridCity as the “city of the future”⁶⁴ that would “transform the way energy is delivered and managed”⁶⁵; has received consumer and media pushback as program has struggled to deliver expectations quickly and contain costs⁶⁶

Internal messaging and education improve engagement

Internal Smart Grid messaging and education programs can better prepare utilities to engage customers effectively. Utilities that conducted internal messaging programs credit them with providing a critical foundation for success. Similarly, utilities that did not conduct internal education programs initially have found it beneficial to do so after launching their Smart Grid initiatives.

Utilities recognize that employees interact with customers across their service area, and by educating their employees they can leverage these touch points to provide consistent Smart Grid messages. AEP Ohio, APS, CenterPoint, MLGW and others have conducted internal education programs to ensure these Smart Grid messages are consistent across all utility representatives. For example, CenterPoint has educated its staff so customers don't "take different avenues and get different answers."⁶⁷ Additionally, CenterPoint has created an "employee ambassador" program in

"Utilities that conducted internal messaging programs credit them with providing a critical foundation for success."

which employees take an online Smart Grid course and must pass an examination. These ambassadors are then equipped to act as Smart Grid resources and advocates in their community, and 18% of CenterPoint's employees have become ambassadors to date.⁶⁸

Many utilities have leveraged internal education and communication to improve customer service during deployment. For example, Austin was able to deal with customer problems more quickly and effectively by educating different departments on their roles in the complaint resolution process.⁶⁹ Furthermore, Austin's meter installers notified customer service personnel if they noticed that a meter being replaced was running slow and the customer was likely to have higher bills after their meter replacement.

IMPLICATIONS

- *Broad internal messaging and education helps ensure that all employees provide a consistent and positive external message across all customer touch points*
- *Utilities can leverage their employees' relationships and status in their communities by using internal education programs to encourage them to act as program representatives and engage in personal, informal interactions with customers*

Internal messaging and education improve engagement

SUPPORTING EVIDENCE

AEP Ohio: Trained all employees to answer common AMI and Smart Grid questions to better prepare them to educate people in their communities about AEP Smart Grid initiatives

Arizona Public Service: Internal messaging to create smart meter “allies” within the company;⁷⁰ belief that everybody has an impact on customer satisfaction;⁷¹ high customer satisfaction and strong Smart Grid program performance

Austin Energy: Customer service group received training on how to explain high bills; installers notified billing department of customers whose old meter may have been running slow and might experience higher bills with their new meter; educated installation contractors about messaging so they are qualified to act as representatives; focus not to let customer issues “fester” – “when we did have an issue, we dealt with it right away”;⁷² experienced few customer complaints and high customer satisfaction

CenterPoint: Educated customer service reps, meter installers, and the staff as a whole to ensure that customers with questions do not “take different avenues and get different answers”;⁷³ 18% of employees have taken an online course and passed a test to become “ambassadors” who act as resources and advocates in their community for the Smart Grid;⁷⁴ 500 complaints (<.01% of installations)⁷⁵

Memphis Light, Gas & Water: Internal “customer bill of rights” given to each employee; training for in-home display installers covering frequently asked questions (e.g., who pilot participants should contact with questions, how to access web portal); extensive, specific customer care and complaint resolution resources; no significant customer complaints during AMI deployment

Oklahoma Gas & Electric: Developed a dedicated group, described as a “business within a business” to work on Smart Grid programs and have found this structure a “very big success”⁷⁶

Oncor: In response to AMI-related customer complaints during early AMI deployment, when Oncor did not significantly engage or communicate with customers, increased AMI education and notification programs, greatly expanded customer service organization that had contracted during deregulation, and created internal council to address customer engagement⁷⁷

Pacific Gas & Electric: Did not significantly engage customers on AMI during their initial stages of AMI deployment, but, after AMI-related complaints arose in response to their deployment, PG&E developed broad internal capabilities to engage with customers on Smart Grid^{78,79}

Portland General Electric: ~60-person team with representatives from across the organization (installation team, customer relations, media relations, etc.) oversaw AMI deployment;⁸⁰ trained installation team to field common customer questions and coordinate deployment schedule with call center; AMI deployment received very few persistent or formally filed complaints

Sacramento Municipal Utility District: Organizational “compact” to be customer-focused and maintain a transparent organization; gave 71 smart meter presentations to employees and 103 employees attended more advanced workshops on responding to AMI questions;⁸¹ 95% satisfaction with meter installation;⁸² ranked 9th out of 132 utilities in customer satisfaction (2010)⁸³

Salt River Project: Imbed consistent branding in all customer interactions (e.g. ads, service) to drive cohesive image;⁸⁴ ranked 3rd out of 132 utilities in customer satisfaction (2010)⁸⁵

San Diego Gas & Electric: Educated all employees on Smart Grid; decentralized approach being taken toward managing smart grid implementation where operating groups do planning and execution; created a specialized customer service team to resolve complaints; very few significant customer complaints⁸⁶

Wright-Hennepin Electric: Circulate newsletter to educate employees on AMI technology and deployment; all employees instructed on the answers to common AMI questions; high customer satisfaction relative to electric cooperatives and utilities in general⁸⁷

Fostering goodwill establishes a foundation for success

Utilities included in this study agree that customer goodwill provides a foundation for successful programs, minimizing pushback and increasing customers' receptivity to Smart Grid programs. Utilities that have worked to establish customer goodwill in anticipation of their programs have faced the fewest issues. For example, AEP Ohio's Smart Grid plan focused on community engagement because they believed it would improve receptivity to their smart meter deployment, and AEP Ohio leadership credits the goodwill established through these efforts with tempering customer issues before they arose and setting future Smart Grid programs up for success.⁸⁸

Many utilities have fostered goodwill by maintaining a visible presence in their communities. APS, Austin, OG&E, SCE, and many other utilities have made sure to be at community events

“Through community outreach, sponsorships and energy assistance programs, our goal is to improve the quality of life where we live and work.”

