Communicating Smart Meter Value

An Intelligent Utility Reality Webcast

September 9, 2010



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1-800-633-0738



Communicating Smart Meter Value



Monique Austin

Client Relationship Coordinator

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Judith Schwartz

Principal

To The Point



Communicating Smart Meter Value



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Agenda

Introduction

About Intelligent Utility

The discussion

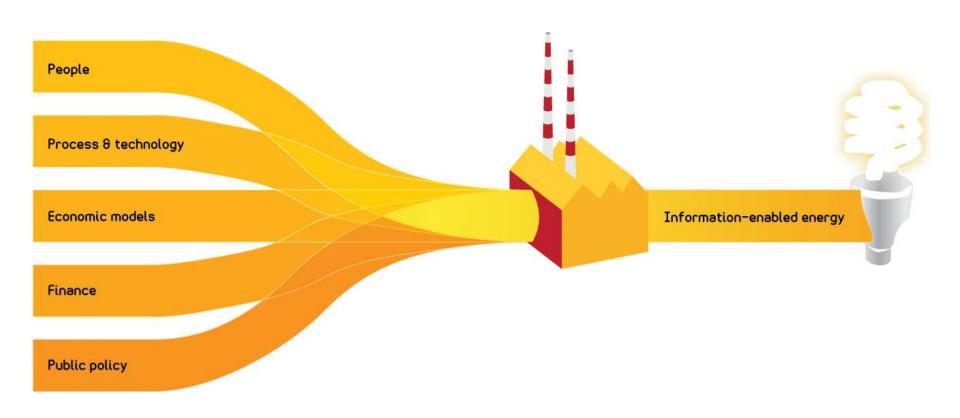
- Monique Austin, client relationship coordinator,
 Austin Energy, will explain how her utility rolled out
 smart meters in Texas' capital without major
 pushback
- Judith Schwartz, principal, To the Point, will discuss why smart meters are needed and factors influencing their acceptance

Q&A

Audience questions and instant polls



Introduction: An intelligent utility operation





Anatomy of a Successful Smart Meter Rollout

Austin Energy installs more than 360,000 automated meters with support from the community.

Monique Auslin Auslin Energy September 9, 2010

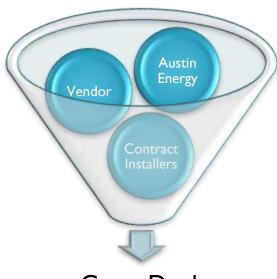
Deployment Team

Cross Dock Deployment Team

- Austin Energy Electric Service Delivery (ESD)
 - Project lead
- Austin Energy Customer Care and Marketing Communications
 - Education/community outreach
- Installation contractors
- Vendor

Mission

To allow easy communication between all contributors



Cross Dock

Deployment Team

Objective: To provide excellent customer service for the community during Austin Energy's meter exchange.

Deployment Team Becomes Central Communications Hub

During deployment, the objective was expanded to include not only customers, but vendors, contractors, and all other Austin Energy departments.



Selection process for Cross Dock Call Center

The Cross Dock Call Center team consisted of:

Lead Customer Solutions Coordinator

 5 years experience working with Austin Energy in Electric Service Delivery and Customer Care. Extensive background in Field Services and Customer Service.

Four Customer Service Representatives

Top performing employees were selected to participate in this project.

Training requirements for the Cross Dock Call Center team

- Ability to de-escalate a customer
- "Soft" phone skills
- How to write professionally
- Cross-training with Meter Electricians to learn meter terminology
- Coaching on how to provide customer "options"
- Utilizing all tools and resources to share as much information as possible with customers and field technicians
- Share new learning experiences with colleagues

How did everyone communicate to the Cross Dock Call Center team?

Austin Energy Customers

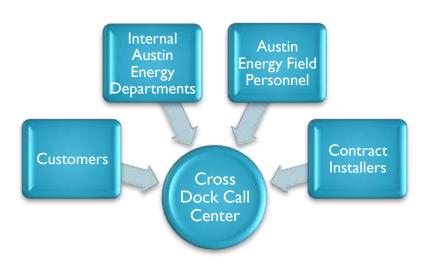
- Special phone number and email address created (main Call Center was not impacted)
- Consistent messaging was key

Austin Energy Employees

- Internal email address created
- Messages sent directly to Dock Center team for immediate response

Installers

- Special phone number for field personnel only
- Known as Red Line
- Went directly to Dock Center team
- Used to identify locations, gate codes, handle customer escalations from field, meter installation issues, etc.