— Reliant Energy⁹²

such as fairs, parades, and environmental events. APS has an energy superhero team that appears at community events, and an employee-led clown troop that teaches children about saving energy. In these settings, utilities can engage in the types of face-to-face interactions that CenterPoint has found help to convince customers of utility goodwill and lay the groundwork for future behavioral change.

In addition to conducting their own community outreach, utilities can leverage trusted local organizations and figures to message and promote their Smart Grid activities. The Climate & Energy Project, a non-profit organization conducting an energy competition in Kansas, creates an overarching structure for the competition but involves community partners who conduct local activities and outreach. Town councils, universities, and other organizations have helped The Climate & Energy Project communicate their message via face-to-face interactions to 34% of their target populations.⁸⁹ This model has engendered such goodwill that a local electric cooperative trying to build a reputation in a new service area partnered with the competition to benefit from its brand.⁹⁰ Similarly, APS has recently featured Phoenix Suns' basketball player Steve Nash in its energy efficiency campaign, and APS has credited the campaign with helping it get more customers to try to reduce their energy use than ever before.⁹¹

IMPLICATIONS

- *Customers that trust their utility's intentions are more receptive to their utility's Smart Grid programs*
- *Organizations with a well-established community presence are positioned to maintain goodwill directly through continued activities and events*
- *Organizations looking to build goodwill should partner with trusted community groups and figures that can promote messages and programs to large networks*

Fostering goodwill establishes a foundation for success

SUPPORTING EVIDENCE

AEP Ohio: Deliberate effort to “come in soft” with their AMI deployment, educating customers at community events and public forums to which it invited the media to explain rationale and build goodwill;⁹³ mobile Smart Grid technology demonstration at large community events; schools educated students on AMI technology; AMI educational campaign leveraged community organizations and local political figures (e.g., mayor, city council, etc.); credit efforts to build goodwill and acceptance through community events as setting up program for success and tempering customer issues before they arose;⁹⁴ deployment generated very few customer complaints, no bad press

Arizona Public Service: Conduct community events for three reasons: to build a good reputation, to be a responsible corporation, and to strategically drive customers to programs;⁹⁵ employees volunteer to be a part of their educational clown troop; energy superhero team performs at local events; Phoenix Suns guard Steve Nash featured in energy conservation campaign that APS credited with helping them achieve their highest rate of customers who tried to reduce their energy on record;⁹⁶ APS participates in Hispanic heritage events with the Hispanic Chamber of Commerce; “virtually nonexistent” AMI complaints until receiving ~1,200 RF-related complaints when deploying in Prescott, AZ⁹⁷

Austin Energy: Believe customer trust is earned through honest communication;⁹⁸ local service agencies educated low-income groups on AMI deployment; hosted planning forums for Pecan St. Project and town hall meeting for customers interested in discussing future of Smart Grid; involved in many community events; few customer complaints

CenterPoint: Conducted community events before deployment; expanded community presence by training 18% of employees to be “ambassadors” on the Smart Grid through online education;⁹⁹ program administrators have found that while mass media builds awareness, face-to-face interactions convince customers of utility goodwill and lay the groundwork for behavioral change¹⁰⁰

Climate and Energy Project: Program has generated face-to-face interactions with 34% of participating cities’ populations;¹⁰¹ developed relationships with local organizations (e.g., town councils, Boys and Girls Club, Boy Scout troops, universities, etc.) before launching competition; participants have responded positively to receiving messages from these organizations and their local competition teams;¹⁰² find that neighbor-to-neighbor communications are particularly effective;¹⁰³ community organizations referred members to events; local electric cooperative partnered with the organization to gain positive associations and improve customer relationships in a new service area¹⁰⁴

Connexus Energy: Engender goodwill through appearances at community parades; employees volunteer at local charities; little goodwill from status as a cooperative (only

~50% of customers think that Connexus is not a cooperative)¹⁰⁵; due to absence of “cooperative” in utility name, plan to promote “owned by the members we serve” message to capture positive cooperative associations¹⁰⁶

Memphis Light, Gas & Water: Promote AMI pilot through personal interactions at community meetings and events; ambassador employees act as liaisons with key community organizations; employees asked to educate their family and friends about AMI pilot, and CBOs contacted to provide grass roots support for pilot and educate their constituents; 94% customers view MLGW either very or somewhat favorably¹⁰⁷

Oklahoma Gas & Electric: Umbrella Smart Grid awareness campaign leverages local tactics including customer testimonials, public figure endorsement, and community events; minimal complaints during AMI deployment

Oncor: Leverage local branding (e.g. customer service staff of “Texans who speak Texan”);¹⁰⁸ 76% of customers can “trust any information or advice [from Oncor]”¹⁰⁹

Portland General Electric: Partnered with community organizations that reached out to non-English speakers, low-income customers, & multi-dwelling building residents; AMI deployment received very few persistent or formally filed complaints

Reliant Energy: Focus on generating goodwill with personal interactions and charitable giving, “Through community outreach, sponsorships and energy assistance programs, our goal is to improve the quality of life where we live and work.”¹¹⁰

Salt River Project: Internal belief that satisfaction is determined by goodwill and rational value, and have found that goodwill is the more important factor;¹¹¹ imbed branding in all customer interactions (e.g. ads, service) to drive cohesive image;¹¹² sponsor energy workshops and science fairs; ranked 3rd out of 132 utilities in customer satisfaction (2010)¹¹³

San Diego Gas & Electric: Value opportunities to engage with customers because they have “limited bandwidth” for utility communications;¹¹⁴ leverage community-based organizations as a communication channel by providing them with materials to distribute, find these partnerships effective due to these organizations’ credibility and existing relationship with customers, particularly for the low-income customers and non-English speakers¹¹⁵

Southern California Edison: Find that leveraging third-party relationships fosters goodwill with customers;¹¹⁶ stage AMI awareness events at schools; AMI deployment has received <200 complaints¹¹⁷

Wright-Hennepin Electric: Appearances at local parades and county fairs

Messages about saving money are applicable to all customers

Utilities have promoted their Smart Grid programs with a wide array of benefits including improved information, consumer control, reduced environmental impact, helping the community, and saving money. Of these benefits, it appears that saving money, increased control, and environmental benefits appeal to certain consumer segments. However, given the limited use of segmentation-driven message targeting, messages about saving money have been the most broadly applicable across all customers and most effective at driving program enrollment.