Customer Notification

Communication, Communication, Communication...

- Postcards*
- Austin Energy Web site
- Customer calls*
- Door hangers*
- Local news coverage (television and newspaper)
- Special newspaper insert spread
- Notified ALL Austin Energy personnel
- Worked with Community Coordinators to make special arrangements for Life Support customers
- Notified partnering social-service agencies that assist low-income clients and provided a presentation with the details

* Was also provided in Spanish

Addressing Accuracy

Customer Education



Pay Your Utility Bill Online

More than 23,000 City of Austin utility customers pay their utility bill online each month through the City's Electronic Fund Transfer (EFT) program.

Sign-up is easy and once enrolled, a draft on your bank account occurs automatically to pay your utility bill each



month on its payment due date. This gives vou ample time to receive

and review your utility bill first. In addition, this means a customer no longer has to write or mail checks nor be concerned about ever being late with their payment.

The program is now three years old and works well. In fact, about one-third of the 400,000 City of Austin utility customers pay their utility bill online either through the City's EFT program, by using their bank's online payment services or by making payments at Customer Service counters at grocery stores accepting City of Austin utility bill payments. Those payments are delivered to the City electronically.

To sign up for EFT, visit www.austinenergy.com or call the City of Austin utility Customer Service Center at

Energy Audits Find 86 Percent Of Homes For Sale With Excessive Duct Leakage



majority of homes receiving energy audits to comply A majority of homes receiving energy audits to compay with a new City ordinance are leaking excessive levels of cooling and heating into their attics from leaky duct systems, and on average, need an additional 6 inches of attic insulation.

Of the first 400 energy audits received by Austin Energy, 86 percent of the homes have ducts leaking in excess of the 10 percent considered acceptable for energy efficiency. The

homes average a 22 percent leak rate - though there were homes with double or triple the average. One audited home was leaking 81 percent of air conditioning and heating into the attic. The duct system in another was leaking so badly the testing equipment could not produce

Effective June 1, 2009, energy audits are required for homes for sale located within the City of Austin that are 10 years old or older and receive electricity from Austin Energy. There are several exemptions from the ordinance - for instance, homes that have undergone energy-efficiency improvements during the last 10 years or those in various legal proceedings that involve transfer of the property, such as foreclosure or a divorce settlement. Potential home sellers can use an online tool at www.austinenergy.com/go/ECAD to determine whether the audit is required for their home, or to get additional information on the ordinance.

The 400 homes as a group are wasting 778,000 kilowatt-hours of electricity annually, or \$77,800 in energy costs due to leaking ducts and insufficient attic insulation. Meanwhile, Austin Energy, Texas Gas Service and federal tax credits are available to help pay for many energy efficiency improvements. Visit www.austinenergy.com for additional information on energyefficiency programs and details on the Energy Conservation and Audit Disclosure (ECAD) ordinance.

Automated Meters Accurate and Durable

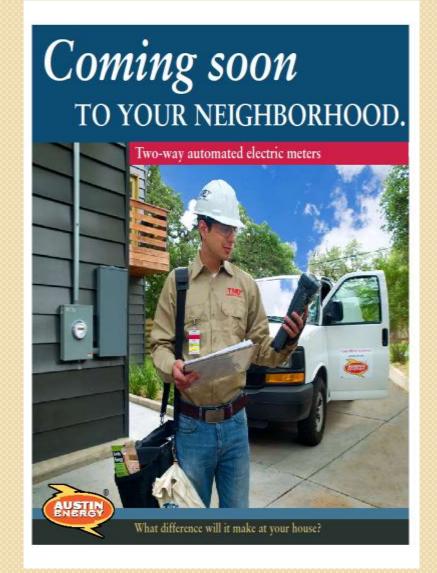


automated meters. The new meters have more computing power than PCs had 5-10 years ago and are very accurate. They replace their meter, old or new, is not recording meters that are 20-30 years old.

As the old meters come in from the field, Austin Energy is testing about one of every ten. A small number of old meters were found to be running slow. A customer with an old meter that was running slow

ustin Energy is providing may notice an increase in electric usage once their new state-of-the-art meter is installed. This is because the new meter is correctly recording all power used.

> Anytime an Austin Energy customer feels usage properly, they should call the utility Customer Service Center at 494-9400 or e-mail custinfo@austinenergy.com to have their account reviewed. If needed, Austin Energy will send out a technician to test any meter, old or new, to assist the process.



News Media Examples

KXAN-TV

If you are an <u>Austin Energy</u> customer, then starting Thursday your electric meter became a "smart" one.