Based on the results of customer surveys, the 2011 State of the Consumer Report concluded that customers want to know “what affects them most directly: personal financial impact,” and utilities have found this to be true when trying to drive program enrollment.¹¹⁸ Examples of such messages include “Save money and energy with MyMeter” (Wright-Hennepin)¹¹⁹, “Stay on target and save with Budget Assistant” (SCE)¹²⁰, and “The free energy offer that pays you now and later” (Duke)¹²¹. Additionally, Smart

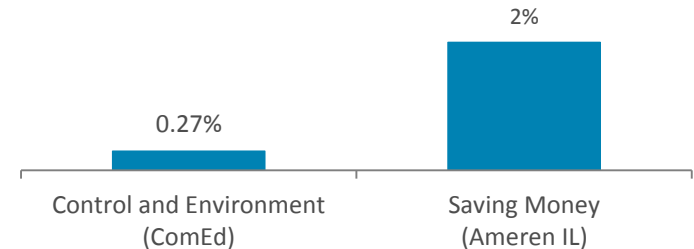
“Save Money, Save Energy: Get Off the Peak”

— Southern California Edison¹²⁶

Grid leadership at AEP Ohio, APS, SCE, and others agree that saving money is their primary and most successful message. APS finds that “cost saving always resonates with customers” and that advertising bill savings has helped them build the nation’s largest time-of-use (TOU) pricing program.^{122,123} Similarly, OG&E has found that saving money has been a more effective message than environmental stewardship, noting that “It’s not that people don’t want to be green, but they want to save money.”¹²⁴

In-field results support the belief that economic messages are more compelling than non-economic messages. Ameren Illinois and ComEd created similar dynamic pricing pilots, with ComEd messaging control and environmental benefits and Ameren messaging saving money. Using direct mail, ComEd achieved a 0.27% response rate while Ameren achieved a 2% response rate.¹²⁵

PRICING PILOT DIRECT MAIL RESPONSE RATE¹²⁷



IMPLICATIONS

- *Cost savings is a safe and broadly applicable message that should be promoted clearly and prominently*
- *Messages about non-economic benefits like environmental stewardship or consumer control have been serviceable as secondary messages and do resonate with certain segments, but have not proven as effective as economic messages in untargeted campaigns*
- *Effective message targeting (see Theme 9) should enable primary non-economic messages for specific segments*

Messages about saving money are applicable to all customers

SUPPORTING EVIDENCE

AEP Ohio: Messages about saving money received a “much better response” across all AMI pilots than those about environmental or social benefits;¹²⁸ survey found that DLC participants expect to save 20% on their bill and would be disappointed by lower savings, so offers free thermostat rather than bill reductions/credits;¹²⁹ observe that people enroll in DLC and TOU primarily to save money;¹³⁰ show comparison between TOU to standard rate on bills to make savings explicit

Arizona Public Service: Find cost savings “always” resonates with customers;¹³¹ messages that customers could save by switching to TOU received low response rates before economic downturn, but have since much higher response rates;¹³² 87% of customers conserve due to cost of electricity and 18% conserve for environmental reasons¹³³

CenterPoint: Focus group participants expressed interest in saving money and access to energy information (2009, 2010);¹³⁴ customers asked to name Smart Grid benefits most commonly cite energy or bill savings (35%) and bill accuracy (30%);¹³⁵ when promoting the Smart Grid, “environment is a supplementary, not a leading message”¹³⁶

Climate and Energy Project: In order of importance, CEP promoted (1) saving money, (2) creating green jobs, and (3) “taking care of the world God gave us”;¹³⁷ avoid messages about the environment; survey found 50% of relevant population did not believe in climate change¹³⁸

ComEd: RTP program messaged “get control over your bills, and help the environment” and achieved 0.27% response rate through direct mail;¹³⁹ similar RTP program run by Ameren (IL) promoted saving money by changing rates and achieved a response rate of 2% (~7x ComEd response rate);¹⁴⁰ ComEd had to stop messaging any messages related to saving money after irregular market conditions caused market prices to be higher than retail rates in 2008 and customers threatened to sue¹⁴¹

Connexus Energy: TOU pilot sends participants monthly reports that compare TOU bill to standard rate bill; believe customers want to know if they are saving money in Smart Grid programs and reinforcing this belief will improve customer retention going forward¹⁴²

Duke Energy: Promote DLC program with bill reductions, “The free energy offer that pays you now and later”;¹⁴³ 8% DLC participation across footprint, varies by state¹⁴⁴

Memphis Light, Gas & Water: TOU pilot provides online bill comparisons between rates under different load shifting scenarios

Oklahoma Gas & Electric: Messages about saving money have been more effective than messages about environmental stewardship when promoting web portal, noted that “it’s not that [customers] don’t want to be green, but they want to save money”;¹⁴⁵ program administrators believe TOU rate comparison tool will help get TOU “past the early adopters” to the mass market¹⁴⁶

Portland General Electric: TOU rate promoted with the tagline, “TOU puts you in control”;¹⁴⁷ 0.3% TOU participation in 2006¹⁴⁸

Salt River Project: TOU marketing asks customers to, “save money”;¹⁴⁹ second-largest TOU program in nation has 22% participation¹⁵⁰

San Diego Gas & Electric: Customer surveys have found that messages about saving money are the most compelling, but messages about the environment “are still there” and customers will respond to altruistic messages under certain circumstances¹⁵¹

Southern California Edison: Find that customers’ first concern is saving money; grid reliability is considered a requirement, not a benefit;¹⁵² promotes “Budget Assistant” online portal with “stay on target and save with Budget Assistant” message;¹⁵³ in the first 6 months of the program, Budget Assistant enrolled 50,000 customers;¹⁵⁴ message pricing program with “Save Money, Save Energy: Get Off the Peak”¹⁵⁵

Wright-Hennepin Electric: Encourage online portal use with the slogan “Save money and energy with MyMeter”;¹⁵⁶ online portal has enrolled 15% customers in 3 years of operation;¹⁵⁷ DLC promoted as a wave to save money; DLC program has ~50% participation¹⁵⁸

Xcel: DLC messages include: save 15% on bill, help improve your neighborhood’s reliability, reduce new power plants, and keep rates low;¹⁵⁹ 25% participation of customers with air conditioners (8% participation of total customer base)¹⁶⁰

OPPOSING EVIDENCE

Connexus Energy: DLC program’s primary message explains what DLC is, describing DLC as AC “taking a nap” and promoting a “Hot PowerNap Deal”;¹⁶¹ saving money a secondary message; program achieved 28% participation¹⁶²

Increasing incentives offer diminishing returns to enrollment

Utilities have effectively used financial incentives to drive Smart Grid program enrollment. However, this study did not find a consistent relationship between the magnitude of these incentives and their programs' enrollment rates. Interviewees validated this finding, noting that, while incentives are important to customers, small incentives can be sufficient to pique customers' interest and drive successful adoption rates.

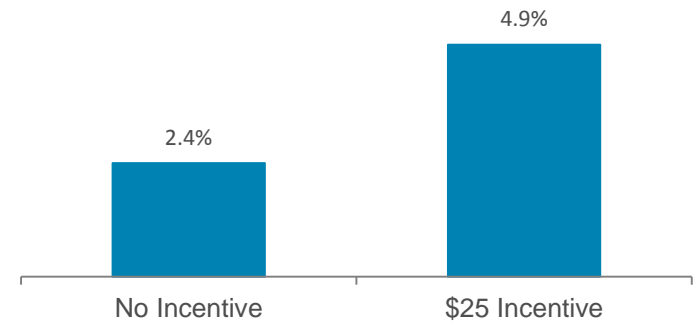
Variances in direct load control (DLC) program incentives and participation rates illustrate the degree to which these two pieces are not directly tied. Connexus and Austin have high participation rates despite offering small financial incentives. Connexus has achieved 28% DLC participation (2009)¹⁶³ while offering enrollees \$10 per month, and Austin has achieved 22% DLC participation (2009)¹⁶⁴ by offering a free programmable thermostat at sign-up and no recurring incentive. On the other hand, SDG&E has achieved only 2% DLC participation (2010)¹⁶⁵ despite offering up to \$32 per month, and SCE has achieved only 8% DLC participation (2009)¹⁶⁶ despite offering up to \$40 per month.

In addition to in-field evidence from DLC programs, customer research from APS suggests that customers may be fairly unresponsive to increasing incentives. A customer survey indicated that raising a one-time acquisition incentive for a DLC program from \$25 to \$50, a 100% increase, would only increase enrollment potential by only ~25%.¹⁶⁷

While the magnitude of the incentive may have a limited impact, many utilities have found that simply having an incentive to advertise helps drive customer interest and enrollment. OG&E found that just having an incentive to offer was helpful when promoting their TOU pilot, and Connexus has found that its

incentives, while not large, provide a tangible benefit to help market the program and drive interest.^{168,169} Similarly, a PG&E study found that introducing a \$25 incentive doubled the response rate for PG&E's CPP direct mail campaign, from 2.4% to 4.9%.¹⁷⁰

PG&E CPP DIRECT MAIL RESPONSE RATE¹⁷¹



IMPLICATIONS

- While the relationship between incentive amount and customer enrollment is unclear, customers are more responsive to messages that promote incentives
- Higher incentives may provide limited returns, and redirecting budget from these incentives to other marketing and acquisition tactics may be a more cost-effective way to engage customers and promote Smart Grid programs

Increasing incentives offer diminishing returns to enrollment

SUPPORTING EVIDENCE

Arizona Public Service: Survey indicated that increasing DLC one-time acquisition offer 2x, from \$25 to \$50, would increase participation 1.15x to 1.25x¹⁷²

Austin Energy: DLC program offering a free thermostat has 22% participation;¹⁷³ program administrators believe there has to be another reason that people enroll in program¹⁷⁴

Connexus Energy: DLC program offers \$45/year incentive and \$10 gift card upon enrollment;¹⁷⁵ DLC program has 28% participation;¹⁷⁶ have found incentive is a “tangible attention grabber” and the level of the incentive only somewhat matters¹⁷⁷

Duke Energy: Promotes rebates for DLC program without specifying rebate amount; program has achieved moderate participation rates (4%-10% depending on geography)¹⁷⁸

Oklahoma Gas & Electric: TOU pilot offered an incentive as a way to enroll low-income customers; found that just having an incentive was more important than the size of the incentive¹⁷⁹

Pacific Gas & Electric: Study found that introducing \$25 incentive increased CPP direct mail response rate from 2.4% to 4.9%¹⁸⁰

San Diego Gas & Electric: DLC program offers incentives of up to \$184 per year for 100% cycling option, and \$46 for 50% cycling only on weekdays;¹⁸¹ 2% DLC participation rate¹⁸²

Southern California Edison: DLC offers up to \$40/month and has 8% participation;¹⁸³ TOU program does not offer incentives to customers because administrators believe early adopters will enroll regardless of incentive;¹⁸⁴ researched incentives in other industries; note that “you’d be surprised what people would do for \$5”;¹⁸⁵ set \$20 incentive to enroll in portal based on available budget, but based on research of other industries believes they could lower this incentive in the future¹⁸⁶

Wright-Hennepin Electric: ~50% aggregate participation across various DLC programs despite unremarkable incentives (e.g., 15% off bill, \$10/month, etc.)^{187,188}

OPPOSING EVIDENCE

Sacramento Municipal Utility District: Reduced DLC incentive in early 2000s;¹⁸⁹ DLC participation dropped from 30% to 20% in 2000s;¹⁹⁰ customers indicated that the program incentive was more important than the program’s operational terms (i.e. cycling frequency and duration)¹⁹¹

Wright-Hennepin Electric: Have found that AC customers prefer 15% off electric bill (~\$15-20/month) to \$5/month direct rebate¹⁹²

Simplicity facilitates program enrollment

Smart Grid programs that are messaged, presented, and structured simply are more effective at enrolling customers. Customers are more likely to respond to messages that communicate programs and their benefits clearly and concisely, and it is easier to communicate these messages if the programs themselves are structured simply. By simplifying the enrollment process, utilities ensure that this process does not itself inhibit customers from signing up.