Crews spent the day installing smart electric meters throughout the city. The advanced meter will replace the old manually read ones.

The new meter can better measure your usage, eliminate the need for crews to get into your backyard for readings and send a message to Austin Energy when there is a power outage.

"Today, when your lights go out, you need to give us a call to let us know that," said Cheryl Mele of Austin Energy. "What we envision in the future is that we're going to get a response from this new system, and it's going to tell us, 'Your lights are out.' We're going to get that call passed on to our system operators, and be able to dispatch a crew and respond to that outage a little bit quicker than waiting on you to call."

Additional features will allow Austin Energy to turn off and reinstate service without sending out a crew.

Austin Energy Brings Two-Way Meter Technology To Austin

In the coming months, Austin Energy will be in your neighborhood to replace your electric meters with state-of-the-art automated meters. The new meters will offer many advantages in the future, including remote reads, faster outage response and more billing and payment options.

The new two-way meter system will be the largest of its kind in the country. Look for notification in the mail before the meters are changed out. Installers will wear an Austin Energy badge, and will knock on the door before they attempt to change the meters.

You can expect a temporary disruption to your electric service for a few minutes during the meter exchange. You will need to reset your electronic devices, such as clocks, alarms and sprinkler systems.

Walking the customers through the steps



Automated Meters Rolling Out

Tastallation of automated meters for all Austin Energy customers will accelerate this mouth. This means that on average, about 1,400 meter changeours will occur duly in residential areas. Automated meter installations for Aurtin Energy business customen will begin in volume early next year. Total meters to be exclanged: about 270,000, with all installations to be completed by

nummer 2009.

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Residential customers receive a post card several weeks in advance alerting them to the changeout. The changeout involves replacing their urmut electrossechanical meter with a new, mild-state

automated one. The exchange takes only a few minutes, and afterward, a door hanger is placed indicating the new meter has been installed. When a meter is inaccessible due to a locked gate or other reason, a door hanger is left with a telephone number for the outomer to call to set an installation appointment.

Automated meters transmit meter reads via radio waves and will eventually eliminate the need for monthly manual reads. Once all the new meters have been installed, one of the first service enhancements will be their capability to signal the Austin Energy control center when they experience a power outage. Currently, customers must call to report power outages, because the older meters have no againing capability.



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Planning For The Future



Austin Energy Customer News FEBRUARY 2008

Roger Duncan



who is the new General Roger Duncan Manager

Austin Energy for six years. Mr. Duncan, who has more than two decades of experience in City government, including two terms as an Austin City Council Member from 1981 to 1985, has served as Austin Energy Deputy General Manager since 2004. He has had responsibility for overseeing Austin Energy's nationally recognized energy efficiency, Green Building and renewable energy programs, as well as the utility's on-site generation program, strategic planning,

Named Interim GM

R oger Duncan has been named interim General Manager of Austin Energy. Mr. Duncan



of the Pedernales Electric Cooperative. Mr. Garza led

Austin Energy in 1998 as Vice President in charge of conservation, renewables and environmental policy.



governmental relations and air quality.

Mr. Duncan joined

Austin Energy Unit First In Country To Earn Certification

The Austin Energy division responsible for the construction, maintenance and operation of Austin's electric system has become the first of any utility in the nation to earn ISO 9001 registration.



ISO (International Organization for Standardization) 9000 is a series of international quality standards designed to ensure that all activities related to providing and delivering a product or service are appropriately quality assured. To earn the registration, applicants must develop a Quality Management System that reflects standards of performance for every major task, in this case, related to building, maintaining and repairing the electric system. Auditors from the National Standards Authority of Ireland (NSAI), the worldwide entity that administers the ISO quality management program, issued the registration on January 3, 2008. The certification followed a rigorous four-day review in December of the Electric Service Delivery Quality Management System by NSAI auditors. The ISO auditors noted that procedures and written work instructions have been implemented for more than 530

Approximately 250,000 companies worldwide, including 25,000 in the U.S., are certified in the ISO 9000 series. Austin Energy transmission and distribution work units, however, are the first of any utility in the country to be so certified.

All Customers To Receive Automated Meters

A ustin Energy replaced approximately 127,000 meters with automated meters in 2003. Upgrades to the current automated meter-reading network are in testing now. When these tests are successfully complete, Austin Energy will begin replacing the remaining

260,000 residential and commercial mechanical meters with automated meters. This activity could begin as early as March 2008, and will continue throughout 2008.