Many utilities have striven to simplify their Smart Grid messaging because energy is typically, as CenterPoint notes, a “low interest category” for consumers, and accordingly utilities have limited windows during which to engage customers.¹⁹³ Utilities like AEP Ohio, APS, Austin, SRP, SCE, and Wright-Hennepin have focused on using clear, simple language and avoided “speaking like a utility”, while also breaking up complex messages into smaller, more digestible messages.¹⁹⁴ These messages typically feature a concise tagline like “Save Money, Save Energy”, while

“Save Money and Energy with MyMeter”

— Wright-Hennepin CEA¹⁹⁹

deemphasizing supporting details. SCE has employed this strategy effectively to message its “Budget Assistant” online portal, enrolling 50,000 customers in the program’s first 6 months.¹⁹⁵

Customers appear unsurprisingly more likely to sign up for programs with simple structures. When SRP expanded their pricing program to include a simpler rate option without seasonal variations, 86% of new enrollees chose the simpler program.¹⁹⁶ On the other hand, program complexity can raise barriers to adoption.

For example, customers have found SDG&E’s four-option DLC program confusing; in a survey of program dropouts, only 19% had heard of all four options, and focus group participants said they found the current options confusing and requested a simpler program design.¹⁹⁷

“People are so bombarded with information. We have to be selective in what we offer them.”

— Salt River Project²⁰⁰

Once customers are interested in a program, utilities should make enrolling as easy as possible. OG&E has facilitated enrollment with their communications media, as with an email campaign for their online portal that featured a click-through enrollment link and with a direct mail campaign for their TOU program that provided a self-addressed stamped enrollment card. OG&E credits much of these campaigns’ success to their simple enrollment processes.¹⁹⁸

IMPLICATIONS

- *Keep it simple – energy is not top of mind for the vast majority of consumers and simple programs with simple calls-to-action are more accessible*
- *Simple messages and enrollment processes limit barriers to adoption and maximize utilities’ limited opportunities to drive customer action*

Simplicity facilitates program enrollment

SUPPORTING EVIDENCE

AEP Ohio: Makes a conscious effort to make communications customer-friendly by focusing on simple, clear language (i.e., trying not to “speak like a utility”)²⁰¹ and by making media more engaging (e.g., full color, graphical direct mail);²⁰² introducing additional information onto online portal gradually in an effort not to “overwhelm” customers²⁰³

Arizona Public Service: Promoted AMI deployment and pricing program with simple messages focused on saving money; no significant issues during AMI deployment; pricing plan options are presented clearly on website and by customer service reps on same level as standard rate option during customer signup;²⁰⁴ only TOU offer during most of program’s 30 year history was simple, 2-tier rate; newer 3-tier TOU offer has seen slow uptake;²⁰⁵ largest pricing program in the U.S.²⁰⁶

Austin Energy: Strive to communicate in clear, concise messages;²⁰⁷ use high-level explanations with words customers understand (i.e., “not something out of an engineer’s handbook”);²⁰⁸ believe they will “need to think more like a product market than a commodity market” in the future²⁰⁹

CenterPoint: Marketing focuses on the direct benefit to consumers because “the utility is a low interest category” for customers and CenterPoint believes it is their responsibility to generate interest;²¹⁰ of in-home display pilot participants, 91% found their display “easy” or “very easy” to install,²¹¹ 71% changed their behavior,²¹² and 17% plan to change their behavior in the next year²¹³

Connexus Energy: Saw increase in DLC enrollment after redesigning program messages to eliminate utility-centric terminology;²¹⁴ during in-home display pilot, 80% participants found display easy to use,²¹⁵ and those who paid attention to in-home display reduced energy use by 5.9%, compared to 3.4% for all pilot participants;²¹⁶ focus group asked for simplified CPP rate design²¹⁷

Oklahoma Gas & Electric: Believe that optimal enrollment tactics may vary between different Smart Grid programs;²¹⁸ email advertisements for OG&E’s online portal include a click-through link to the website, have been portal’s most successful enrollment tactic;²¹⁹ TOU direct mail including a self-addressed stamped response card was “a huge success”²²⁰

Sacramento Municipal Utility District: Simple, overarching “Save today, save tomorrow” message²²¹

Salt River Project: In 2010, introduced simplified TOU rate structure which eliminated seasonal changes to peak times and rates; 11,000 customers enrolled in the new program within 6 months and 86% of new TOU customers chose the simpler rate structure;²²² promote pricing program with simple messages (“save money”); belief that “People are so bombarded with information. We have to be selective in what we offer them.”²²³

San Diego Gas & Electric: DLC program offers 4 options for different levels of cycling; among DLC dropouts, only 19% were aware of all 4 options and 26% would have preferred to change their option but were not aware they could;²²⁴ DLC focus group participants found current options confusing and asked for simplicity and convenience among other things;²²⁵ 2% participation in DLC program²²⁶

Southern California Edison: Avoid confusing customers by providing too much information, because “[utilities] have a tendency in all marketing channels to over-communicate”;²²⁷ break dense messages into pieces and use simple language when possible and provide messages with three layers: a two-second tagline, a brief “elevator pitch”, and a detailed fact sheet; used this approach with “Budget Assistant” online portal and have enrolled 50,000 customers within 6 months;²²⁸ administrators believe a simple TOU design is critical to encourage participation

Wright-Hennepin Electric: Simple “Save money and energy with MyMeter” message for web portal, which has ~15% participation^{229,230}

OPPOSING EVIDENCE

Connexus Energy: DLC cycling program messaged as AC is “taking a nap”,²³¹ promoted with “Hot PowerNap Deal” and saving money as a secondary message;²³² achieved strong participation(28%)²³³

Urgency and purpose spur customers to act

Customers are more likely to enroll in programs and change their behavior when given an immediate reason to do so. The utilities in this report have inspired consumers to take action with a number of tactics, including high-frequency messages, acquisition incentives, and behavioral triggers.

High-frequency messaging campaigns can drive customers to act. For example, AEP Ohio has provided “air cover” for certain direct mail campaigns by placing automated pre-calls to tell customers to

“Act Now!” — Oncor²⁴⁰

look for the mail piece. They have found this strategy effective, noting that “it’s all about frequency” when trying to get customers to take action on energy.²³⁴

Utilities including Oncor, Reliant, and Connexus have used acquisition and time-sensitive offers to give customers an immediate reward for enrolling in programs. For example, Connexus uses \$10 gift card limited-time offers to promote its DLC program, which has 28% participation.²³⁵

Recently, many utilities have used behavioral triggers, such as energy savings competitions, comparative energy reports, and goal-setting programs to establish purpose behind saving energy. Wright-Hennepin and The Climate & Energy Project have used competitions to generate excitement and spur participants to

reduce energy usage, with participants in Wright-Hennepin’s competition reducing their usage by up to 58%.²³⁶ Other utilities have inspired customers to reduce energy use around 2-3% with comparative energy reports which compare a household’s energy use to that of similar households.^{237,238} Duke’s program inspired a majority of customers to make behavioral changes: 84% of participants changed thermostat settings and 51% took actions they would not have otherwise.²³⁹

Utilities like SCE and Wright-Hennepin have used goal setting programs to encourage customers to reduce their energy use. SCE’s “Budget Assistant” online portal allows customers to set a monthly budget and alerts them as they approach this threshold. Wright-Hennepin has a goal-setting feature on its online portal that allows customers to create a timeline of important energy saving activities, like installing CFL’s, and to track the impact of these activities.

IMPLICATIONS

- *Customers care about saving money, energy, and the environment, but are largely disengaged today and must be motivated to make changes*
- *Utilities should communicate impetuses that spur customers to take action*
- *In addition to those tactics discussed above, utilities should leverage existing customer touch points (see Theme 10) to engage with customers at those few moments when they are already thinking and making decisions about energy*

Urgency and purpose spur customers to act

SUPPORTING EVIDENCE

AEP Ohio: Believe that “it’s all about frequency” when trying to generate an impetus for action;²⁴¹ made pre-calls before direct mail drops and found this improves customer response over direct mail alone;²⁴² comparative energy report pilot since 2010

Climate and Energy Project: Used competition model with finite duration to drive behavioral change; leaders found that it was easy to engage residents in the competition once they made one-on-one contact²⁴³

Connexus: Promoted DLC program with limited-time rebates and \$10 gift cards; DLC program has achieved 28% participation;²⁴⁴ comparative energy report program achieves ~2.0% energy reductions;²⁴⁵ using automated pre-calls to alert customers about upcoming direct mail increased direct mail response rate;²⁴⁶ promoted pricing pilot with extra phone calls and direct mail to customers enrolled in online portal

Duke: Comparative energy report program inspired a majority of customers to participate: 84% of participants changed thermostat settings, 80% “managed their drapes”, and 51% took action where they would not have without the report²⁴⁷

Oncor: Promotional giveaways (e.g., in-home displays) require customers to “Act Now!”²⁴⁸

Portland General Electric: Interactive website uses game mechanics to encourage energy reduction, sends customers on “missions” e.g. taking shorter showers, and awards prizes; “mission” participants have saved ~490 MWh and planted 26,000 trees²⁴⁹

Reliant: Raffle 1,000 in-home displays to low-income households;²⁵⁰ \$10,000 pricing program sweepstakes²⁵¹

Sacramento Municipal Utility District: Conducted a 3-year energy report pilot from 2009-2011; reductions rose over the first year, leveled off at 2.9% average reductions²⁵²

Southern California Edison: Use a variety of strategies to engage customers; increase the frequency of DLC impressions in the spring as summer season approaches; “Budget Assistant” online portal creates monthly budgets for customers and alerts them as they approach their budget; Home Energy Efficiency Survey provides seasonal analysis of energy use and compares customers’ use to their neighbors’

Wright-Hennepin Electric: Online portal users can set energy goals and have reduced energy use by an average of 2.6%;²⁵³ energy saving competition with another cooperative (10 families total) reported household-level results and a WHE employee notified participants of energy spikes, resulted in average energy reductions of 43% with reductions as high as 58%;²⁵⁴ children were very active and excited about competition²⁵⁵

OPPOSING EVIDENCE

ComEd: Have incentivized RTP enrollment with \$100 cash giveaway, a free programmable thermostat, and a raffle for a Prius;²⁵⁶ ComEd found these incentives did not have an appreciable impact on participation rate (~2%)²⁵⁷

Attitudinal segmentation may improve program messaging

Few utilities have used segmentation when messaging their Smart Grid programs. Many utilities have targeted only certain customer groups for certain programs, such as customers with smart meters, certain appliances, or central air, but segmentation along demographic or attitudinal dimensions remains largely unused. When attitudinal segmentation has been used, it has largely been as a research tool and not as a proactive marketing tool. Interviews indicate that many utilities are starting to employ attitudinal segmentation as AMI deployments are finalized and utilities begin to market a range of new Smart Grid programs.

Very few utilities have used demographic segmentation at all as part of their customer outreach programs and its impact is yet to be determined on a wide scale. Although attitudinal segmentation is

“With effective segmentation, organizations can improve outreach by delivering targeted messages, enabling a wider range of primary messages beyond ‘saving money’”

even less prominent, secondary research suggests that it has potential. The 2011 State of the Consumer Report found that attitudinal segmentation may be more effective than demographic segmentation because “cost consciousness, comfort, green altruism, tech enthusiasm, indifference, and resistance...persist across cultures, income levels, and education while the percentage mix varies locally.”²⁵⁸ Given this, demographic segmentation is

unlikely to enable differentiated and optimized messaging strategies in the way that an attitudinal, but targetable, segmentation scheme could.