Once installation of automated meters is ready to begin, customers will receive notification in various forms to let you know approximately when crews will be in your area to exchange your meter. In advance of installations, please make sure shrubbery or other obstacles do not block your meter. Obstructions that prevent a meter change out will have to be cleared.

Automated meters eliminate the need for manual meter reads. Instead, the meters signal consumption totals to computers via radio waves. Automated meters also improve reliability because they signal outages. Without automated meters, utilities do not know when a home or business is without power, in most instances, unless the customer calls in the outage. Automated meters also lay the foundation needed to increase service offerings to customers. This could include customer selected billing dates, time-of-day pricing of electricity use and programs that help customers reduce their energy use.



The reflect of unitmated nature to all Austin Energy customen la progressing well. About 90,000 meters

have been trutabled since April - about 1,000 meters each day, with the goal of doubling that number beginning in January. All installations are espected to be completed by early summer 2009. The new meters transmit meter readings via radio waves, eliminating the need for manual made.

Residential customers receive a post card a few weeks in advance of their mater leatallation. Workers knock on the door before totalling the new natur. If no one is at home, a green door hanger is left indicating the change out occurred.

If the meter curroot be exchanged due to a dog, locked gate or other mason, a red door hanger is left with a number to call to arrange for an installation.



were 6,600 and the average since 2005 has I Offsetting The Need

tion Index or SAIDI) was 46.48 mirrors. B

The excellent performance of the Austin

creased maintenance over recent years as well

the excellent response time by Austin Energ

instance, a key measure of storm activity is I

the lowest for Austin. January through mid-

2,670 cloud-to-ground lightning flashes. La

Another important factor has also been a

utility industry averages nationwide.

System Reliability

Energy efficiency improvements made by participating in the Austin Energy Pro-Program and Austin Energy Green Building peak energy demand by almost 62 megawat the coming year, reducing day-to-day energ, million kilowett-hours (kWh)

The reductions almost match last year's round as Austin Energy marches toward a 2020 goal of offsetting the need for a 700 MW power plant through its energy

More than 10,500 Austin Energy residential customers and 615 businesses participated in the programs during the fiscal year that ended September 30, 2008. The multing energy sartage will reduce electric bills of the groups by more than \$12 million annually. They will also reduce curbon dioxide (CO₂) entissions by more than \$6,000 tons and rotingen oxide (NOx), a pollutant that helps form smog, by almost 60 toos each year. Energy efficiency is also the least espensive way to meet new electric demand. Austin Energy efficiency programs cost the utility about \$350 per kilowatt (kW) of energy saved. Building a new natural gas-facked power plant would mut approximately \$700 per kW.

Sending postcards prior to arriving

AUSTIN ENERGY IS COMING TO CHANGE YOUR METER!

In the next few weeks, we will be in your neighborhood to replace your electric meter with a state-of the-art automated meter at no additional charge to you.

These new meters have many advantages. You will find them accurate and easy to read. In the foreseeable future, we will introduce new features like:

- · remote mads
- · faster outage response
- · greater meter accuracy
- new billing options
- new payment options
- energy management options

AUSTIN ENERGY VIENE A ;CAMBIAR SU MEDIDOR!

En las próximas semanas,
estaremos en su vecindad para
cambiar su medidor eléctrico con un
medidor automatizado de lo mejor,
sin costo de su parte.

Estos nuevos medidores tienen muchas ventajas. Son precisos y fáciles de leer. En un futuro cercano, introduciremos nuevas características como:

- lecturas por control remoto
- atención rápida a interrupciones
- · mayor precisión en el medidor
- nuevas opciones de cuenta
- nuevas opciones de pago
- opciones de manejo de energía

Questions? Please visit www.austinenergy.com or call 972-7540.

;Preguntas? Visite www.austinenergy.com o llame 972-7540.

Notified the customers we were there





How was an escalation handled?

- Austin Energy Customer Service Representatives were well-versed on the processes of the Deployment Team
- Cross Dock Call Center team served as subject matter experts
- Depending on the escalation circumstance, Austin Energy offered various options:
 - Flexible appointments
 - Ranging from all day to within a few hours
 - Early morning before businesses open
 - Before and after customers got home from work
 - Weekends
 - Meter testing
 - Provided new meter information
 - Provided details of old meters (ex. the original installation date)
 - Communicated the new opportunities these meters will provide to customers and Austin Energy

Few Customer Complaints

Since the installation, Austin Energy has received a low percentage of calls related to the new automated meters. Customers who question their bills can request a meter check, and Austin Energy will send a certified technician to test the meters according to industry standards.