Utilities including AEP Ohio, APS, and SCE believe attitudinal segmentation can help them improve their outreach and are beginning to incorporate it into their Smart Grid programs. For example, AEP Ohio believes their attitudinal segmentation framework is showing promise as in their pilot and they plan to use it for targeting purposes in the future.²⁵⁹ One utility in this study, SRP, has incorporated attitudinal segmentation into its outreach efforts for its highly successfully TOU pricing program, creating up to six targeted direct mail messages each month which promote different benefits (e.g., environmental benefits, user control, etc.).²⁶⁰

IMPLICATIONS

- *There is a rising belief among utilities that attitudinal segmentation, which has been employed to great effect in other industries, can help improve program performance, and select utilities have begun to integrate these schemes into their Smart Grid activities*
- *With effective segmentation, organizations can improve outreach by delivering targeted messages, enabling a wider range of primary messages beyond “saving money” (see Theme 5)*
- *Utilities may see value to extending customer experience differentiation beyond messaging to include offer and channel strategies as well*

Attitudinal segmentation may improve program messaging

SUPPORTING EVIDENCE

AEP Ohio: Developed six psychographic-based segments, and looked at each segment across four energy usage levels to identify high-likelihood, high-value customers, but to date have only used this scheme to aid in pilot design;²⁶¹ believe their segmentation scheme has worked well in pilot and plan to use it in the future to target programs to customers that are both likely to enroll and also have high energy reduction potential

Arizona Public Service: “Green Choice” rates offered to satisfy target segments;²⁶² online rate selection tool leverages demographic and attitudinal segmentation

ComEd: TOU direct mailing sent to high education, high bills, high income, and current DLC participants; impact on results not clear, but only 2% participation in program²⁶³

Duke Energy: DLC program targets customers based on wireless coverage, income, and whether a home has AC; moderate DLC participation rates (4%-10% depending on geography)²⁶⁴

Memphis Light, Gas & Water: In AMI pilot, asked customers to choose program study profiles; some households had difficulty choosing given differences between individuals

Sacramento Municipal Utility District: Employ an attitudinal, 8-segment framework which sorts customers into “young families”, “money minded strivers”, “green echoes”, “uninvolved achievers”, “senior savers”, “green boomers”, “boomers, buyers, and browsers”, and “big toys, big spenders”;²⁶⁵ measure program engagement for each segment from awareness to familiarity to consideration to participation;²⁶⁶ monitor use of different media by segment (e.g., daily newspaper readership is highest (64%) among “senior savers”)²⁶⁷

Salt River Project: Creates up to six new bill inserts each month to target their multiple segments (defined along demographic and attitudinal lines) with different messages and benefits (e.g., environmental benefits, economic benefits, etc.);²⁶⁸ second-largest TOU program in nation has 22% participation²⁶⁹

San Diego Gas & Electric: Track customers’ history with the utility and plan to add demographic information to construct a customer “profile”;²⁷⁰ customer service representatives will use profile to tailor interactions and refer customers to programs that might interest them; find that higher-income and more technology-savvy customers have been more engaged in pricing program²⁷¹

Southern California Edison: Developing an attitudinal segmentation framework around which they may develop future program offerings; by offering programs tailored to specific segments (e.g. “The Green Plan”) SCE would allow customers to self-select into programs that appeal to them

Wright-Hennepin Electric: Find it simple and effective to target DLC messages to non-participating customers with high summer bills²⁷²

Utility channels can transition from service to sales

As utilities have launched Smart Grid programs, they have for the first time acted as a sales organization looking to drive opt-in participation. As Smart Grid programs make the transition from pilots to footprint-wide offers, utilities have begun to develop channels through which to promote and enroll customers in these programs. Some utilities have already seen promising results from three channel opportunities: customer sign-up, internal referrals, and third-party referrals.

Perhaps the most convenient time to enroll customers in Smart Grid programs is when they sign up for electric service. For example, APS and SRP have used these opportunities to drive enrollment in their pricing programs, helping them achieve leading participation rates of 50% and 22%, respectively.²⁷³ Focusing on APS, it presents all pricing plans as equal and helps customers identify which rates would best suit them, rather than leading with their basic service plan and promoting other plans only as alternatives to this lead offer.²⁷⁴ Given APS's high customer

“...SRP offers different price plans so you can choose the plan that fits your lifestyle.”

— Salt River Project²⁷⁸

turnover (~50% annually), this acquisition strategy has been instrumental in achieving high enrollment, with the majority of program participants enrolling during the electricity sign-up process.²⁷⁵ These results are especially impressive given other

pricing programs' struggles to enroll customers, and APS' success suggests that customers are not inherently opposed to pricing programs and can be enrolled in large numbers.

Utilities have had success leveraging existing customer touch points to promote Smart Grid programs. For example, Austin refers customers to their DLC program through their call center, helping it achieve 22% participation.²⁷⁶ Similarly, Connexus finds that customers receiving energy reports are 15% more likely to enroll in Smart Grid programs than other customers, and plan to use the “tips” section of the report as a referral channel in the future.²⁷⁷

Lastly, select utilities have made use of third-party referrals to drive customer interest from non-utility touch points. For example, SCE donates \$5 to schools when parents participate in their Home Energy Efficiency Survey.

IMPLICATIONS

- Utilities should integrate their Smart Grid programs into day-to-day business operations, promoting them and making them accessible across customer touch points
- Existing customer touch points provide strong opportunities to engage customers on energy, as it is already front of mind and the time/effort cost of engagement is low
- As utilities move beyond pilot-stage and begin managing full programs, traditional economic success metrics (cost of acquisition, churn, etc.) will become more important

Utility channels can transition from service to sales

SUPPORTING EVIDENCE

AEP Ohio: Cross-promoting DLC program to TOU pilot customers has been “pretty successful”, with ~20% of eligible customers enrolling²⁷⁹

Arizona Public Service: Most participants enroll in TOU while signing up for electric service, at which point call center reps present rate plans equally and discuss which plan best suits the customer’s needs;²⁸⁰ rates are also easy to find on website and are presented on same level as basic rate, which also has rate comparison tool; many opportunities to enroll signups in pricing program due to high customer turnover (~50% annual turnover);²⁸¹ largest pricing program in the nation, with >50% participation;²⁸² have been offering TOU rates for >30 years

Austin Energy: Call center promotes DLC, which has 22% participation;²⁸³ have found that customers think of electricity as a commodity and do not want to manage their energy consumption, so believe that pricing programs may face headwinds as customer education slowly shifts consumer perceptions about energy²⁸⁴

ComEd: 0.27% participation in RTP program and falling even though ~80% of people found the program easy and helpful and satisfaction is >90%^{285,286}

Connexus Energy: Found that comparative energy report recipients were 15% more likely to join other programs;²⁸⁷ in response, Connexus plans to use “tips” section of reports as platform from which to recommend other programs in the future;²⁸⁸ the online energy portal alerts customers if they could save money on a TOU rate; only received 3.9% participation of eligible households enrolled in CPP pilot program (n=39);²⁸⁹ attribute low participation to anxiety over new rates and unwillingness to put forth effort required to save money on TOU;²⁹⁰ focus groups found that CPP was perceived as complex, risky, higher cost, and difficult to participate in²⁹¹

Oklahoma Gas & Electric: Less than 1% participation in TOU plan;²⁹² observe that customers choose not to enroll even if aware of program and its one-year risk-free trial;²⁹³ believe that the future release of an online rate comparison tool will increase TOU participation and help “get past the early adopters”²⁹⁴

Pacific Gas & Electric: TOU program offers \$50 gift card for signing up²⁹⁵ and has high satisfaction (88% would recommend program to a friend);²⁹⁶ participation remains <1%²⁹⁷

Salt River Project: Second-largest TOU program in nation has 22% participation,²⁹⁸ promotes “No risk, 90-day trial”;²⁹⁹ messages plans with language like “...SRP offers different price plans so you can choose the plan that fits your lifestyle.”³⁰⁰

San Diego Gas & Electric: Using AMI door hangers, appliance rebate programs, real estate agents, customer service center, and community organizations to refer customers to Smart Grid programs; emphasize the importance of call center representatives in identifying programs that suit customers’ needs as the number of Smart Grid programs increases and they become difficult for customers to internalize;³⁰¹ higher success with referrals if customers have had a positive experience in a utility program;³⁰²

Southern California Edison: Donates \$5 to schools for every parent that takes the Home Energy Efficiency Survey (HEES); HEES energy report recommends that customers enroll in other programs (pricing, DLC); call center refers customers to “Budget Assistant” online portal; working to transition call center from its focus on dealing with service calls efficiently to fulfilling a sales function as well;³⁰³ SCE’s 20% annual turnover will provide many opportunities to enroll customers in pricing programs when they are widely available;³⁰⁴ research found customers are unlikely to change from current rate, regardless of alternative options³⁰⁵

Wright-Hennepin Electric: Call center and energy auditors promote online portal, which has ~15% participation;³⁰⁶ most customers referred by call center (as opposed to bill marketing, etc.)³⁰⁷

Acknowledgements

We would like to thank the many people who made themselves available for interviews and who deepened and enriched the content of this report. Without their knowledge and insight we would not have been able to provide these insights in order to better understand and engage consumers.

This report is the result of collective efforts from SGCC members and non-members alike and offers the valuable insights that can only result from collaboration and the sharing of information. Only by continuing to collaborate on consumer issues will we be able to fully realize the promise of Smart Grid. If you are not a member, we invite you to join us as we continue to listen, collaborate, and educate going forward.

Primary author

Altman Vilandrie & Company

SGCC member organizations

Accenture

Aclara Technologies

Alliance to Save Energy (ASE)

American Council for an Energy Efficient Economy (ACEEE)

American Electric Power

Arizona Public Service

Avista

Baltimore Gas & Electric Co. (BG&E)

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California Public Utility Commission

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Landis+Gyr

Lawrence Berkeley National Laboratory

Magnolia/Best Buy

Market Strategies International

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National Institute of Standards & Technology (NIST)

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Natural Resources Defense Council (NRDC)

NETL- SG Implementation Strategy Group

North Carolina Dept. of Commerce - Energy Office

Office of Peoples' Counsel – DC

Ohio Consumers' Counsel

Ohio Partners for Affordable Energy

Oklahoma Gas & Electric

OPOWER

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Pacific Gas and Electric Co. (PG&E)

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Tendril

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Utility Consumers' Action Network (UCAN)

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Carisa Neu, Michigan Public Service Commission

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Jules Polenetsky, Future of Privacy Forum

Anthony Rodriguez, Office of the Ohio Consumers' Counsel

Jennifer Robinson, EPRI

Theresa Schmidt, Consumers Energy

Jenny Cross Senff, DRSG

Thomas Simchak, Alliance to Save Energy

John Stevenson, Stoel Rives LLP

Michael Terrell, Google

Chris Thomas, Illinois Citizens Utility Board

Garren Watkins, Tendril Inc.



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Smart Grid Consumer Collaborative (SGCC) is a consumer focused non-profit organization aiming to promote the understanding and benefits of modernized electrical systems among all stakeholders in the United States. Membership is open to all consumer and environmental advocates, technology vendors, research scientists, and electric utilities for sharing in research, best practices, and collaborative efforts of the group.

For more information please visit www.smartgridcc.org

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Altman Vilandrie & Co. (AV&Co.) is a strategy consulting group that focuses exclusively on the communications, energy, and related technology and investor sectors. For our energy clients, we look at the dynamic intersection of innovation and shifting customer demand and the business opportunities this creates

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