Automated Meter Results

- 10,743 (3.8%) customers whose meters were exchanged called with questions about the new meters or high consumption.
- Only 231 (2.1%) requested meter accuracy tests.
- Out of the 231 meters tested, only 25 (10.8%) were exchanged.

Smart Meter Deployment Timeline

March 2008

- Cross Dock Call Center was developed
- Communication began

April 2008

Meter installation began

May 2008

Community outreach increased due to large number of installations

May 2010

Majority of meters were installed

What's next:

NEW PROCESSES, a time of change...



Why Are Residential Smart Meters Needed?

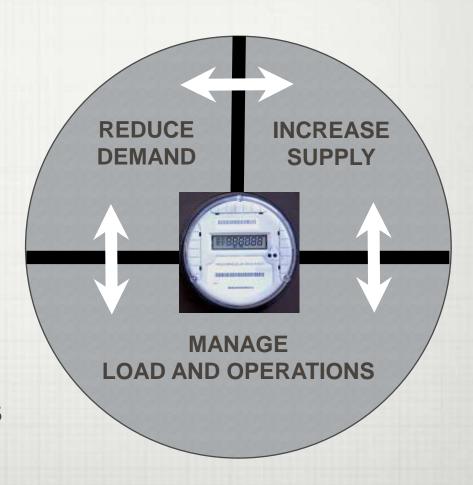
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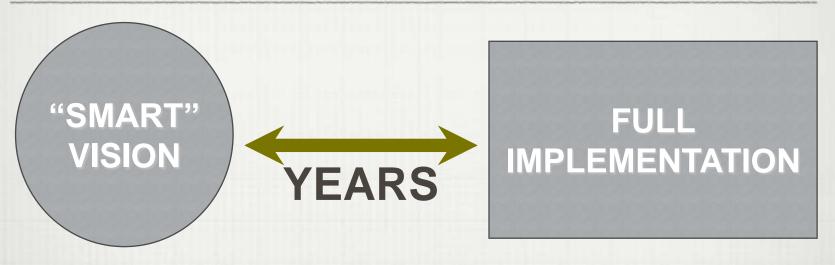
Judith Schwartz, To the Point judith@tothept.com 650-906-9927

Smart Meters Are Required to Enable a Sustainable Energy Future...

- Distributed clean generation
- Grid optimization
- Energy efficiency
- Demand Response
- Dynamic price signals

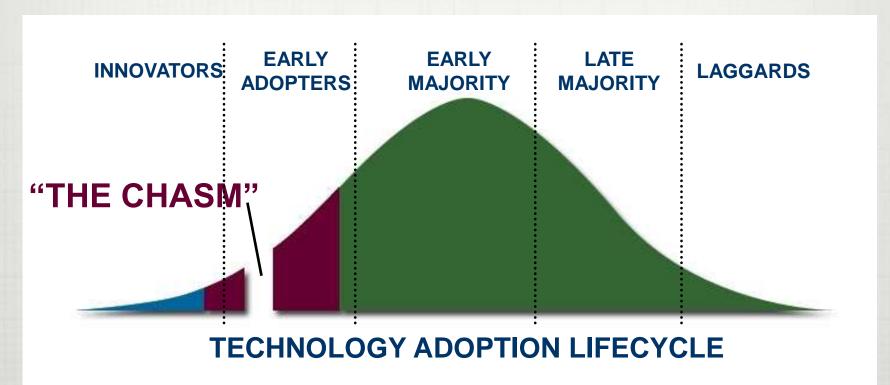


Utilities Must Bridge Customer Perception Gap



- Visibility before reality
- Bills before benefits
- Ambiguity before maturity
- No silver bullet

Utilities Need a Strategy to Bridge Gap



DIFFUSION OF INNOVATIONS BY EVERETT ROGER

Crossing the Chasm BY GEOFF MOORE

Ubiquitous transformation takes place over 20-30 year period

Judith Schwartz, To the Point judith@tothept.com 650-906-9927

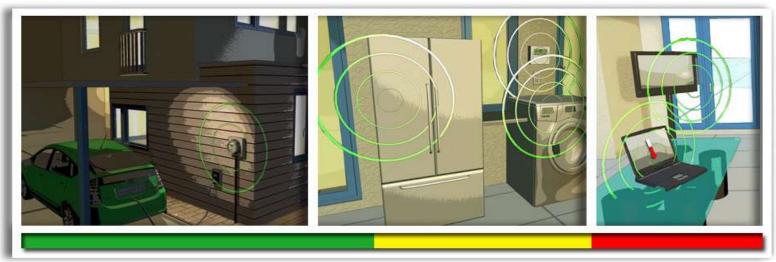
Consumers Segment by Motivation

Green **Altruists Cost Conscious** Tech **Enthusiasts** A W **Comfort Lovers Privacy Skeptics** R E **Minimalists** BARGAIN **VALUE PREMIUM**

Judith Schwartz, To the Point judith@tothept.com 650-906-9927

"Nudges" Correlate to Motivation

Incentives may be feedback or price or automation



Consume and store lowest price off-peak power

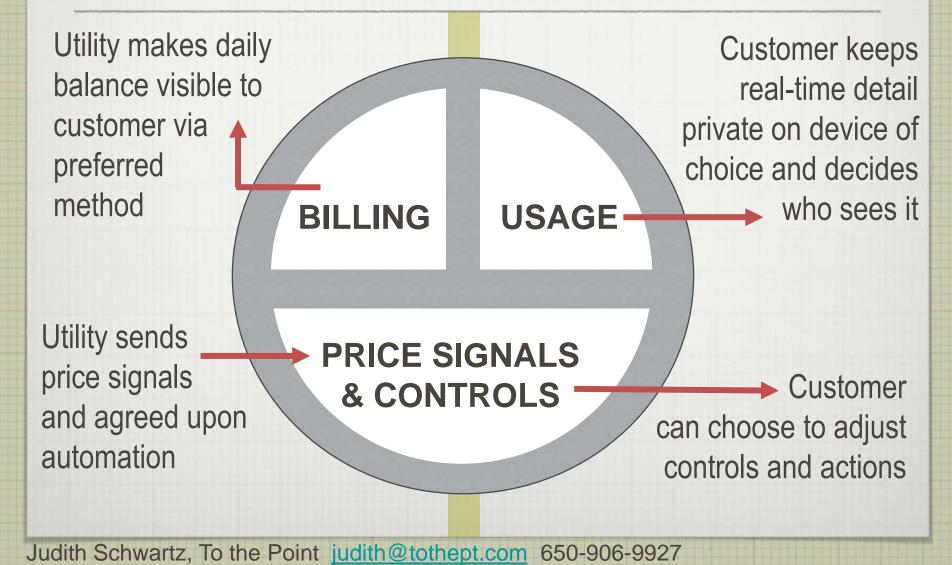
Offset power usage with energy-efficient appliances and feedback devices

Save money with voluntary programs at peak periods

Anticipate Consumer Concerns and Push Back

- Smart meter accuracy
- EMF (electro magnetic frequency) exposure
- Dynamic pricing and low-income populations
- Shared risk and cost
- Big Brother (privacy and cyber security)
- Individual control
- Gender variations have not been addressed:
 Guys keep score while women cooperate

Solve Privacy and Control Concerns Via Data Demarcation



Solve Choice and Pricing Concerns Via Opt-in Programs

EV and Micro Generation Options

The Saver Plan

The Green Plan

Dynamic Pricing Options

The Basic Plan

The Comfort Plan

Subsidized or Pre-Pay Options

SOME PLANS REQUIRE SMART METERS/GRID

Proactive Education Creates Informed Partners

"I think the utility should educate the consumer and tell the consumer what they can be doing and what the utility is doing to remedy the issue and conserve energy."

- L.S.T., TOPSFIELD, MA



Communication Gaps Can Overshadow Tech WINS

- Failure to listen actively
- Silo messages vs vision
- Promotional vs educational tone
- Not planning for extreme weather and tech bugs
- Delay in responding to legitimate concerns



Recipe for Success

Listen • Respond • Respect



- Integrated narrative
- Internal alignment
- High touch contact centers and field reps
- Media awareness
- Consumer education
- Community outreach

Don't Sell: Build Trust and Credibility

- Good community relationships
- Educational and engaging
- Authentic and credible voices
- Technically-accurate
- Independent validation
- Realistic and timely calls to action
- Multiple impressions delivered via varied channels



Research Validates Trends

- Accenture and Harris Interactive
- Boston Consulting Group
- Burson-Marsteller; Penn, Schoen & Berland
- EcoAlign <u>www.ecoalign.com/news</u>
- GE Energy Services and StrategyOne
- IBM Institute for Business Value www-935.ibm.com/services/us/index.wss/ibvstudy/gbs/a1029014
- IDEO and SCE

Contact each group for specific study details

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